

# EMPLOYMENT, GROWTH, AND PRICE LEVELS

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HEARINGS  
BEFORE THE  
JOINT ECONOMIC COMMITTEE  
CONGRESS OF THE UNITED STATES  
EIGHTY-SIXTH CONGRESS  
FIRST SESSION  
PURSUANT TO  
**S. Con. Res. 13**

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SEPTEMBER 22, 23, 24, AND 25, 1959

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**PART 7—THE EFFECTS OF MONOPOLISTIC AND  
QUASI-MONOPOLISTIC PRACTICES**

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## STUDY OF EMPLOYMENT, GROWTH, AND PRICE LEVELS

(Pursuant to S. Con. Res. 13, 86th Cong., 1st sess.)

OTTO ECKSTEIN, *Technical Director*  
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# EMPLOYMENT, GROWTH, AND PRICE LEVELS

TUESDAY, SEPTEMBER 22, 1959

CONGRESS OF THE UNITED STATES,  
JOINT ECONOMIC COMMITTEE,  
*Washington, D.C.*

The committee met, pursuant to notice, at 10 a.m., Hon. Paul H. Douglas (chairman) presiding.

Present: Senators Douglas and Bush; Representatives Curtis and Widnall.

The CHAIRMAN. Gentlemen, we are very appreciative of your coming to Washington to testify on this question of whether we have more or less monopoly and more or less competition as compared with the past.

As I understand it, Mr. Hines is to speak first, and then Mr. Martin, and then there can be discussion back and forth with Senator Bush and you.

## STATEMENT OF HOWARD H. HINES, ASSOCIATE PROFESSOR OF ECONOMICS, IOWA STATE UNIVERSITY, AMES, IOWA

Mr. HINES. Mr. Chairman, it is an honor and pleasure to be with you today. I was a little hesitant about leaving my home base so soon, as the school year was starting, when the students were, so to speak, still on the launching pad. But we have a famous visitor in the State today, who will, I suppose, take care of the launching, if not of the economics, of these students. So he will hold the fort until I return, I am sure.

Practically every American market for goods and services has some monopolistic and some competitive aspects, as economists use these terms. Therefore, even if one is thoroughly objective and has access to full information about a market, it is still quite a task to classify it in one category or another or, better, to place it at a relatively definite point on a scale. Nevertheless, investigators have succeeded in giving valid appraisals of many markets. Naturally, it is even more difficult to attempt to judge our entire economy, taken as a whole, and it is asking for still more trouble to attempt to discern changes over time.

This has not kept foolhardy souls from venting opinions on these subjects. Consequently, hardy (but not foolish) ones like Dr. Adelman or Dr. Rosenbluth, who I had hoped would be with us today, have had to go to work to provide us with more scientific measures. Some of these have dealt with the extent or changes in economic concentration, meaning both the place of big business in the economy at large and bigness relative to specific products or industries. Others

have looked into the extent or changes in monopoly—which is often related to concentration in the product or industry sense, although not identical with it. While I have over the years read most of the published studies and profited from them, I do not pretend to be an authority on this subject. I am only an interested student.

However, for what it is worth, my opinion is that the studies add up to the following conclusions: (1) There is a great deal of both concentration and monopoly in the American economy, by all definitions and measures, and (2) if there is any trend in either, whether between recent years or since the start of the 20th century, it is more probably downward than upward.

This second finding should be good news. It should be good news to all sides, to everybody. However, if concentration and monopoly are fading away, they are not fading very fast.

These studies date rapidly. Many do not go beyond the late 1930's or 1940's, but I doubt if more recent data, such as the forthcoming Census of Manufacturers will give us, would change the general conclusions. Some credit may be due here to the 1950 amendment to the Clayton Act law on mergers. A new recent development is the increasing dependence of agriculture on industries that supply fertilizer, feeds, machinery, and other purchased inputs. Modern agriculture is almost becoming a "processing" industry, and the degree of competition among its suppliers has wide significance. Some of my associates and I have been looking into this problem with reference to the competition and monopoly situation.

Another new and special problem is: How do we measure competition in the industries that live mostly off defense contracts?

There is a matter closely related to the measurement problem to which I personally have given a good deal of attention, and on which I would like to make a brief comment. This is the question of entry into markets. A single firm or an oligopolistic few who at any moment appear to dominate a market may actually have little real or lasting power if additional firms could move in fairly easily whenever the present occupants become grossly inefficient or exorbitantly profitable. Entry is a sprinkler system to smother monopolistic fires.

Now, it is widely believed that entry into business has become almost prohibitively difficult because of large capital requirements and other barriers. And, in fact, many sectors of our economy are closed to the entry of new small firms. Nevertheless, they may be open to entry by already established firms, especially large ones. Established manufacturers frequently move into product lines that are new to them; large retailers take up manufacturing; and so on. Moreover, even where actual entrance does not occur, the possibility of entry will deter present occupants from abuses. On the whole, I believe this kind of entry and potential entry tends to make for more competitive results than would be expected when this factor is not taken into account. But, although this kind of entry reduces "monopoly," business "bigness" in a wider sense remains as a problem. For a more complete statement and a more qualified one, you may want to refer to my paper in the *Quarterly Journal of Economics*, February 1957. I have furnished Mr. Lehman with a copy, if you want to use it for your records or files.

You will be interested also in Mr. Martin's study of the synthetic ammonia industry, which is in the current issue of the same journal.

I have been speaking of the general tendency. Yet while our American economy is highly competitive and may be tending to become more so if viewed as a whole, in more specific market sectors the amount of monopoly that remains is, in a plain phrase, "too much." And the fact that many entry barriers can be crossed by established firms is no reason not to try to reduce them so that newer and smaller firms can also come in more often. The findings in no way warrant a "do nothing" policy about monopolies that we have or passiveness about preventing future ones.

And now, without attempting a complete analysis or getting ahead of the subject for today, may I turn to just a few speculations about some relationships between monopoly and the subject of your investigation—employment, price levels, and growth. Or, rather, about the last two; because while monopoly distorts the manner in which workers and resources are employed, it probably does not prohibit full employment in the aggregate. (I grant that severe monopolistic distortions in certain strategic or bottleneck products markets may be so troublesome as to be an exception.)

With regard to the effects of monopolies on prices, the most interesting question to me is this: Do we really know very much about actual pricing practices in oligopolistic markets in so-called normal but not excessively buoyant times? Times like these, I mean. I wonder if most of the factual studies haven't dealt either with restrictive practices that appeared in shrinking markets (declining industries or acute depressions) or with conditions of exceedingly strong aggregate demand—as in wartime.

For example, J. K. Galbraith's "A Theory of Price Control," 1952, reviewed wartime OPA experience with oligopolies. Recent work on the "wage-price spiral" is too much influenced by 1946, 1947, 1950, 1951, and other years when aggregate demand was greatly excessive. But the problems in these periods derived from the war and postwar readjustment. They have little to do with high level peacetime prosperity.

Perhaps there are relevant studies which I have missed or forgotten; if not, this would be an important area for this committee to explore.

As for economic growth, the most vital question in the present connection is: What blend of monopoly and competition would give us the most rapid improvements in products and in methods of production and marketing? Some degree of monopoly may help, by holding out a reward for new ideas (a traditional argument for patents) or by sheltering the entrepreneur while he carries them into the market (Schumpeter's point).

Still, we may feel sure that firms whose monopoly positions are too cozy will rarely come up with basic innovations. Neither extreme seems ideal, therefore, but on policy matters I would also lean toward strengthening competition; we are not likely to commit any excesses in that direction.

What seems most necessary is this: Business managers must come to feel that their main objectives—continuing profits, expanding activities for their firms, lifelong managerial careers—depend more on

making frequent product and methods innovations than on merely administering the (monopolistic) positions they may hold at the moment. Preaching will not convince them. Rather, outside conditions must be such that they make this policy pay. If monopoly positions are comparatively weak, their owners are forced to move rapidly to protect their futures. This should often encourage beneficial innovations. A well-founded expectation of prompt antitrust or other regulations of abuses also helps to indicate that the future lies in successive development of new products and processes rather than in lingering exploitation of old one.

Best of all, the process is likely to become cumulative. Where the economy is dynamic, economic decisionmakers more and more realize that they must run hard—and in ever-changing directions—if they are to survive. So as we grow, business leaders who try to exploit fixed monopoly positions will more often fail. And fewer will want to confine their firms and their careers to this unprogressive kind of planning.

How near are we now to this happy process? If we knew, we would have an important performance test of degree of monopoly to complement the measures of market structure and the observations about the presence or absence of restrictive measures, such as price agreements, which were the chief criteria for the studies referred to previously. I see no way to quantify this kind of performance; yet we can certainly see it operating in many American businesses. Some sectors of the economy, however, we shall always need to assist or to jog.

Here, as before, I believe the relevant guide should be not an impression of the extent of monopoly in the economy at large but the situation in specific industries and markets.

Thank you very much.

The CHAIRMAN. May I say I would like to include in the record at this point the article of Mr. Hines which he referred to.

(The article referred to follows:)

## EFFECTIVENESS OF "ENTRY" BY ALREADY ESTABLISHED FIRMS\*

By HOWARD H. HINES

Introduction, 132. — I. Requirements for entry, 134. — II. Oligopolistic uncertainties and large-firm entry, 137. — III. Effects on market performance of entry by outside firms, 139. — IV. A parenthesis on mergers, 143. — V. Social effects: career opportunities, 145. — VI. Business size and "concentration of power," 147. — VII. Summary and conclusions, 149.

"Entry" is the subject of much recent discussion,<sup>1</sup> especially the growing recognition that the "entering" firm may be, not a newborn one, but an established firm (often a large one) moving into markets or industries where it has not previously participated. An increasing number of writers are pointing this out.<sup>2</sup> But in revising our traditional conception of the mode of entry, should we also change our views about the probable *effectiveness* of entry in our society? Although many of the recent statements plainly imply that entry is much freer,

\* Although the author assumes sole responsibility for what follows, he wants to thank Dean E. T. Grether and Professors Eugene R. Beem, E. H. Chamberlin, and Edna Douglas, and the members of the faculty colloquium of the School of Business Administration, University of California, Berkeley, for criticism and encouragement.

1. Among others, see Fritz Machlup, *The Economics of Sellers' Competition* (Baltimore: The Johns Hopkins Press, 1952), Part III; two articles by Joe S. Bain, "Economies of Scale, Concentration, and the Condition of Entry in Twenty Manufacturing Industries," *American Economic Review*, XLIV (Mar. 1954), 15-39, and "Conditions of Entry and the Emergence of Monopoly," in E. H. Chamberlin (ed.), *Monopoly and Competition and Their Regulation* (London: Macmillan: 1954), pp. 215-41; and Andreas G. Papandreou and John T. Wheeler, *Competition and Its Regulation* (New York: Prentice-Hall, Inc., 1954), chap. 12.

2. See especially Alfred R. Oxenfeldt, *New Firms and Free Enterprise*, chap. 2; P. W. S. Andrews, *Manufacturing Business*, pp. 171-72; also "Industrial Analysis in Economics," in T. Wilson and P. W. S. Andrews (eds.), *Oxford Studies in the Price Mechanism* (Oxford: Clarendon Press, 1951), p. 141, n. 1, and p. 167; Corwin D. Edwards, *Maintaining Competition*, p. 188; Harold G. Vatter, "The Closure of Entry in the American Automobile Industry," *Oxford Economic Papers*, n.s., Vol. 4, No. 3 (Oct. 1952), p. 229; and R. B. Heflebower, "Toward a Theory of Industrial Markets and Prices," *American Economic Review*, Papers and Proceedings, XLIV (May 1954), 130-32. Relevant also is some of the earlier literature on product diversification and multiproduct firms, but much of this relates to the theory of the firm rather than to the theory of markets. However, see T.N.E.C. Monograph 27, "The Structure of Industry," Part VI. The same statement can be made of most of the marketing literature on "scrambled merchandising."

and presumably more effective, than we had believed while thinking in terms of new-firm entry only, there does not seem to be any explicit analysis of this question as yet. The principal purpose of this paper is to try to approach this problem analytically by outlining what appear to be the major issues concerning the effectiveness of established-firm entry in the American setting, and by presenting some of the principal arguments bearing on them.

Oligopoly (particularly with differentiated products) is the most important situation in which to study the effectiveness of the different kinds of entry. Although its precise distribution may be argued, this category undoubtedly includes a sufficiently large proportion of both manufacturing and local distribution markets to be worth close attention. Analytically as well, the study of entry in this type of market structure seems to be interesting for two special reasons. In the first place, the uncertainties of oligopolistic rivalry form a kind of hindrance to entry not found in markets with large numbers. Secondly, in oligopolistic markets, the effects will not be confined to the long run, for potential as well as actual entry can play an active role in such cases.

This paper opens with a brief exploration of the question of whether entry by existing firms is likely to be easier than new-firm entry. Here the problem of oligopolistic interdependence is crucial. Then it takes up the probable "economic" (market-performance) effects of this kind of entry in typical market situations, compared with the results to be expected when the only possibility of entry would be by entirely new firms. Finally, the last part of this paper moves away from the economics of particular markets to raise some issues about the effects of existing-firm entry in a broader social and political setting.

A precise evaluation could come only from careful study of specific industry and market situations. Doubtless there would be important differences among the many cases if such factors as the industry's stage of growth were taken into account.<sup>3</sup> However, a generalized treatment of the kind this article affords may provide some guidance (1) in teaching — to decide how much stress to put on the propositions about ease of entry; (2) in theorizing — to select appropriate oligopoly models; and (3) in formulating public policy — to delineate issues for discussion.

3. We shall not attempt to consider the relationships between either growth or business fluctuations and entry. In particular, this paper does not raise the question of whether established firms might differ from new firms with respect to entry behavior at different stages of industry growth or in successive phases of the business cycle.

## I. REQUIREMENTS FOR ENTRY

Before we attempt to discover how *effective* the different forms of entry are likely to be, we shall consider briefly which kind of entry is easier and hence more likely to occur. "Entry" relates to the ease or difficulty with which a firm can become a member of a group of competing firms by producing a close substitute for the products they are offering.<sup>4</sup> Precise definition of this concept involves the difficulty that the idea of a "group" strictly implies a homogeneous product. There are fundamental logical objections to using the concept when one recognizes that each seller offers a different product. Under these conditions, an "entering" product may substitute closely for some "products" and hardly at all for others. Another entrant might affect a different constellation of sellers. This paper will nevertheless use the "common-sense" meanings of "entry" and "group," which assume that one can deal with an arbitrarily bounded range of substitutes, but the limitations of this procedure must be recognized.

Entry in this sense depends (under given cyclical conditions) upon a number of specific factors, which it is convenient to classify as: (1) information about opportunities for profitable entry, (2) access to productive resources, (3) access to markets, and (4) ability to overcome immobilities and other frictions that slow the rate of adjustment. Although we shall not study any of these matters in detail, it will be apparent that most factors that would facilitate entry by a new firm would seem to be at least equally available to an established-firm entrant that might want to come into the same market,<sup>5</sup> while it is possible to note a good many ways in which the existing firm would have differential advantages over any new-firm entrant. The following summary suggests some of the methods by which an estab-

4. In Triffin's classification, under *free entry* competitors "are able to arise and produce, at the same cost as firm *i*, a commodity economically homogeneous with the one produced by *i*. Both elements, of cost identity and product homogeneity, are necessary. . . . The possibility of producing an identical good, but at a cost which may be superior [higher], may be termed *homogeneous entry*; and the freedom to produce imperfect substitutes, *heterogeneous entry*." (Robert Triffin, *Monopolistic Competition and General Equilibrium Theory*, p. 120.) Bain's "Condition of Entry" synthesizes the composite influence of all factors affecting entry in a given industry, and explicitly states them to be matters of degree. (See note 1, above.) On the difficulties of the concept of entry where products are differentiated, see E. H. Chamberlin, *The Theory of Monopolistic Competition*, 6th ed., pp. 200-2, and his "Monopolistic Competition Revisited," *Economica*, n.s., Vol. 18 (1951), pp. 350-51.

5. Two exceptions might be (1) special knowledge of local profit opportunities not noticeable by (or possibly withheld from) outside firms, and (2) public policies favoring new — or small — firms, such as disposal of surplus government property or limitations on branch banking.

lished firm may be able to overcome handicaps that might effectively bar new-firm entrants:

(1) *Obtaining information*: An established firm probably has unusually good knowledge of profit opportunities in markets contiguous to its own, particularly in those related vertically as suppliers or distributors.<sup>6</sup> Accordingly, it might require a smaller uncertainty allowance than would a newcomer. Also, information about one product or local market may lead a diversified firm to more rapid exploration of possible analogous opportunities for other products or in other areas than a new firm. For example, the diversified firm may adapt retail methods that succeed with one product to the distribution of other kinds of goods.

(2) *Access to productive resources*: Capital, and after that managerial and other key personnel, are often strategic factors for entry, since actual markets for both are notoriously imperfect. For capital, Professor Bain found that “. . . absolute capital requirements for an efficient plant in all the [twenty] manufacturing industries examined are large enough to restrict seriously the ranks of potential entrants; even 500,000 dollars, the smallest amount listed, will not be forthcoming from savings out of salary or from the winnings in a poker game.”<sup>7</sup> However, large established firms (and small ones, too, if unusually profitable) may use some of their retained earnings or depreciation charges to open new lines of business. Moreover, as is well known, they obtain outside capital more cheaply than newcomers.<sup>8</sup>

If a firm can acquire capital economically, it can undertake large-scale research to develop production processes or product modifications that will reduce dependence on such bottlenecks as raw materials, patented techniques, or skilled workers. It can finance a training and “shake-down” period as a means of obtaining technicians and managers, and of gaining distributor and consumer acceptance for its product. It can work around patent barriers by trading patent rights it already owns, or by assigning its research or legal staff to circumvent them. To be sure, these maneuvers involve costs, but ordinarily they are less than new firms would encounter.

Sometimes, as Andrews notes, a firm may shift already-installed equipment and processes from one product to another more readily than a new firm could initiate production.<sup>9</sup> Top management might

6. Heflebower, *op. cit.*, p. 130.

7. “Economies of Scale. . .” (*op. cit.*), p. 37.

8. R. B. Heflebower, “Economies of Size,” in *Journal of Business of the University of Chicago*, Vol. 24 (Oct. 1951), p. 260.

9. Hence he would define industries by technological production similarities rather than by types of finished products. (“Industrial Analysis in Economics,”



also be already available within the firm; a number of observers have already commented on the generalized nature of managerial skills as demonstrated in the amazing wartime conversions from civilian production.<sup>1</sup> In choosing key personnel, knowledge derived from working with persons already in the firm is more certain than information obtainable through actual markets. Furthermore, the established firm has already trained its management and employees as a *team*.

(3) *Access to markets*: In addition to organizing economical production, the newcomer must find suitable marketing channels or perhaps build them himself. Once again the already-established firm may have an advantage in being able to adapt existing facilities, especially dealer organizations, to the marketing of new products. These methods need not always closely resemble those of the original sellers. In fact, a new kind of approach may be necessary to overcome legal or other institutional barriers. Perhaps only the mail-order house or chain store can successfully compete with the local plumber.

Brand preferences sometimes constitute barriers that might cost a fortune for a new firm to overcome by advertising. Yet they may in certain cases be offset cheaply by using a brand already well known for one product to confer prestige upon a new product. And so sellers attach the brands "Hotpoint" to refrigerators and "Frigidaire" to stoves!

(4) *Frictions and immobilities*: Probably the established-firm entrant would have fewer advantages in overcoming frictions and immobilities than in the cases above. Indeed, if it is large or its management is "old," an established firm may suffer from bureaucratic inertia.<sup>2</sup> On the other hand, a going organization with a fund of know-how may be able to move with far greater speed than a newcomer.<sup>3</sup>

*op. cit.*, p. 168.) Presumably such a classification should include marketing as well as production techniques, which would complicate matters. Note that Andrews is chiefly interested in manufacturing businesses. Also note Joel Dean's broad concept of "excess capacity," which seems more realistic. (*Managerial Economics*, New York: Prentice-Hall, 1951), pp. 115-19.)

1. Peter F. Drucker, *Concept of the Corporation* is the most enthusiastic. An earlier reference is E. A. G. Robinson, *Monopoly*, pp. 42-43. On the other hand, some very successful teams have recently found themselves unable to adapt to new situations requiring "styles" of management fundamentally different from those they use effectively in their original product areas.

2. Cf., George W. Stocking and Myron W. Watkins, *Monopoly and Free Enterprise* (New York: Twentieth Century Fund: 1951), p. 117.

3. On the elusive matter of direct entrepreneurial allocation, internal to the firm, compared with market allocation, see Ronald H. Coase, "The Nature of the

This list is only suggestive. One must turn to the literature cited and to other studies for fuller discussion. Moreover, there are exceptions, of course, and each case will have peculiarities of its own. Nevertheless, we should in general expect entry to be much easier when we take account of established outside firms than when we consider new firms only.

## II. OLIGOPOLISTIC UNCERTAINTIES AND LARGE-FIRM ENTRY

Often established firms would want to add new products or markets on a scale comparable with other major sellers for reasons of prestige, and with their own large programs in other fields in order to make economical common use of administrative, productive or marketing resources. Also, many of the advantages which existing-firm entrants may have over new firms with respect to information, productive resources, marketing facilities, and mobility are functions of absolute size. Indeed, the very reasons that make new-firm entry comparatively difficult — “barriers” and the necessity of matching the economies of scale of firms already in the market — usually require sizable operations to overcome. And absolute size will often (though not inevitably) imply large size relative to others in the market.<sup>4</sup>

Now markets having obstacles to free entry of the kinds we have been discussing are probably oligopolistic already. Therefore, as a number of writers have observed, the entering firm would ordinarily displace substantial portions of the business of individual established sellers. Strictly, where there are differentiated products (and marketing and selling methods), it is not accurate to regard total group or industry demand as given.<sup>5</sup> The entrant in this case does not merely share, but also widens, the group’s market, by penetrating new geographical areas, by using different marketing channels, by attracting new income groups to the product, and otherwise. Conceivably, the entrant might find most of his customers outside the former markets,

Firm,” *Economica*, n.s., IV (1937), 386–405, reprinted in G. J. Stigler and K. E. Boulding (eds.), *Readings in Price Theory* (Homewood, Ill.: R. D. Irwin, Inc.: 1952), pp. 331–51.

4. The question is one of fact: Does achievement of economies of scale in production and marketing comparable with those of established sellers require occupancy of a substantial share of the market? (For the best work on this problem, see the articles by Bain cited in note 1, p. 132.)

5. Nevertheless, certain writers have retained this assumption without relaxation throughout their analyses, probably in order to allow a simple exposition and to arrive at definite results. Product differentiation in fact opens a number of possible hypotheses.

drawing so few from previous sellers that it would not pay them individually to retaliate. But market-widening effects are not likely to outweigh substitution effects unless the product is of a distinctively new type. And while established outside firms may well be among the most rapid followers of innovation, it is convenient here to regard such following as part of the innovation process rather than as part of the customary (more static) concept of entry.

There remains, then, the problem of displacement — and of the retaliation that it might provoke. Entry might take place, notwithstanding the fact that a limited number of sellers would have to divide a substantially given pool of business, in a number of cases: (1) the entrant's differential superiority in cost, selling strategy, or product-appeal enables him to deal a knock-out blow to a weak member of the group; (2) the entrant can steal sizable (not necessarily fatal) quantities of business from several members of the group, for similar reasons of differential advantages which his rivals cannot match; (3) the group, enlarged by this entrant, is able to arrive at a new equilibrium at a higher price level, covering the higher unit costs that might come from the reduced scale of operations for each firm; or (4) the established outside firm chooses to enter this market as part of a strategy of interfirm relationships involving markets for other products.<sup>6</sup>

Whether or not any of these conditions obtains, one fact must be kept at the center of attention when analyzing entry into oligopolistic markets. The probability of a new competitor entering such a market does not depend solely on technical or objective factors, such as his ability to match production costs, obtain market channels, and offer an attractive product. He must also be willing to hazard the uncertainties of oligopolistic rivalry. And even though a large, established firm could — if it were actually to make the attempt — enter a given market, survive possible retaliatory measures, and possibly gain a favorable position in a new oligopolistic rationale, it might prefer to avoid uncertainties by not making the attempt. This is all the more likely if established firms are more inclined than new enterprises to prefer a "quiet life." Consequently, our optimistic previous conclusions about ease of entry by established firms have to be modified when we take account of oligopolistic interdependence.

But there is another side to the matter of attitudes toward

6. See Charles Henry Hession, *Competition in the Metal Food Container Industry, 1916-1946* (Brooklyn, N. Y.: Privately printed, 1948), pp. 155 and 158-59, and Robert F. Lanzillotti, "Multiple Products and Oligopoly Strategy: A Development of Chamberlin's Theory of Products," this *Journal*, LXVIII (Aug. 1954), 461-74, especially p. 470, n. 7.

uncertainty. In oligopolistic markets one need not wait for the working out of new equilibrium positions in the long run to see the effects of entry. For existing sellers cannot safely take an extremely short-run point of view with regard to profits.<sup>7</sup> Rather, they are likely to be aware of the possibility of attracting new rivals should they attempt grossly exploitative practices in the short run. Thus, potential entry has immediate and continuing effects on this kind of market, where the competitive pattern is to a large extent subject to the direct control of existing sellers. Consequently, we must compare the probable effects not only of actual but also of potential entry by established firms with entry by new firms. We shall do this in the following section.

### III. EFFECTS ON MARKET PERFORMANCE OF ENTRY BY OUTSIDE FIRMS

What will be the effects of entry — and potential entry — by established firms on competitive behavior in oligopolistic markets? How will the results compare with what we should expect when the only form of entry would be by new firms? No easy answer is possible; after all, it is not easy to predict the outcome of oligopolistic behavior in general, even apart from entry. However, we shall attempt the more modest task of trying to discuss the directions in which the competitive process will move in the two cases, even if we cannot be certain about the destination. Which is more effective (1) when we take account only of actual entry, and (2) when we consider potential entry also? In both situations, the possible effects on market performance will result from influence upon the form competition is likely to take and on the outcome of competition in any specific form.

*Actual entry.* The first point is that there will be some cases in which new firms cannot enter at all, whereas established outside firms can. This method, then, will be the only way in which additional resources can move into the given area of the economy. And the arrival of new resources is probably beneficial, notwithstanding the familiar proposition that, where products are differentiated, the arrival of new sellers may cause each firm to produce at a smaller output and therefore at a higher unit cost, and higher price. For such a result can occur only if the group, as it enlarges in number, always

7. See Joe S. Bain, *Pricing, Distribution, and Employment* (1st ed.; New York: Holt, 1948), pp. 155-56, William Fellner, *Competition Among the Few*, pp. 161-62, and R. F. Harrod, *Economic Essays* (London: Macmillan, 1952), Essay 8, "The Theory of Imperfect Competition — Revised."

renews its "understanding" of mutual dependence. Now Chamberlin has shown that the problem then is too many of all resources, not merely too many entrepreneurs.<sup>8</sup> Indeed, one might say that the arrival of additional entrepreneurs is likely to be wholly beneficial, since the more decision-makers there are, the more difficult it would be to work out and maintain a nonaggressive mode of competition within the group. And entry which helps to break down a non-aggressive understanding would lead toward the Chamberlinian "sort of ideal" that takes account of product differentiation preferences, as well as of unit production costs.<sup>9</sup>

Furthermore, there may be situations where entry by an existing firm would be more effective even though new, small firms could actually enter. Let us consider a typical market structure in order to illustrate the point. One frequently observes a small number of large firms, controlling a substantial share of the market, selling differentiated products at similar (if not necessarily identical) prices, while spending large sums on advertising and other nonprice competition. Around them cluster a number of small sellers, whose share of the market is relatively small. If a new (small) firm can come into this sort of market at all, it is most likely to enter at either the upper or lower end. That is, it may try to offer specialty products at premium prices or to compete for low-income customers by designing products to allow a lower price. Gradually such entrants might cut into the share of the market held by the major firms. But unless their nibbling processes are unusually persistent, they are likely to remain at best merely part of a "competitive fringe," exerting a minimum disturbance on the price structure of the large sellers. By contrast, established-firm entrants (because of their large size or the strength of their brand or product appeal) might more probably move at once on a large scale into the central core of the market, where they will immediately influence pricing policies. The comparative advantage of the existing-firm entrant over the new firm is even more apparent where major established firms offer a variety of product types, blanketing all price lines. Established-firm entrants would be much more likely to be able to duplicate the range of their offer, and so to exercise real initiative in the market.

In oligopoly, therefore, entry is important not only because it

8. Chamberlin, *op. cit.*, p. 217.

9. See Lucile Sheppard Keyes, *Federal Control of Entry into Air Transportation* (Cambridge, Mass.: Harvard University Press, 1951), p. 14. Also cf. Harrod, *op. cit.*, pp. 140-56.

brings additional resources of all kinds into an industry, but in particular because it increases the number of entrepreneurs. For the arrival of additional decision-makers will make it more difficult to work out and maintain a nonaggressive mode of competition within the group, the more so where firms and products are heterogeneous. It may well be true that a *large new-firm* entrant would be more likely to behave aggressively than a *large existing-firm* entrant. But where large size is requisite for entry, at least in a form which would permit an independent role in the market, entry is likely to occur only in the form of established firms. Even where small new entrants could successfully come in at the fringe and gradually grow to significant size, the process would be slow compared with large-firm entry.<sup>1</sup> Thus, in comparison with new-firm entry, existing-firm entry is more likely to take place, to do so with less delay, and to occur in a form that will add independence in decision-making.

*Potential entry.* Now we must also consider the effects of potential entry, since in oligopoly individual sellers can adjust their behavior for the purpose of forestalling entry. Would they adopt different strategies in the case of potential entry by new and by established outside firms?

According to Triffin, the best defense against entry is low prices.<sup>2</sup> While low prices may entail low profits, the latter alone — if caused by production inefficiency, excessive selling costs, and the like — may not deter entry. In the first place, he reasons, the prospective entrant is likely to have much more information about present prices than about present profits. Also, he will be concerned with his *own* prospective profits, for which those of present operators are not necessarily a good index where there are differentiated products (and dynamic changes in them). Low prices, however, definitely discourage entry, since everyone must take them into account. Perhaps this argument does not give enough weight to the effectiveness of skillful product differentiation, continuing product variation, and advertising as means of resisting entry by new firms. But with respect to entry by established firms he is probably right. Neither is concealment of profits (actual or potential) likely to be as successful against established firms as against new firms. Of course, existing sellers may continue to prefer advertising and other nonprice strate-

1. On the importance of speed of entry, see George J. Stigler, *The Theory of Price* (Rev. ed.; New York: Macmillan, 1952), p. 222.

2. *Op. cit.*, p. 122. But cf. Fellner, *op. cit.*, p. 162. Another important paper is Joe S. Bain, "A Note on Pricing in Monopoly and Oligopoly," *American Economic Review*, XXXIX (Mar. 1949), pp. 448-64.

gies to price warfare as the mode of competition with one another, but they will rely less on their efficacy to bar entry.

However, recalling the analysis in the preceding section, where we pointed out how oligopolistic uncertainties are likely to be particularly important in deterring entry by large established firms, is it likely that the firms already in the market may take this factor into account and discount the possibility of entry from this direction? To the writer, the contrary hypothesis seems more plausible: Firms already in the market may well overestimate the likelihood of entry by established outside firms. At least, they are more likely to do so than in the case of wholly new firms. Surely the ability of already-established firms to acquire resources and to gain access to markets will be more evident to them than the possible reluctance of those same firms to face oligopolistic uncertainties, the more so in cases where the insiders know that the market has ample room for another seller. Even if the insiders were aware of the established outside firms' hesitation, their own safety considerations would keep them from counting on it for protection. For the already-established outsiders could command financial strength, managerial experience, and prestige among customers sufficient to prevent old-timers from frightening them away by threats, or from driving them out of the market once they had entered. Their history and their diversified operations would attest their power to survive. And as the group enlarges, it would ordinarily be more difficult and more costly to work out a new group rationale. Any differences between a newcomer's attitudes toward aggressive competition, his product variety, his marketing strategies, or his costs, and those of others in the group, would add to the difficulties of working out a new *modus operandi*. The increase in total capacity of the group would augment the uncertainties of competitive relationships and make it likely that any new pattern of behavior which might be reached would be less profitable than before. And even if aggressive rivalry could be ended (or prevented) by forming a new rationale comparable with the former one in its advantages to the group as a whole, this kind of entrant would be relatively certain to command a favorable strategic position within the new understanding. Since a large part of his share would probably come at the expense of a few of the former members whose products or markets were nearest to his, they would be especially anxious to prevent his entry, and they might take the initiative to make the industry less attractive to an entrant.

Consequently, considering the greater possible penalty they

might have to pay for guessing wrong, sellers are much more likely to modify their competitive behavior to take account of possible entry by already established outside firms than by new ones. What is more, those already in the market may overcompensate for that possibility. The point is, to repeat, uncertainties of oligopolistic interrelationships will affect *insiders* as well as potential entrants. And the results are likely to benefit the public. Advertising and brand promotion are probably less effective against established outside firms than against new firms. Continuing technological progress would be a more certain protection, but it is difficult to attribute this to any one kind of incentive, still less to that of a particular type of entry. However, we would generally expect the upper limit for an exploitative price to be pressed downward. Indeed, one must interpret the useful notion of a "limit price" — usually specified as determined for those within a market by the average costs of the most efficient potential entrant — not as an objective but as a conjectural value, or as some kind of probability distribution of values. Moreover, potential entry might cause a nervous rival or two to depress the price toward the lower end of the now-narrowed discretionary range. If so, despite the fact that the uncertainties of oligopolistic relationships may diminish the likelihood of actual entry, they may intensify the significance of potential entry.<sup>3</sup>

#### IV. A PARENTHESIS ON MERGERS

When established firms move into new markets, they do not always construct new facilities. They often buy out already operating independent firms (or plants). Of course, purchase of existing facilities may be only an initial step. The new owner may soon enlarge them. At least, he will probably add managerial and financial resources.<sup>4</sup> Often he will substitute or add his own marketing facilities and use his own trade-mark, if it is better known. But such cases are only modifications of the instances where all resources are new. The original question remains: What would be the effects if the merger were merely a transfer of ownership?

3. On the other hand, in just those situations where the existence of a potential entrant is most apparent to present sellers, namely, where the outside firm is a buyer from or a supplier to the industry, there is an obvious alternative for present sellers: price concessions to the potential entrant. The results here will vary with the legality of price (and other) concessions and with the likelihood that favors to a potential entrant might spread to other buyers or suppliers, whose prospects for entry are perhaps more distant. Cf. Hession, *op. cit.*, pp. 209–13.

4. On General Motors' entry into locomotive manufacture, see *Fortune*, "GM Diesel," XXXVIII (July 1948), 77.



Since the total number of entrepreneurs would not increase, and might even decrease if several firms in the same market were merged, any influence on competitive results would have to come from changes in the conditions under which the managers make their operating decisions or from differences in the attitudes of new and old managements toward aggressive competition. In financial resources, in market acceptance of the product, and in other ways, the newly-purchased firm's potential influence would usually grow. Granting that it might sometimes choose to continue a passive role in the market, such a choice would not, at any rate, be mandatory owing to a lack of resources. As for managerial attitudes toward aggressive behavior (independently of the market environment and the strategic positions of the participants), it is probably impossible to generalize. A cautious or bureaucratic management may tame an aggressive independent; more likely, perhaps, a small operator who had grown content to rest in the shade of his neighbor's umbrella may be superseded by a management that insists on taking the initiative.

In any case, the change in management is likely to be peculiarly disruptive of *local* restrictive agreements. Administrative convenience may require the firm to set broad national or regional policies, leaving little scope for local adaptation. For example, a firm would not undermine a nationally-advertised plan for credit terms by making concessions here and there to local merchant associations. More important, the environment in which larger firms make their decisions is probably quite alert to federal antitrust regulation. By contrast, local business frequently operates in an environment where laws are weaker or enforcement is more lax; indeed, public policy at the local level may favor market "stabilization." Consequently, although one hesitates to generalize about the results of mergers of this kind, in a number of realistic situations more aggressive competition and better price and efficiency results would seem probable — and have, in fact, often occurred.<sup>5</sup>

And yet, are we justified in classifying such mergers as entry? From the point of view of the acquiring firm, yes, but we must not ignore the simultaneous exit of the acquired. Since there is no change in the total number of firms, there has been no entry from the point of view of the group of sellers, which is the central concern of this

5. Two related questions are: (1) Does the possibility of being able to sell out later to another (probably larger) firm encourage the small businessman to make his original entry into a market? (2) Do presently-competing firms tend to merge, or to buy up smaller competitors, in order to prevent their sale to outsiders?

paper. The quantity of productive resources in the field may grow, and the management may become more competitively aggressive. Important as they are, these effects might occur within a group as a result of changes in ownership or management succession associated in no way with entry, for the concept of entry implies an enlargement in numbers. Therefore, the answer must be negative. Still, where the merger enables a firm to leave the atomistic periphery of a group and to take a place amidst the oligopolistic portion (or alongside a previously dominant single firm), it does seem reasonable to consider this as entry from the point of view of the group, since the number of active decision-makers increases. This extension of the entry concept may be debatable, but the phenomenon we are concerned with is undoubtedly important, however one may choose to classify it.

These remarks deal with mergers when they are the means of entry. This is perhaps a convenient point to note how certain mergers may reduce the likelihood of entry (by established firms) taking place. Mergers between two potential entrants would reduce the number of possible entrants by one, obviously, but they might strengthen the remaining firm to the point of increasing its effectiveness as an actual or potential entrant. More insidious would be mergers between two firms who are potential entrants into one another's markets. Thus two chain store systems, presently operating in different regions, or two manufacturers producing different products, might threaten one another with entry. But if they merge, they remove this threat. Amidst the numerous recent "conglomerate mergers," many may have this effect — and it is doubtful if the amended Clayton Act can reach them.<sup>6</sup>

#### V. SOCIAL EFFECTS: CAREER OPPORTUNITIES

Up to this point, we have considered only the probable market performance effects. We recognize that the actual results of entry by established firms will vary with the facts of each individual case. It will not always succeed, as the recent experiences of Kaiser in automobiles and General Mills and International Harvester in home appliances exemplify. Even at a general and abstract level, we do not assert that actual and potential entry by existing outside firms will tend to bring "ideal" results in oligopolistic markets. The only point is, we do predict a *better* market performance than one would expect

6. I am indebted for this point to discussions at the Round Table on Mergers, Northwestern University, August 12 and 13, 1955, and particularly to remarks by R. B. Heflebower.

from models which assume that entry could occur only in the form of new firms, with the inference that (1) it would not be likely to take place at all, or (2) it would not affect the central oligopolistic core of the market even if it did take place. But this certainly does not imply that there is no need for anti-trust or other public policies. And performance effects are not the only criteria for public policy. We must now consider broader social and political issues.

One of these broader standards of judgment concerns career opportunities.<sup>7</sup> Our society holds wide freedom of choice among occupations, particularly for youth, to be an important value. The possibility of starting one's own business provides a desirable opening for a career. Where entry is impeded by barriers of one form or another, including economies of large-scale production and marketing, fields may be closed to young men. That established outside firms may be able to overcome these difficulties hardly means that young men are free to open entrepreneurial careers.

On the other hand, it seems unduly restrictive to identify personal occupational opportunities with owner-management of new firms. There are thousands of openings in government, in labor unions, and elsewhere outside of business.<sup>8</sup> Even with respect to business careers, there are many possibilities within larger firms, including the performance of entrepreneurial functions. Granting that entry by established firms does not afford the same kinds of openings for owner-management as new-firm entry is supposed to give, it does offer careers in other forms.<sup>9</sup>

7. "The antitrust laws are not purely or even primarily economic in motivation. Their historic goal is social and political as well as economic. They aim to keep economic opportunity open for its own sake, as a means of assuring the community a large and broadly based middle class, which could recruit new members freely and steadily from all parts of the population. The process of social mobility in this sense is one of the most vital forces on which the continued development of the American culture depends. It is as important to our future, perhaps more important, than achieving a maximum of efficiency in the use of resources at any given moment." Eugene V. Rostow, "Market Organization and Stabilization Policy," in Max F. Millikan (ed.), *Income Stabilization for a Developing Democracy* (New Haven: Yale University Press, 1953), chap. X, pp. 439-513. Cf. also, John Perry Miller, "Measures of Monopoly Power and Concentration: Their Economic Significance," in *Business Concentration and Price Policy* (Princeton, N. J.: Princeton University Press, 1955), p. 120.

8. See J. M. Clark, introduction to A. R. Oxenfeldt, *New Firms and Free Enterprise*, pp. 4-5.

9. A related question concerns historical trends: Are occupational opportunities for young people fewer than in former days? Since they are obviously more ample than in the rigid society of long ago, the implied comparison must be with the late nineteenth century. One suspects that our own times would measure up rather well.

## VI. BUSINESS SIZE AND "CONCENTRATION OF POWER"

Entry by established firms into markets where they have not previously operated affects not only those markets but also the entering firms themselves. They grow larger, and through diversification they undoubtedly gain in survival power. Consequently, we must evaluate not only "monopoly" in the sense of market control (as we have done above), but also the broader but less definite concepts of the "concentration of power" and "big business."

For ramifications of the broad concept of concentration of power, one may look within the large firm, toward its network of relationships with suppliers and customers, or toward its influence on government and on society at large. There is, in the first place, the possibility that too much power within the large firm falls into a few hands. Not only does this involve perplexing relationships between owners and managers, but it impinges upon the lives of all persons who work in such firms: of lesser employees, obviously, and of junior executives as well.<sup>2</sup> Further, big businesses may dominate in certain respects the ordinarily smaller "independent" firms who supply and buy from them. More broadly still, some observers think that through financial institutions, interlocking directorates, and the creation of "communities of interest," the power of big business as a whole exceeds in some sense the sum of the powers of individual firms. Critics have severely handled this hypothesis, at least so far as it concerns market power, yet it may still have significance if power is interpreted in some socio-political sense.

For example, a range of possible problems concerns the effects of big business on other elements of our society by way of its ability to mold public opinion. Large advertisers may influence, directly or

1. Precise definition and measurement are difficult in both cases. Measurements of "monopoly" may relate to various dimensions of firm and market structures, or to the many variables that reflect market performance. Despite considerable recent research on these problems of measurement and on related questions of evaluation, many matters remain unsettled. As for "power" (economic, social, and political), hardly anything has been done toward making the concept operational. Business "size" — with which power is often associated — can be measured by number of employees, value of assets, sales, value added, and otherwise. But "power" and its exercise remain undefined. Progress toward a more definite concept awaits further efforts of other social scientists as well as of economists.

For possible functional relationships between the two concepts, see Corwin Edwards, "Conglomerate Bigness as a Source of Power" in *Business Concentration and Price Policy* (*op. cit.*), pp. 331–52, but also see "Comment" by George W. Stocking, pp. 352–59.

2. Cf. William H. Whyte, Jr., and the Editors of *Fortune, Is Anybody Listening?* (New York: Simon and Schuster: 1952), a book that is both disturbing and amusing.

otherwise, the editorial policies of newspapers, radio, and television. (These and other communication media themselves tend to be big business, so that those views which their advertisers will find sympathetic may come naturally to them.) In addition, large corporations seek to mold opinion on political and social issues through "public relations," nowadays a subtle and pervasive activity. Even one who does not object to the specific tastes and ideas they promote may feel concern about their very substantial power to influence the public. Lobbying and the infiltration of regulatory bodies by business officials, including such practices as the subsequent employment of the regulators by the regulated, are other techniques for gaining political and governmental influence beyond those which are consistent with the democratic process as many people understand it. And if, responding to the amassing of business power (or making use of it as a slogan), labor and agriculture strengthen their own interest groups, individualistic society may degenerate into a contest among blocs and counterblocs.

These questions remind us of still other problems which might result from the activity and growth of big business.<sup>3</sup> We shall not attempt to list them, still less to evaluate each in the light of the entry problem, because in the present state of knowledge it is almost impossible to deal with "power" and "bigness" without being vague or rhetorical. Yet despite oversimplification, exaggeration, and the very evident want of exact definition — not to mention quantification — it would be unwarranted to conclude that the concept of concentration of power is wholly unreal, and its problems, imaginary. And to whatever extent these problems are important, it is doubtful whether the predominantly favorable conclusions of the earlier sections of this paper on market performance apply to the later sections on social and political power. To the degree that we desire an individualistic society, a community where massive centers of power are absent, we can derive no comfort from the new views on entry.<sup>4</sup>

Indeed, since firms grow larger as they enter new markets, big

3. For a useful compilation (though a disappointing analysis) of criticisms of big business, see J. D. Glover, *The Attack on Big Business* (Boston: Division of Research, Graduate School of Business Administration, Harvard University, 1954), especially Parts II and III.

4. Whether or not "countervailing power" will help is another matter. Although entry is related to that concept, since sometimes the ability of large buyers or sellers to integrate vertically is a source of their bargaining strength, countervailing power emphasizes cross-market relationships and does not include established-firm entry under other conditions. Cf. John Kenneth Galbraith, *American Capitalism: The Concept of Countervailing Power* (Boston: Houghton Mifflin, 1952).

business and concentration of power may expand, and consequently social and political evils may result, despite improvement in conditions within specific markets. In the present state of knowledge, one can only speculate about these possibilities. But let one point be clear: The fact that we have given the larger part of our space to the subject of market control rather than to the concentration of power in the broader sense does not mean that the latter issues are less urgent for our society.

## VII. SUMMARY AND CONCLUSIONS

Entry may typically occur in the form of already-established firms, rather than new-born firms, as a number of recent writers have noted. Does entry of this kind perform all the traditional functions of entry — and perform them more effectively, in typical market settings? This paper attempts to delineate the major issues relating to the question of how effective entry of this kind is, compared with new-firm entry. First it examines the effects of entry and of potential entry upon oligopolistic markets, and then on society at large.

Established firms are in almost all respects superior to new firms in their ability to overcome barriers to resources and markets, and to attain economical scales of operation in the face of oligopolistic rivalry. However, entry involves attitudes towards uncertainties as well as objective, technical considerations. Consequently, the uncertainties of oligopolistic interdependence might often deter existing firms from entering. Still, we have argued, firms *within* the markets may well overestimate the probabilities of potential entry by this kind of firm, and behave more competitively as a result. In particular markets established-firm entry or potential entry should hamper the operation of an oligopolistic rationale, by narrowing the range of discretion in pricing and by tending to push prices toward the lower end of such a range. The probable effects on nonprice competition and particularly on technological innovation are less certain, but the outlook is mostly favorable. No claim is made that established-firm entry will insure “optimum” performance, but only that better results are to be expected than when entry and potential entry are disregarded altogether, or are conceived as new-firm entry only. This general conclusion is subject to modification in the light of the more detailed facts of specific industry or market situations.

While existing-firm entry draws rather good marks on the tests of market performance, it does not rate so well with respect to broader social and political criteria. At least, more questions remain unan-

swered. Although the concepts of "bigness" and "concentration of power" are notoriously vague, matters of real social significance may nevertheless exist within them. In so far as the public relies on entry to preserve or restore an individualistic form of society, entry by already-established firms cannot take the place of entry by new firms; if the latter is absent, the benefits will not occur. In fact, to the degree that it tends to enlarge big business, established-firm entry may bring a number of results that many citizens would hold to be plainly undesirable. Unfortunately, however, the whole question of the social and political results of "big business" has been more characterized by rhetoric than by research.

HOWARD H. HINES.

IOWA STATE COLLEGE

The CHAIRMAN. All right, Mr. Martin. You may proceed.

**STATEMENT OF WILLIAM H. MARTIN, PENNSYLVANIA STATE UNIVERSITY**

Mr. MARTIN. I have placed a prepared statement in the hands of the committee. I would prefer not to take your time in reading it, but instead may I elaborate on one or two of its major points?

Senator BUSH. Mr. Chairman, it is not a very long statement.

Would you mind reading it? I think it helps to get the background of your statement if we move through your statement first.

Mr. MARTIN. Could I then add subsequently to the remarks that I have?

Senator BUSH. Yes, anything you want; but I think it helps us to get your basic statement first.

Mr. MARTIN. I would be happy to read the prepared statement.

In recent years, economists seem to have become increasingly disenchanted with attempts to measure "degrees of monopoly." After an extended flurry of activity in this direction, attention to this particular problem has lost much of its interest. In part, this is a result of apparently insuperable difficulties that lie in the way of measurement, but a more valid explanation, I suspect, is to be found in the perhaps belated recognition that the qualitative features of monopoly are so much more important (and more difficult to ascertain) than its quantitative ones.

Monopoly is essentially a power phenomenon, not necessarily related to size of firms, and is important in both market and nonmarket aspects. And in both it consists of numerous dimensions which do not lend themselves readily to measurement. Particularly is this true if attention is centered on the dynamic features of business organization in an enterprise economy, as it seems to me must be done when the purpose of investigation is to discover proper guides for the determination of public policy.

Much attention has been directed lately toward measuring the degree of concentration in the American economy. The number and size distribution of firms for the economy as a whole and for particular product markets is certainly important, and measurement should be pursued. The difficulties of product and industry definition and of market delimitation are widely recognized as substantial but not insurmountable.

But it is hardly novel to point out that the measurement of concentration constitutes the starting point for an investigation of monopoly and that other features are of equal importance to assessing the degree of monopoly in particular markets. Such things as the nature and intensity of competition, the attitudes of firms toward one another (including open and tacit collusion), the number and kinds of markets in which firms sell, and factors affecting entry (including the patent situation), must be evaluated before a judgment concerning the extent of monopoly can be entered. Further, these factors must be set in a dynamic framework where the behavior of demand over time and the nature and progress of technology become important determinants of the nature and degree of monopoly or competition. Again, it is hardly original to remark that in these directions it is not always possible to quantify.



Nor am I convinced that time is wisely spent in trying further to discover whether the economy has become "increasing monopolistic." The difficulty of establishing a definition of monopoly which has a clear empirical counterpart plus the inadequacies of relevant data make pursuit of such an object rather a fruitless occupation. Again, it is hardly new to point out that we simply do not know whether the economy has become more or less monopolistic over past decades. Those who take a position one way or the other do so on the basis of uncertain evidence and by concentrating on one or a few of the many aspects of monopoly.

We do know, however, that the degree of concentration is high in the domestic economy, whether looked at from the point of view of the economy as a whole or from the standpoint of particular markets. We know also that concentration is a necessary ingredient of the exercise of monopoly power. Moreover, although concentration statistics do not prove it, we know from a long history both of academic investigation and the pursuit of antimonopoly policy by public agency that a substantial number of domestic markets are subject to monopolistic administration. I want to make clear, therefore, that nothing in my doubt concerning measurement is to be interpreted as denying the importance of the problem.

I think it especially appropriate that an inquiry into the factors affecting growth and employment include an investigation of monopoly. The maintenance of full employment and a satisfactory rate of economic growth does much to rob monopoly of its sting. No one, of course, would argue that full employment automatically solves the monopoly problem. But I think it can be granted that in a fully employed economy there is a lessening of pressures on firms to exercise monopoly power and, where exercised, a mitigation of social consequences. In addition, forces are set in motion which tend to reduce monopoly power. A growing economy is marked by expanding markets, which in turn invite new entry and invasion. Competition becomes more vigorous as firms become stronger, have more ready access to capital, and want to grow. Innovation is encouraged and in a number of instances positions of monopoly power are eroded. Though the income distribution aspects of the problem remain significant, the efficiency aspects are less important.

Where full employment does not prevail, however, firms are under additional incentive to engage in restrictive measures at the same time as the initiative of potential new competition is dulled. The employment problem is compounded by the restriction of output which ensues.

Equally important and of perhaps greater interest to this committee is the impact of monopoly on economic growth. As growth is the enemy of monopoly, there is good reason to believe that monopoly is equally the enemy of growth. One can appreciate the "process of creative destruction" without conceding that monopoly is a superior agency for inducing economic change. But I hasten to confess that we remain quite uninformed of the relation between innovation and economic growth on the one hand and such things as market structure, degrees of monopoly power, and the underlying nature of technology on the other. Here certainly is where the time dimension is overwhelming in its significance to the main issue and

where, by virtue of this fact, common indicia of monopoly power frequently lose much of their meaning.

Perhaps I can give some concreteness to my remarks by referring to the field of industrial chemicals, with which I have some familiarity through study. By commonly accepted measures the industry would have to be regarded as monopolistic, some would say, I am sure, rather highly so. The industry is highly concentrated, with a few giants towering over the remainder. In a large number of specific product classes there are few producers, at times not more than two or three. Prices are relatively inflexible over long periods of time and clearly fall within the administered category used by some. Profits have been high, in the aggregate and on specific products. The industry is very difficult to enter on a significant scale. Finally, there is enough evidence to support specific charges of monopolistic control. And yet it is my impression, although I am not prepared to document it completely, that the industry is highly competitive. In this instance, I would urge that competition takes the form of new product and process innovation. I want to deny explicitly that a high rate of innovation occurs because the industry is concentrated or, by other measures, monopolistic. I have seen no evidence to support such a conclusion, nor do I believe it to be so. The tangible results of such competition include a high rate of technological progress, rapid growth of output, long-run lowering of prices, the obsolescence of products and processes, radical changes in end-use patterns and repeatedly the invasion of growing markets by firms within the industry. Not to be overlooked is the extension of competition to other fields as, for example, plastics and synthetic fibers have invaded the domain of older materials. Such results are to be observed most strikingly over the past two decades which, I needn't remind you, have been years of high employment. It is my impression that the chemicals industry is more competitive than formerly primarily because expanding markets provided the incentive to the kind of competition I have observed.

To close on a more general note: Regardless of the form that monopoly takes—and there are many—its exercise represents most importantly the administration of private power structures. In the absence of policy designed to discover and restrict such power we can only hope that it is used benevolently, even while we suspect highly that it will in practice be used to advance selfish interest. Regardless of how monopoly power is used, society is entitled, indeed required, to ask itself repeatedly, "What are the consequences? Is this the way we want it to be?" These, I trust, are the questions to which this committee ultimately seeks answers.

The CHAIRMAN. Did you wish to expand on that at all?

Mr. MARTIN. The only thing I have new, Mr. Chairman, concerns the possible expansion of monopoly power over the past two decades. Mr. Hines has indicated that concentration apparently has not increased in recent years. In fact, there is some evidence that there has been an actual decline. Now I have indicated the difference between talking about the degree of concentration, on the one hand, and the degree of monopoly on the other. So I would not want to argue exclusively from concentration data that the degree of monopoly has not increased.

However, I do not think that we are completely in the dark, and observation suggests a number of other factors over the past two decades which in my judgment have acted to limit the extension of monopoly power in the United States.

May I summarize them briefly?

The CHAIRMAN. Yes.

Mr. MARTIN. One, this has been a period of high income and expanding markets, which has encouraged entry into new markets, including competitive imitation of new products.

Two, this has been a period of dynamic technological change, with the rapid introduction of new processes and products, including new materials.

Senator BUSH. What period, now, are you talking of?

Mr. MARTIN. I am speaking of the last two decades. In other words, I am confining these remarks to periods when we have had substantially full employment.

These conditions did not prevail, and so, consequently, you did not have these limitations on monopoly power operating during the 1930's.

Senator BUSH. During the 1940's and the 1950's?

Mr. MARTIN. Yes, sir. This I take it is the question: Has there been an increase in the extent of monopoly power in the United States? And I confine my attention to the recent two decades. I think these are more relevant, really, to the making of public policy at this time.

No. 2, I have referred in my prepared statement to the effect of technological change—may I back up? I have covered this point.

No. 3, antimonopoly law has discouraged monopolistic practices. The past two decades have seen more vigorous enforcement than any previous period; at the same time, a broader interpretation of the Sherman Act by the courts has brought more practices and conditions under proscription than had previously been the case.

As Professor Heflebower has put it, and I quote:

The Department of Justice occupies a chair, figuratively, in all business councils.

No. 4, internal financing resulting from large profits has been used by businesses to expand product lines, which has in turn has involved the invasion of other market fields by established firms.

No. 5, barriers to foreign trade have been reduced somewhat.

No. 6, fair trade has broken down in some geographical and product areas, enhancing competitive forces not only in retail distribution but at the manufacturing level as well.

Of course, there have been offsetting forces. Increasingly, research tends to be carried out most aggressively by the very large companies. In numerous cases two or more large companies have formed joint ventures for the development and production of certain products. Defense contracts go largely to the very largest companies. And, if I might sound an ominous note, these contracts are most important in those fields where technology is advancing most rapidly.

Very little seems to have occurred to dislodge local monopoly, where a substantial amount of power rests with the service trades, professional groups, and the construction industries. These are areas,

too, where Federal law does not reach effectively, since they frequently, almost always, in fact, do not involve interstate commerce.

The question here is the change in the degree of monopoly, and I doubt that these forces are any stronger now than they were a decade or two ago.

I might, in closing, simply reenforce Mr. Hines' position by saying that, although we need not share alarmist views concerning the incipient spread of monopoly, there is equally no call for complacency. Though apparently not increasing, concentration has extended far enough through the economy to lead us to suspect that monopoly, or oligopoly, is common enough to warrant increased vigilance and continued careful study of the problem.

The CHAIRMAN. Senator Bush, do you wish to ask any questions?

Senator BUSH. Thank you, Mr. Chairman. Let me first ask Mr. Hines—Mr. Hines, how do you define monopoly power, for the purposes of analyzing actual market situations? How could we define it?

Mr. HINES. That is an eminently fair but horribly difficult question.

Senator BUSH. Well, it is a difficult subject we are on here.

Mr. HINES. Quite right. I just say it is very difficult.

Senator BUSH. Can you give us any general definition which you think would help?

Mr. HINES. I think the briefest and clearest definition of monopoly is control over the supply of some goods or service.

Senator BUSH. Control over—

Mr. HINES. Over the supply of some goods or service. The problem then becomes one of defining the goods or service and the market in which this control over supply takes place. And this is where you get into the difficulties of comparing goods which are identified as a census product, for example, but which have perhaps substitutes in other census product categories. Also the problem of defining the relevant market is difficult. Is it an industry which is unconcentrated in the national sense but quite concentrated when you take account of regional and local markets?

These are the difficulties of it. But the basic definition is control of the supply of some goods or service in a designated market.

Senator BUSH. Do you feel that we have a dangerous degree of monopolistic power existing in our business community today?

Mr. HINES. Well, the word "dangerous" is perhaps an important word.

Senator BUSH. Well, dangerous to our general economy, economic growth, and the general welfare of the Nation.

Mr. HINES. Yes. I feel this way, sir: That there is enough monopoly in our country that we should be concerned about it from the point of view of public policy.

I would put it this way: If you made a study and quantified it as best you could, of the percentage of ill health that there is in the United States as a physician might count it, I suppose you would find that the percentage of ill health had declined in the last 50 years. But I think we still need doctors. And my impression is that whether or not the amount of monopoly has increased or decreased—it possibly has decreased—there still is enough that it should be a very important area for public policy.

Yes, I certainly feel that way.

Senator BUSH. Do you have the feeling that some of our big corporations are getting too large; that with this size goes an element of power and control over our economic life that seriously endangers our economic growth and economic stability and the economic welfare of our people?

Mr. HINES. Well, I think we certainly have seen a growth in the size of businesses. It is not necessarily the same thing as a growth in the amount of monopoly, where the market itself has also expanded, but we have seen a growth in the absolute size of businesses, measured by number of employees, assets, value added, and other relevant measures.

Now my own feeling is that a good many benefits have come out of a good many of these companies. There is no doubt but that a good deal of good has come from them. My feeling also is that a good many problems have come up out of these.

Some of these relate to specific product markets—bigness, mainly monopoly. Some of them relate perhaps to broader political and social problems. Even where there is no monopoly, a large organization may create problems for its employees, leading their own lives, this kind of thing, about which there has been a good deal of discussion.

In relation to government, the public relations kind of thing; and it centralizes the power, in that sense. I did deal with this a little bit in this article which I have submitted for the record, no doubt in a more exact way than I could do on the spur of the moment here.

Senator BUSH. Well, it is a very difficult question, this question of size, and I am not surprised that you have not got exactly the positive single answer that helps us.

Mr. HINES. Well, it is ambivalent, I think.

Senator BUSH. We are faced with some very difficult decisions. I mean we have our defense problem, as Mr. Martin mentioned, I think, and the fact that a great deal of our defense business naturally goes to the large companies, because they are equipped to do it, and without them I do not know just how we could handle our defense problem. So that one faces a real dilemma on this question of size, as to companies like General Motors and General Electric, and some of the aircraft manufacturing companies—whether their size is actually a threat or a blessing to our situation as we find ourselves in it today.

Are either of you gentlemen proposing any measures which the Congress should take? After all, that is what the basic purpose of a congressional investigation is. It is to try to get some guidance. Are either of you making any recommendations as to courses the Congress should take in relation this whole matter of monopoly and size?

Mr. HINES. Speaking for myself, I did not go into that in my statement this morning, owing to the understanding that I was supposed to stick more specifically to the question of changes in concentration, and with the understanding that the committee would hear from others who would prepare specific statements. I certainly am in favor, in general, of antitrust policy. I think the existence of an active antitrust policy in the United States may well have been one of the factors which has helped the chemical industry in this country behave as well as it has. I do not know if Dr. Martin would agree, and he knows more about this than I do. But this is another potential force, which is quite different from the European chemical situation and

quite possibly from the behavior of our own chemical companies in the international markets in the past.

I certainly support a vigorous antitrust program. Now as to the details of just how it is to be carried out, I realize there are a lot of problems there that are fascinating ones.

Senator BUSH. You are not making any recommendations for legislation that you think would be helpful?

Mr. HINES. I would not care to present any specific ones this morning.

Senator BUSH. I did not mean in the form of a bill that is all written out, but in a general recommendation as to legislative action that you think would be helpful. I am not trying to force you to make one if you do not have it. I take it you do not have it.

Mr. HINES. I do not have a specific one this morning.

Senator BUSH. Do you have any specific suggestions along that line, Mr. Martin?

Mr. MARTIN. No, sir; I have not, and it would be presumptuous of me to try to outline even what a bill might contain.

I do believe this, however, if I might inject one positive note here: I referred in my statement to the possible impact of the defense program on the degree of monopoly, and you showed some interest in this question. I see no evidence that the defense program was evolved with any consideration of the impact that it might have on the structure of American industry.

Now in this connection, I would call for a study of this particular aspect of the monopoly problem and ask that in the future, when defense programs have got to be evolved, some consideration be given to the impact of the program on the structure of American industry, something which I think we have overlooked completely in the present rearmaments period.

Senator BUSH. You mentioned in passing the question of the fair trade law. Would you care to comment upon that as to whether you think that is a desirable act, or not?

Mr. MARTIN. I think the best comment that I can make, Mr. Bush, is to refer to the study of a former colleague of mine, Prof. Edward S. Herman, now at the University of Pennsylvania, who has reported in an article on the fair trade laws published in the *George Washington Law Review* of June of 1959. Professor Herman concludes that fair trade—and now I quote him—“has permitted restraints on a primary and desirable form of competition far beyond loss leader control.”

And, of course, here he is referring to the common defense of fair trade measures, that it is intended to prevent the employment of loss leader selling in distributive outlets.

He refers also to the argument that fair trade is necessary to protect manufacturers, dealers, and consumers against the depredations of unrestricted price cutting. Professor Herman admits the argument to have some force but, and now I quote him again:

It is not convincing when balanced against the broadly anticompetitive ends and consequences of fair trade, its wide scope for abuse, and its neglect of consumer interests.

And then finally may I quote him again:

Fair trade has been used with the greatest of effectiveness by very sizable firms, who have been enabled thereby to capitalize to a maximum on the potential monopoly power generated by their large advertising expenditures.

I think, Mr. Bush, you would find a wide degree of support among economists for the conclusions which Professor Herman has reached after a very careful study.

Senator BUSH. In other words, he cannot justify them as essential to our situation?

Mr. MARTIN. That is correct, sir.

Senator BUSH. Neither of you has touched on a question which recurs from time to time, which is the question of the exemption of labor unions from the antitrust laws or anything like them. And it has been said that it would be difficult to put the unions under the antitrust laws, because they were not written for that type of thing. But there has been some suggestion made that we should have a new body of law, which would apply to the monopolistic powers or supposed monopolistic powers, alleged monopolistic powers, of the unions.

I wonder if either of you would care to comment upon this question of the growing monopolistic powers of the labor unions; or both of you.

Mr. MARTIN. Senator Bush, in the field of economics, there is an extensive degree of specialization; and behind this wall of specialization, may I plead ignorance of the particular problem which you have raised. We have our own monopolistic coloration, you see, and I do not want to impinge on the field of specialists.

Mr. HINES. I agree with much that Dr. Martin has said this morning, and on his statement about ignorance I also concur. I have not studied the problem specifically. My impression is that if controls are needed—and I certainly think they are worth considering—they would not be of the antitrust type. But further I really should not go. You just would not learn anything from me if I did.

Senator BUSH. This is a very difficult question. I am not surprised that you do not have any recommendations for us on it. But it is a question which I think is going to be facing the Congress in the years ahead, as it already, I think, is facing us now.

Mr. Chairman, you have been very generous, here. I will yield back.

The CHAIRMAN. I was much interested in my good friend and colleague's exploratory operations in feeling out economic sentiment as to whether the Philadelphia court decision in a case of 1809, I believe, should be placed on the statute books of the Congress. I was very much interested in that.

Senator BUSH. I do not get the reference. I am sorry.

The CHAIRMAN. That was a decision by Mr. Justice Levy of Philadelphia saying a combination of workers to raise wages was monopolistic and hence illegal under the common law, and thus punishable under the common law. So, as I say, this is interesting and is perhaps a premonition of things to come.

I would like to ask both of you whether you think Joan Robinson's view on the economics of imperfect competition still holds up. I thought it was a very sound piece of work.

Mr. MARTIN. I think the best answer I can give the Senator is to refer, probably inaccurately, to Mrs. Robinson's comments on the book at the meeting of international economists devoted to the question of

monopoly and competition held 3 or 4 years ago. Mrs. Robinson expressed surprise that the book is any longer read, although she evidently was proud of having written it at the time. But she quite obviously felt that it is dated, and that its contribution to the particular questions that that convention was considering, very similar to our questions here this morning, is distinctly limited—primarily, of course, because of the static framework in which the theory was developed.

The CHAIRMAN. It establishes on geometrical and mathematical ground lines of reasoning which seem to be incontestable and conclusions which seem to me important. Check me as I proceed, to see whether my memory is accurate.

As I remember it, the differentiation between imperfect and perfect competition is that under perfect competition the fraction of the total part produced by any one firm is so infinitesimal that charges in the output of the firm have no effect upon price, and that therefore the additions to total revenue, which we may call marginal revenue, will be identical with the price per unit, and that therefore there will be equilibrium where marginal cost, or perhaps in the long run average total cost, will be equal to the price. This is the competitive situation.

But under imperfect competition, the output of a given firm performs a sizable fraction of the total output, and therefore expansion in its output will cause the price to fall, and this will cause a still greater decrease in the additions to revenue, or the first differences, so to speak. Marginal revenue will fall, and fall approximately twice as rapidly as price.

Now under these conditions there will be an equilibrium where output will be determined at the intersection of marginal cost and marginal revenue, which will be a smaller output than you would have under perfect competition.

Is my memory accurate thus far?

Mr. MARTIN. Indeed it is.

Mr. HINES. I think it is very flattering to have Senator Douglas ask us whether his memory is accurate of the book—for a person of his distinction in the profession.

The CHAIRMAN. The more imperfect the competition is, and the closer the market approaches complete monopoly, then the greater the difference between the output which you get under monopoly and the output which you would get under perfect competition; with the output always being less under imperfect conditions than under perfect, and being still less the more monopolistic the market is.

Now, under those conditions you do not have maximum employment of labor and capital, and the labor which is not employed in monopolistic industries, or in the imperfectly competitive industries, is shunted into the competitive industries, or less monopolistic industries, with the inevitable result of lowering prices and marginal productivity in those industries.

Now, therefore, can it not be said that on the surface of the case you get an expansion of output by diminishing the degree of imperfect competition and monopoly in the industries which are characterized by these forces?

Mr. HINES. You get a better mix of the products.



The CHAIRMAN. And you raise total social productivity, do you not, by transferring labor and capital from areas of low marginal productivity to areas of higher marginal productivity?

Mr. HINES. A better use of resources. That is right.

The CHAIRMAN. That is right.

Yes, Mr. Martin?

Mr. MARTIN. I would point out, however, Mr. Chairman, that the validity of what you say may be confined by the static framework of the analysis. I think it was Professor Schumpeter who pointed out that this analysis, all of what you say, is correct only if you have the same cost and demand curves. But it is an open question whether in any real case in the real world you would, in fact, have the same demand-and-cost curves in the monopolistic situation as you would have if the industry were competitive. I think even so, your conclusion is justified: that since entry is blocked into monopolistic industries, resources do not respond to the apparent demand preferences of the community, and in that respect the total social product is reduced. But I would prefer to view it in terms of blocked industry, rather than in terms of the firm's response to specific cost and revenue functions.

The CHAIRMAN. As I understood Mr. Hines, while he was emphasizing the importance of conditions of entry into the industry, and probably emphasizing that the possibility of entry was greater than is sometimes believed, these are mitigating factors to monopoly, but they do not remove the reality of monopoly or of control by a few firms, which we call oligopoly. Is that not true? Those are mitigating factors, but they do not remove the tendency which we deal with?

Mr. HINES. That is right. You quoted me correctly. They mean that the situation is more competitive than is sometimes believed.

The CHAIRMAN. That is right.

Mr. HINES. But this does not mean that it is necessarily as competitive as it should be, and also does not mean that these forces operate effectively in every market.

The CHAIRMAN. So that the case is strong for trying to get more competition and to diminish the degree of oligopoly and monopoly.

Mr. HINES. I certainly agree, in general. And I think there is practically no chance that we will push it too far in the other direction.

The CHAIRMAN. Now, there is another point. And perhaps Mr. Martin will not agree with me on this.

Under monopoly or highly reduced competition you would tend to have a higher unit price than would otherwise be the case, and a higher rate of net profit. To the degree that this continues, because of imperfect entry of competitive firms, then does not this mean that this industry will absorb a larger quantity of net monetary purchasing power, which is sometimes referred to as aggregate money demand, created by the banking system, than would be true in a competitive society for a given volume of output? And does not this withdrawal of monetary purchasing power from other industries create leftward shifts of the demand for these industries, and lower prices than these industries would otherwise have? Therefore, the injury that monopoly has is doubled. On the one hand, it does not absorb its full share of capital and labor. On the other, it absorbs a larger quantity of monetary purchasing power—unless the total money supply expands

proportionately. But if the general policies of the Federal Board, let us say, are carried out, and then the total aggregate demand remains the same, then the more that goes into the hands of monopolies, the less must go into the hands of competitive industries. So that the evil is a dual one.

What would you say as to that?

Mr. MARTIN. I would not be inclined to agree, offhand, at least on the basis of your analysis that unit costs would be higher for monopoly.

The CHAIRMAN. I am not saying costs; I was saying prices.

Mr. MARTIN. Excuse me. I thought in the beginning you had mentioned higher unit costs.

The CHAIRMAN. No.

Mr. MARTIN. Prices may or may not be higher under monopoly. And this, of course, would depend on the behavior of costs.

The CHAIRMAN. If less is produced with a given demand curve, the unit price will inevitably be higher, because the demand curve for a product is negatively inclined. And if you have a smaller quantity produced, the unit price will almost by definition be higher.

Mr. MARTIN. But this is assuming, it seems to me, that in the alternative situation, full competition, the cost curve would be as low for all firms as it is for the single or few firms—

The CHAIRMAN. Yes. That is true. But I mean assuming that the cost curves are identical, so far as the demand curves are concerned, the fact that the demand curve is negatively inclined would mean that with less produced than would be true under perfect competition, unit price would be higher.

Mr. MARTIN. On the basis of that assumption, that is correct; yes, sir.

The CHAIRMAN. Then the question turns on whether the large firms can reduce the cost curve by the fact of its size sufficiently so that the ultimate equilibrium will be moved along on the quantity scale.

Mr. MARTIN. Yes, sir.

Senator BUSH. Apropos of my good friend the chairman's comment about that Cordweiner decision—

The CHAIRMAN. That is old American for Shumakers.

Senator BUSH. Yes. I appreciate that advice, as well as what I have gotten from my friend on my right here, in which he points out for my benefit that there is a distinction between local unions and international unions. And that the Cordweiner decision even applied to collusion between two workers within a single plant. Clearly, the issue regarding union antitrust holds for the case of joint action by several local unions, and so forth.

The reason I raised it is because in the last year or two we have had actual admissions of monopolistic power from Mr. Hoffa of the Teamsters Union, in which he has even threatened, I believe, to, or has boasted, that he could bring our whole economy to a halt if he chose to do so, and he has even mildly threatened to do so on one or two occasions.

The CHAIRMAN. May I say I think Mr. Hoffa—

Senator BUSH. Just a minute. My point is that this reflects a degree of monopolistic power that I do not think we can overlook in analyzing the effects of monopoly in our national economic life, or

the dangers of monopoly. It presents a phase of monopolistic power with which little has been done in the way of congressional investigation. So it was for that reason that I offered the inquiry to the gentlemen, to see if they had any comment to make on it.

The chairman quickly jumped to the conclusion that this is a fore-runner of things to come. I do not know whether it is or not. As far as I am concerned, it is a bona fide inquiry of two witnesses here to see whether they have given any thought to this phase of monopolistic power.

So much for that, Mr. Chairman.

The CHAIRMAN. May I interject?

Senator BUSH. I am sure you will, so go ahead.

The CHAIRMAN. I may say that I have no more respect for Mr. Hoffa's economic policies than I have for his political affiliations.

Senator BUSH. Well, I am not familiar with his political affiliations but I have a lot of respect for his economic power, including fear of it.

What are his political affiliations?

The CHAIRMAN. He is a very ardent Republican.

Senator BUSH. Is that so? Well, I did not know that. And I am sure that out of the 20 million Republicans, we may have a few on the list that we are not proud of. And that might also apply to your party.

Now, gentlemen, we will get back to something a little more in your area. The Robinson-Patman Act has not been discussed here this morning. Have you any comment to make about that? I asked you about the so-called fair trade laws. Robinson-Patman is a restrictive law, I believe, that is in general conflict with the Sherman Act, and with the purposes of the Sherman and the Clayton Act. Would either of you gentlemen care to comment on that? On the Robinson-Patman Act? As to whether we should revise it or abolish it or amend it?

Mr. HINES. Again, I had not prepared anything specific on the legislative aspects this morning.

Senator BUSH. Well, what is your appraisal of the usefulness of that?

Mr. HINES. I share your doubts about whether it and the Sherman Act are aiming at the same thing. Offhand I suspect that there are a good many problems that need to be looked at in the Robinson-Patman Act. I have some doubts about it. But today I did not bring a specific brief on that and would rather not make a statement that I would be wanting to question myself on another day. I am sorry. I could well have looked into that. I am not totally ignorant of it. But I am not prepared specifically.

I liked your initial statement, though. I think there are some problems there.

The CHAIRMAN. I would like to ask the question whether in the case of giant companies, such as General Motors or United States Steel, it is necessary to have these companies as huge as they are in order (a) to get the benefits of research and development, and (b) other alleged efficiencies; or whether, for example, in the case of General Motors, if you split General Motors up into a number of companies, each producing a given car, you would get as great or

greater efficiency. I wonder if you have any opinions on that subject.

Mr. MARTIN. Mr. Chairman, your question underwrites a pet position of mine, that what is really called for in this field is a much larger number of case studies of how particular industries and markets in the United States operate. I am sure that no one can appreciate better than you the difficulties of answering the sort of question that you ask. It is the very kind of a question to which you do not give an offhand, off-the-cuff answer. I doubt that anyone, except one who has studied very carefully the automobile industry and the steel industry, could give a meaningful answer to your question and buttress it with sufficient empirical evidence to make his statement convincing.

I am sorry to have to appear evasive, but I do feel that much scholarly research is needed before we can get answers to the sorts of questions—

The CHAIRMAN. The public expects us to give answers before we have the full information we feel is necessary.

Mr. MARTIN. But life frequently becomes more difficult because we give uninformed and therefore, wrong answers.

The CHAIRMAN. How long would it take to determine that—as to the comparative efficiency of General Motors as one company or subdivided into a series of companies? Could you find it out without making an experiment?

Mr. MARTIN. I feel that a careful study could uncover the evidence that would permit an informed answer. I do not think that in this case experimentation would be needed. Now, again, as to how long it would take, that depends on how long your time horizon is. If you visualize this economic system of ours as lasting quite far into the future, then the time might not be viewed as too long. If you feel that legislation must be enacted in the next session or the present session of Congress, then, of course, you have not the time to conduct the sort of investigation that I am calling for. I do not visualize an inquiry that would extend over the next two decades.

The CHAIRMAN. What about chemicals? Do you think the efficiency of General Motors or Du Pont would be hindered by formalizing the divestiture by Du Pont of General Motors stock? Is that going to help General Motors?

Mr. MARTIN. I can see no connection between divestiture by Du Pont of General Motors stock and the efficiency—

The CHAIRMAN. Will it have any effect as to Du Pont?

Mr. MARTIN. I cannot see that it will.

The CHAIRMAN. Suppose, as to chemicals, you were to split Du Pont up? Do they have a separate research establishment? Or does each subdivision have a research section?

Mr. MARTIN. There is, of course, a great deal of specialization in research as well. And again I answer the question on the basis of incomplete information. I am of the impression that this firm need not be as large as it is to achieve the research and operating efficiencies of large scale. But I hasten to add, again, that I cannot document this position with an exhaustive array of statistics.

The CHAIRMAN. Is there not such a thing as an organization growing so large that the general public do not know what is happening down below?

Mr. HINES. The managers seem to spend a good deal of time in trying to ascertain what is happening below and accordingly shaping their supervisory policies.

The CHAIRMAN. Presumably this would be a rather real barrier for efficiency. You say studies should be made. Who should make them—the Antitrust Division or Federal Trade Commission or Congress? Should we wait for the economists—

Mr. MARTIN. As to who should make them there is no question. They should be made by economists. It is under whose auspices—this is another question.

It might be under the auspices of a privately sponsored research organization. It might be under the auspices of governmental agencies. It might be under the auspices of the Congress itself.

The CHAIRMAN. The Kefauver committee has had a number of studies made on steel, on drugs, and so forth. We have no particular pride of investigation here, but do you think those studies lay a basis for action at least in those fields?

Mr. HINES. The ones I have seen have been very useful. May I comment a little bit?

The CHAIRMAN. Yes.

Mr. HINES. I feel that where it is a private investigator or an impartial agency, such as the academic institution, or something of that type, you presumably have a kind of scientific detachment which is hard to achieve where the study is made by the company itself, or sometimes by some Government agencies.

But on the other hand, it is very hard for us to get information about these industries. We don't have the power to persuade people to tell us how they run their businesses in the way—well, either the Antitrust Division or a congressional committee does have.

So the best academic studies invariably have to rely on raw material which has been gotten up generally by Government agencies, although very often with a lot of help from the companies.

Good people make good studies. Dr. Martin made a good study in synthetic ammonia.

I think when you have made one such study, you don't become evasive about discussing that industry. You have a feeling that questions should be referred to the man who studied that industry, and I will talk about my industry, and so on.

One learns a lot from these studies. May I stick my neck out?

Senator BUSH. Mr. Hines wishes to comment.

The CHAIRMAN. I beg your pardon.

Mr. HINES. I said, "May I stick my neck out?" I think that caught an ear.

I would have the feeling that a good many of our companies are tremendously large. I am willing to harbor a presumption that they need not always be so large and I would be willing to predict that a good many studies—without necessarily identifying the companies, as I certainly shouldn't do—I would be willing to predict that a good many of them would show that they could well be smaller in size.

However, the job of splitting a company up also introduces some problems. It introduces the problem of expectations of business management about the future of their companies, and so on, which are difficult to carry out in the antitrust sphere.

I don't think one needs to frighten business leaders by the kind of public policy that is designed to regulate business. I don't think that anything like that is implied at all.

I think sometimes the suggestion that a fairly widespread policy of splitting up companies might be followed by—I say “might” have—bad effects on business morale.

So that if you end up where it would appear that no real losses to the country would occur by operating businesses in smaller units—not necessarily tiny ones, but smaller ones—then the job of how to accomplish that would be still another problem and a difficult one.

If I had to bet, I would bet that a lot of these investigations would show that a lot of the companies are too big.

Again it would be unfair to everybody for me to say just where these—

Senator BUSH. When you say it is too big, what do you mean by that? Too big for what?

Mr. HINES. I was thinking of Senator Douglas' suggestion that there are no economies, no reduced costs per unit from operating on the scale on which they operate, and possibly the more difficult question of whether the research efficiency of the companies requires operations quite as large as some of them have.

Senator BUSH. I am not trying to justify the size. But I just do not quite see what you mean by too big.

Do you mean they become less efficient because they are so large?

Mr. HINES. This is a possibility; or that no loss in efficiency would occur if they were smaller and possibly some gains from the points of view of decentralizing power in a general social and political sense. I think these are questions of fact.

Senator BUSH. The danger from being too big, the danger from exaggerated size, would be in a monopolistic power which could be used to the disadvantage of the public.

That, I think, would be a measure of what was too big.

In other words, where you have a degree of monopoly that could be used to raise costs, to restrict sales, and otherwise have a harmful effect on the country itself.

But it is not clear to me yet, although I am concerned about this problem of size, very much so, and have been for some time—but it is not clear to me yet that the lack of competition exists in some of these industries where the size is very great, as, for instance, in the motor field.

The competition appears to be very severe in that field and getting more tough almost daily, as we are faced with increasing imports from abroad and increasing activity by some of the smaller companies, such as American Motors.

So I do not think any case has been made before the Kefauver committee yet, from what I have seen of it, that would indicate that the size has yet created a monopolistic power which is obviously deleterious to the national interest.

That is what we are interested in finding out, whether it is or not.

The CHAIRMAN. If I may make a comment on what my good friend and colleague has said, I hope he will forgive me if I say that I think he has fallen into a common error by contrasting perfect competition to one side and complete monopoly on the other, that is where

one firm controls the entire supply. The actual cases are a scaled intermediant between these two streams, where a given firm will produce a fraction of total supply and, therefore, have an effect upon price, and having an effect upon price will cause its increases to total revenue to form more rapidly.

The more imperfect competition is, the greater the fraction of the total output which a given firm produces, and then the more effect upon price and changes in output of this one firm.

Since the price will fall not merely on the last unit, but on all the preceding units, the decrease in the increments of total revenue is greater.

Therefore, assuming given cost curves, the result is less output in comparison with what the output would be under competition and hence the smaller the market for labor and for capital with a resultant overflow into the more competitive fields. This will lower productivity there.

The other point that I mention, namely, the price per unit, will be higher. Thus for a given quantity of monetary purchasing power or monetary demand, they will withdraw monetary purchasing power from these other industries.

So prima facie I would say that the more imperfect competition is, the worse it is on this point. It will have to be compensated for by other factors, such as lower costs to make up for the disadvantages in the field of employment and production and prices.

If you can prove that the compensating advantages of lower cost will come from larger and larger concerns, that would be an effective argument, but I would say the burden of proof is distinctly against big business.

Senator BUSH. If you are talking about the motor industry certainly the price of automobiles has come down in respect to what it was 4 years ago, very substantially.

As the market has increased and production has increased enormously prices have come down and the market has broadened back to a point where practically everybody has an automobile.

The CHAIRMAN. I certainly will not deny the advantages of large scale production, but I would like to make this comment, if I may, that we sometimes confuse the productive advantages with the marketing advantages and with the financial advantages of largeness. The productive advantages of marketing of large scale are largely confined to the individual factory, not wholly, but largely individual factory.

This has caused large individual factories, joining together factories producing substantially similar products. The advantages here are marketing advantages which come from being able to purchase raw material cheaply, let us say. But the advantage of doing this is a disadvantage to the people who sell the raw material.

So I think it cannot be argued that it is a net social advantage. Simply a financial advantage.

Senator BUSH. It is not necessarily a disadvantage for the selling of raw materials. They can sell it in bulk and volume. They do not have to charge so much for it.

The CHAIRMAN. If they sell the same bulk to half a dozen different companies instead of selling the same bulk to one company. It would

apply to the sale of corn flakes, but I do not think it would apply in the case of raw materials.

You see the Senators argue with each other, which I suppose is the goal of every witness.

Do you have any comments?

Mr. MARTIN. I might add another common source of confusion with respect to competition among the giants. Frequently, what appears to be competition, and I am sure in the minds of the businessmen it is competition, turns out to be not the sort that is particularly socially useful. It is quite possible, for example, that this kind of competition that we are talking about now will take the form largely of excessive advertising expenditures or inconsequential changes in the nature of the product.

I am sure that any businessman views this as competition and when he is engaged in such a struggle he sees himself as engaged in a competitive struggle.

My only question is this: Is this the sort of competition that we want?

Is this the kind of competition that results in the socially most useful product mix?

The CHAIRMAN. Have you any further questions?

Senator BUSH. No.

The CHAIRMAN. There was one question that I would like to raise. I do not want to be an economic psychoanalyst and probe the subconscious depths of your mind.

But one factor puzzled me. You seem to say that it is so difficult to evaluate whether a monopoly has adverse effects or not, that you do not wish to pass judgment. Yet you both believe that the antitrust laws should be rigorously enforced.

What I would like to ask is this: Have you not really on the basis of the evidence that you have formed a judgment on that on the whole we have more monopoly in American industry than we should have; that the net effects are adverse and that we should diminish this by legal action at least?

Mr. MARTIN. Mr. Chairman, I don't think there is a contradiction here. I think we were not saying that evaluation is too difficult.

We were admitting it to be difficult, but more importantly we were saying that an evaluation requires the kind of evidence that we are not ourselves carrying around this morning in our hip pockets or in the crevices of our minds.

The CHAIRMAN. I suppose I will ask you this question: Should we enforce the antitrust act rigorously or should we put someone in the Department of Justice who would be very lax in this treatment? We have to pass on this in the Senate because we confirm the Attorneys General, and, in some cases, I guess, the Assistant Attorneys General.

Mr. MARTIN. There is no problem in my mind here, Mr. Chairman. In fact in my prepared statement I think I included a plea for continued vigorous action against monopolies. So I continue to support that.

The CHAIRMAN. So your judgment is on the whole we have more monopolies than we should have and the evil effects outweigh the good?

Senator BUSH. I do not believe that is very clear.



The CHAIRMAN. If you can draw any other conclusion—

Mr. HINES. Mr. Chairman, I said I thought there was too much monopoly.

The CHAIRMAN. Yes.

Mr. HINES. And I think vigorous public policy is desirable and general. I think our reluctance and cautiousness—apart from being more of a professional mark than cap and gown these days—is the difference between making very general statements applying to the whole of the country and evaluating a particular situation.

I don't think either Dr. Martin—

The CHAIRMAN. We are not asking you to pass judgment whether a given antitrust suit should be prosecuted.

Mr. HINES. Exactly.

The CHAIRMAN. But rather antitrust suits should be prosecuted?

Mr. HINES. And I suspect Dr. Martin and I know that I would be quite willing to give an appraisal of a specific industry which I studied in some capacity. I would be willing to make a judgment about how monopolistic it is, and whether I thought any particular finding of public policy was desirable.

The CHAIRMAN. Would you specify a given industry?

Mr. HINES. Not as of recent date. But I think the caution about a general statement does not necessarily mean there is nothing that can be done about any specific one.

But your invitation suggested that we speak this morning largely on the question of change in extent and we are aware, of course, that you are going to have a number of people later who are experts on individual laws and I think our caution is much more important on the general statement about the extent than on specific applications.

The CHAIRMAN. I understand.

Senator BUSH. I think—let me see if I get this and see if you agree with this impression: We should continue to enforce the anti-trust laws vigorously. I gather both of you agree on that; is that right?

Mr. HINES. Yes, sir.

Mr. MARTIN. That is right.

Senator BUSH. You have not made any suggestion as to how those laws should be broadened or you don't have in mind any suggestion as to how those laws should be broadened or firmed up to be more effective.

Mr. HINES. Not for this morning; no, sir.

Senator BUSH. Not for this morning. I think if you return to your domiciles and have any afterthoughts that you think would be helpful to the committee in respect to that question, the committee would like very much to hear from you. This is the real difficult problem.

What do we do about it? It is all right to say we ought to do something about it. Things are too big.

General Motors is too big. Maybe it is. I do not know. I do not think the committee has any opinion about that.

But it would be very helpful if we get some specific suggestions as to what we might do in the way of legislation.

The CHAIRMAN. Have either of you looked into the drug situation at all?

Mr. MARTIN. No, sir.

The CHAIRMAN. Or chemical industry internationally.

Mr. MARTIN. I have confined my attention to the domestic industry, Mr. Chairman.

The CHAIRMAN. There is a good deal of evidence which would indicate that in the past there has been an international price cartel in chemicals. Have you seen evidence to disprove that?

Mr. MARTIN. I take it you are referring to the chapters in Stocking and Watkins' "Cartels in Action" which gives a very vivid description of international cartelization in chemicals.

Corwin Edwards also studied the international cartel situation for a Government agency. I don't recall now which one it was.

The study contained information concerning the functioning of international cartels in chemicals, but I have added nothing.

The CHAIRMAN. Have you studied anything about basing point practices?

Mr. MARTIN. No, sir, except in the general way that any student in this area has studied.

The CHAIRMAN. Do you have basing points as instruments for uniform price policy between various companies?

Mr. MARTIN. I have not studied extensively this question beyond what anyone in this field would have a look at.

The CHAIRMAN. I have no more questions.

Senator Bush?

Senator BUSH. No, sir.

The CHAIRMAN. Thank you very much, gentlemen, for coming. We appreciate your coming very much indeed.

This afternoon we meet at 2:30. Mr. Robert Bicks, who is the Acting Assistant Attorney General of the Antitrust Division, will read a paper on evaluation of antitrust policy.

Now, the first monograph sponsored for our committee by Mr. Charles Schultz has been distributed to the press. Mr. Schultz regrets that he is not here today, but Dr. Eckstein is.

If any members of the press would like to meet Dr. Eckstein and Senator Bush and me, we would be very glad to meet with you and we can also lay out for you the schedule of the studies which are coming.

We will recess now until 2:30 this afternoon.

(Thereupon, at 11:35 a.m., the committee was recessed, to reconvene at 2:30 p.m., the same day.)

#### AFTERNOON SESSION

The CHAIRMAN. I am very glad to welcome you, Mr. Bicks. I do want to say that you and your predecessor, Judge Barnes, in the Antitrust Division, have done a very excellent job on behalf of the public, and the country is in your debt.

#### STATEMENT OF ROBERT A. BICKS, ACTING ASSISTANT ATTORNEY GENERAL, ANTITRUST DIVISION, DEPARTMENT OF JUSTICE

Mr. BICKS. Thank you, Senator. I welcome this opportunity to meet with you this afternoon. So much of our work in appearing before Congress involves fairly specific issues. Our broader objec-

tives may well tend to become obscured midst the details of particular, oftentimes complex, issues. This is a first opportunity, then, to discuss more general, perhaps more basic, questions.

Mr. Chairman, your letter inviting our appearance mentioned five questions: First, what are the objectives of antitrust policy? Second, what can we say about the "effectiveness" of the antitrust laws? Third, what criteria do we use in picking our cases and deciding where to sue and where not to sue? Fourth, what are the "major substantive and administrative limitations" of antitrust enforcement? And finally, What major changes are desirable at this time?

I pray your leave to put my entire statement in the record. It is a bit longer than I would like to burden this committee with by reading. I think I can be of more help by focusing on particular portions of it, and then answering whatever questions you may have.

#### I. THE OBJECTIVES OF ANTITRUST POLICY

First, the objectives of antitrust policy. In response, to cull from our recent Supreme Court decision:

The Sherman Act was designed to be a comprehensive charter of economic liberty aimed at preserving free and unfettered competition as the rule of trade. It rests on the premise that the unrestrained interaction of competitive forces will yield the best allocation of our economic resources, and the greatest material progress, while at the same time providing an environment conducive to the preservation of our democratic political and social institutions (*Northern Pacific Railroad Company v. United States*, 356 U.S. 1, 4).

That public interest in competition, as Judge Learned Hand put it in *Associated Press (United States v. Associated Press)*, 52 F. Supp. 362, 372) is closely akin to the interest protected by the first amendment, it presupposes that right conclusions are more likely to be gathered out of a multitude of tongues—or in the case of the market, out of a multitude of producers and sellers—than through any kind of authoritative selection. To many this is, and always will be, folly; but we have staked upon it our all.

I think the force of those two choices is dramatized by our recent visitor to this country. Uppermost in all our minds now is the economic choices before us—economic choices as to how in our country we would like to have our resources allocated and prices made. Antitrust, no question about it, stands committed to one choice, and that is to free markets, free competitive markets. We feel in the long run they are most likely to mold economic decisions that inure to the public welfare. There are other choices, other alternatives, that you are all familiar with. But we in the Antitrust Division must stand committed to the free market approach.

Senator, as you know, there are basic limitations on free market choice in a variety of areas. For example, Congress has chosen other approaches. Congress has enacted exemptions from antitrust. But at least, in terms of doing our job, we must assume, as the Supreme Court said, that by enacting the Sherman and Clayton Acts, Congress has intended that competition generally shall be the rule of trade.

Second, with these goals uppermost, what can we conclude about the effectiveness of the antitrust laws? Here mathematically precise measurement is difficult. Problems arise in isolating the effects of antitrust enforcement from perhaps related economic factors as (1)

changes in demand, (2) changes in technology, (3) introduction of new products and elimination of old ones, (4) appearance of new industries producing new competition for old ones, and (5) cyclical and long-term movements in business and prices.

Beyond that, bear in mind at least one significant enforcement aspect—the private treble damage proceeding—is beyond Government control and perhaps precise measurement. In the half century following the enactment of the Sherman Act, 175 private suits were filed while in the period 1947 to 1952, inclusive, 423 private suits were entered, of which more than 130 were won. (“The Role of Private Antitrust Enforcement in Protecting Small Business,” Report No. 1855, Senate Small Business Committee, 85th Cong., 2d sess. (1958).)

Here I might digress a moment. It is not as widely known as perhaps it should be that the antitrust laws are enforced not only by the Government of the United States as well as a variety of State attorneys general moving into antitrust law, but also by private parties. Congress has provided a right of action to any private party injured by reason of an antitrust violation. And it is further provided that any such party can recover threefold damages. Any effort to gage the impact of antitrust must take into account these private suits.

The CHAIRMAN. You mention in your footnote the motion picture industry. Is it true that block booking was broken up by a private suit?

Mr. BICKS. No, sir. It was first declared legal by the second circuit in the *Paramount Pictures-Lasky* case, and then that was reversed in the *Paramount* suit.

The CHAIRMAN. Was that a private suit?

Mr. BICKS. No, sir, a Government suit. And coincidentally, since you are interested in block booking, we now have pending some suits charging that movie companies are now trying to block book films to television stations.

To return to our general problem, I would be less than candid if I suggested to this committee that we can offer any mathematically precise way of gaging what good antitrust does.

Instead, what I would like to do is present to you very briefly a series of case studies. This I know is much more the pragmatic approach of the administrator than it is perhaps the methodology of the econometrician. But it is the one I am best equipped to offer to you. Limitations on data make any broad generalizations in mathematically precise terms very unwise.

I would like to first start with the typical restraint of trade case and try to suggest to you ways that this committee may feel are worthwhile to gage its impact. What do I mean by a restraint of trade case? I mean generally price fixing, a boycott to drive a particular person out of business, an exclusive dealing arrangement, your typical straight conduct case. How do you go about gaging what good such a case has done? I know that many economists feel that such cases are not of great economic utility. I myself would agree that it is probably unwise to overemphasize them. But I do feel that they have particular meaning in localities.

Congressman Curtis, for example, is well acquainted with a major section 1 case, an indictment of National Dairies, in his part of the country.

Now this, as a statistic, looks like a straight price-fixing case. But actually it raises quite graphically the entire problem of the national operator going into a local area, absorbing extensive losses in the local area, to force smaller local operators, who had been in that case using gallon jug milk sales and making a fine profit with them, to either abandon gallon jug milk sales or raise prices so that National Dairy could come in and meet their competition and sell profitably in half gallon sizes.

Now in that particular area, that case would be of quite some meaning. It will halt a practice which has been of serious detriment to a lot of small local dairy operators and to farmers. But that is a price-fixing case.

Well, I would like to suggest to you one possibility of how you measure the impact of a price-fixing case. In the *National Dairy* case, of course, the impact would be on those small operators who can sell with gallon jugs at whatever price they fix. They do not have to make a deal with National to either raise their price or be driven out.

In one other case, *United States v. Fur Shearers Guild*, we can point to a really sharp reduction in price right after our suit. The final judgment in that case was entered on March 18, 1959, requiring six defendant shearers, comprising practically the entire industry, to withdraw uniform price lists and issue new and independently prepared price lists within 30 days. The new prices reveal reductions ranging from 15 to 40 percent under the prices prevailing in 1958 and, in addition, reveal price disparity indicative of independent price determination.

I could also point to our typical bread and milk price-fixing case, where local dairies or local milk distributors revised their prices immediately following filing of the suit, bringing about a sharp reduction in price.

These kinds of suits, these essentially conduct suits, are easy to bring, easier to bring than a big section 7 or section 2 case. They have some market utility in the sense of attacking directly rigged market mechanisms. However, they do not attack directly the structure of the market, which in turn, in many cases, makes possible the rigging. I think any balanced program has got to have some of these kinds of cases in it.

There are three reasons I think so. First, because those cases bring antitrust home to a variety of people incapable of understanding the grandeur of issues involved, for example, a General Motors or Du Pont matter. They see prices rigged. They see cases brought. They see prices afterward come to a competitive level. And they receive benefit. I think free enterprise depends for its support on public understanding. This sort of case is important for that reason.

Second, I think this sort of case can in a short-term way contribute to our anti-inflation program. It can over the short term help make prices more responsive to other monetary and fiscal measures. It can, for example, if the Federal Reserve Board decides to take one sort of action designed to achieve a particular inflation impact, in the short run move in the direction of making market prices responsive.

The third reason why I think these cases have some role to play in our enforcement program is that they enable speedy treatment of the problem. They do not have the defect of time and of tremendous dis-

sipation of enforcement resources that the bigger cases do. However, by this I do not mean that a well-balanced and meaningful program should not have numerous section 2 and section 7 cases. The section 2 and section 7 cases are essentially structure cases. And these cases I would like to move on to next.

Consider next the impact of monopoly cases under section 2 of the Sherman Act. Such cases may involve complex issues of law and fact and hence are much more difficult to prepare and litigate. Processing of section 2 cases from the time the case is initiated until the time the judgment is entered may involve long periods. The effectiveness of the results achieved in section 2 enforcement may be roughly gaged by a few case histories.

And here, to complete your committee's records, I would like to submit some studies that we have been making on this problem. We have been quite concerned ourselves with the means of evaluating just what happens in a market after we sue and win. Have new companies in fact been able to come in? Apart from a theoretical win—by that I mean a Supreme Court decision saying, "Yes, ABC violated the law for this reason"—what actual economic contribution to preservation or betterment have we made?

I would like if I may to submit for your committee's record a study of some five major patent judgments which we made recently, to see what good our patent judgments are doing. They show generally that in an industry that is going to be prosperous, where there is not a thin market, patent relief can be quite effective in helping to open the market. They also show that other factors unrelated to the antitrust judgment also may have a significant influence. But nonetheless new entrants have come into markets and feel that the antitrust judgment has helped them get in.

The CHAIRMAN. Do you want to make that part of the record?

Mr. BICKS. Yes, I think that might be helpful.

The CHAIRMAN. Very well.

(The document referred to is as follows:)

ADDRESS BY ROBERT A. BICKS, ACTING ASSISTANT ATTORNEY GENERAL, ANTITRUST DIVISION, DEPARTMENT OF JUSTICE, BEFORE THE SYMPOSIUM TRADEMARK DIVISION, SECTION OF PATENT, TRADEMARK, AND COPYRIGHT LAW, AMERICAN BAR ASSOCIATION, MIAMI BEACH, FLA., AUGUST 23, 1959

I am pleased to participate in this panel discussion. As Mr. Hoge suggested, my topic for discussion is "The Interplay of Antitrust and Trademark Protection Concepts in the Import Field."

Uppermost in mind is the Government's recent perfume cases,<sup>1</sup> and proposed legislation to amend section 42 of the Lanham Act and to repeal section 526 of the 1930 Tariff Act. In the time allotted, I shall concentrate on these two topics.

#### I. THE PERFUME CASES

Helpful at the outset is a bit of background. Section 27 of the Trade Mark Act of 1905<sup>2</sup>—practically the same as present section 42 of the Lanham Act—barred importation of merchandise bearing a mark which copies or simulates a mark registered under the act. The question arose whether this section protected the person who had purchased from a foreign manufacturer the exclusive U.S. rights to a trademark against competitors who imported goods

<sup>1</sup> *United States v. Guerlain, Inc., et al.*, 155 F. Supp. 77 (S.D.N.Y.), judgment vacated and remanded on Government's motion, 358 U.S. 915, dismissed, 172 F. Supp. 107.

<sup>2</sup> 33 Stat. 730.

bearing the same mark bought from the foreign manufacturer. In two cases,<sup>3</sup> the Court of Appeals for the Second Circuit held that it did not—that the section was limited to spurious goods, and that the goods in question were genuine.

The second of these cases is the famous *Bourjois v. Katzel* decision, and it deserves special comment because it led directly to the enactment of section 526 of the Tariff Act of 1922. In *Bourjois*, a French manufacturer of face powder had sold an American company its American business and trademarks for \$400,000. This company continued to import the French powder and packaged it in this country in boxes of its own manufacture. A competitor imported the identical powder and sold it in the original French boxes. As I said, the court of appeals held that there was no infringement, since the goods in question were genuine and not counterfeit.

The Supreme Court, however, reversed.<sup>4</sup> It held that since the French manufacturer could not use the trademarks in the United States after having sold them, neither should any other importer be allowed to use them. And it further ruled that the defendant's use of the marks could harm the plaintiff's reputation because the public associated the face powder with the plaintiff rather than the foreign manufacturer.

But before the Supreme Court's reversal, Congress enacted section 526. It did so solely to overrule the court of appeals' decision in *Bourjois*. The legislative history makes this clear,<sup>5</sup> and the courts have so held.<sup>6</sup> The section's proponents in Congress stated repeatedly that the sole purpose was to prevent fraud committed against American citizens who had purchased trademarks from foreigners, if the foreigners then violated their contractual obligations.<sup>7</sup> The section accomplishes this by prohibiting the importation of merchandise bearing a mark owned and registered by a citizen of, or a corporation created or organized within, the United States, unless the written consent of the owner is obtained.

That, briefly, is the background to the perfume cases and proposed legislation in the trademark field recently introduced in Congress. The division has not, and is not proposing, to limit the essential protection afforded by section 42 against the importation of goods with counterfeit marks. The trademark owner and, more important, the public clearly require such protection.

Nor do we have any quarrel with the importation bar in the *Bourjois v. Katzel* situation. In that type of situation, the American owner conducts and builds up his business independently of the foreign manufacturer who had sold him his American rights. As in *Bourjois*, he probably can purchase his raw product from any source<sup>8</sup> so that, in the course of time, his merchandise, though marketed under an identical trademark, might differ from that of the foreign vendor. Also, as in *Bourjois*, he can package the product differently, and can distribute and sell it in a manner and at prices completely independent of the foreign manufacturer.

In short, it is his business to do with as he sees fit. Anyone who attempts to market another product under the same trademark in this country—even though that product be identical in composition—is infringing the American owner's mark. Such infringement results whether this identical product is purchased from domestic or foreign manufacturers.

But the "drastic" power embodied in section 526, to use Judge Augustus Hand's description,<sup>9</sup> clearly should be limited to the *Bourjois v. Katzel* type of situation. In the perfume cases, however, the argument was made that section 526 should be given a broad interpretation to include any corporation organized within the United States. Let me, step by step, point up the consequences of such a construction.

A foreigner cannot take advantage of section 526—for the alien is deliberately excluded. Could a foreign corporation obtain the benefits of section 526 by creating a bona fide U.S. corporation? If it could, both the statutory scheme and the express legislative purpose would be thwarted. For, Congress, which

<sup>3</sup> *Gretsch Mfg. Co. v. Schoening*, 238 Fed. 780; *Bourjois v. Katzel*, 275 Fed. 539.

<sup>4</sup> *Bourjois v. Katzel*, 260 U.S. 659.

<sup>5</sup> See H. Rept. No. 1223, 67th Cong., 2d sess., p. 158; 62 Congressional Record 11602-11605.

<sup>6</sup> *Sturges v. Pease, Inc.*, 48 F. 2d 1035, 1037 (C.A. 2); *Coty v. LeBlune Import Co.*, 292 Fed. 264, 268-269 (C.A. 2).

<sup>7</sup> 62 Congressional Record 11602-11605.

<sup>8</sup> *Bourjois v. Katzel*, 274 Fed. 856, 857 (S.D.N.Y.).

<sup>9</sup> *Sturges v. Pease, Inc.*, 48 F. 2d 1035, 1038 (C.A. 2).

was concerned only with the protection of American owners from frauds committed by foreign enterprises, was not saying to these same foreign enterprises: "You also may get the benefits of this legislation by simply forming an American corporation. It is true that there is no question of fraud or of counterfeit marks in your case. It is true that the only result of extending this power to you is to permit you to charge the American consumer much higher prices than those found appropriate by you in other countries—in short, to be able to prevent your foreign prices from being a ceiling or check on your American prices. But we, nevertheless, give you this powerful tool for achieving monopoly conditions for the distribution of your products in this country.

This was not the congressional design. As the Harvard Law Review put it (71 Harv. 564, 565-566):

"Though section 526 also allows the independent trademark owner a domestic monopoly, the monopoly afforded to an international enterprise may be more objectionable because the enterprise through its American component may invoke section 526 to exclude from the United States goods purchased from its foreign component, and thereby prevent competition from its own customers. The rationale of section 526 may lie in the unfairness of allowing others to enter the domestic market and to take advantage of the American trademark owner's advertising and goodwill expenditures. However, protection of such an investment may not warrant the stifling of domestic competition in the trademarked product even when the owner is independent. Public interest in the exclusion of genuine goods seems minimal since there is no misrepresentation of product, and as to a nonindependent owner there is little, if any, misrepresentation of source since the goods ultimately derive from the associated foreign manufacturer. The policy of section 526 may be especially questionable when the affiliated American owner is part of a financially integrated and singly owned and controlled international enterprise which benefits from all sales and can at least partially recoup lost domestic profits through sales to competing domestic distributors by the foreign manufacturer."

In sum, if a foreign firm cannot take advantage of section 526 by organizing a domestic corporation, it cannot accomplish the same forbidden end by using American citizens whom it actually controls through contractual relationships. In both instances, the end result is the same. The foreign corporation puts goods into commerce at a price giving it a profit, but prevents these goods from being a ceiling on the prices charged in this country through the stratagem of an associated American citizen or company. That citizen must not only conduct the American business pursuant to terms set by the foreign manufacturer, but the latter takes far and away the lion's share of the profits.<sup>20</sup> In practical effect, the American firm is simply the prolonged arm of the foreign manufacturer—his American part of a single international enterprise.

In the Department's view, that was the situation in the *Perfume* cases. We regarded the defendant American companies as parts of single international enterprises. We felt that Congress had not given these international enterprises the drastic and unique power—for it does not exist domestically—of preventing products which one part of the enterprise has sold in one area from competing with the sales of the other part of the enterprise in another area. And, it should be noted, this restriction of a free economy had the expected consequences: the French retail prices for these perfume products were roughly one-half of the American prices. We accordingly brought civil suits in 1954 in the southern district of New York, charging that these companies, through their improper use of section 526, were violating section 2 of the Sherman Act.

I am sure you are familiar with the history of these consolidated cases. The district court found that the defendants were parts of single international enterprises and, as to two of them, were controlled by their French associates. It therefore held that the American part of such an enterprise could not avail itself of the provisions of section 526 to prevent the importation into the United

<sup>20</sup> Thus, in the *Guerlain* case, one of the defendants was controlled by the foreign manufacturer in every phase of its use of the marks (manufacturing, processing, advertising, packaging, labeling, and selling). The foreign vendor chose the American company's principal executive officer, required that he be continued as such for the duration of the agreements, and forbids the American company from changing its name, merging with any other company, etc., without the prior approval of the foreign firm. Finally, the latter is assured the major share of the profits, under a plan giving it between 10 to 15 percent of the gross sales. See *U.S. v. Guerlain, Inc.*, *supra*, 155 F. Supp. at 96-97.



States of authentic products sold abroad by the foreign part of the enterprise.<sup>11</sup> And, finally, the court concluded that section 2 of the Sherman Act was violated since there had been an extension of a statutory monopoly into illegal proportions by deliberately exclusionary conduct. As support for this holding, it cited the Supreme Court's language in the *Cellophane* case, "Illegal monopolies under section 2 may well exist over limited products in narrow fields where competition is eliminated."<sup>12</sup>

Upon appeal to the Supreme Court, the Department, after further study, moved to vacate the judgments and to remand the cases to the district court for consideration of a motion to dismiss to be filed by the United States. We took this unusual action essentially because the physical exclusion of goods could only occur with the continuing aid of the customs authorities, who deemed themselves legally constrained to grant the claim of statutory protection invoked by the perfume defendants and others. We recognize that our antitrust complaint was not barred merely because actions taken by certain officials of the United States were involved in the effectuation of the alleged Sherman Act violation. But it seemed to us more desirable (in this case) that such an intragovernmental conflict as to the meaning of the tariff or trademark laws of the United States should be resolved, if at all practicable, through means other than antitrust litigation—and specifically by new legislation.

An additional reason for proceeding by legislation is that section 526 presently gives the independent American company the right to exclude authentic products produced and sold by it in foreign countries.<sup>13</sup> Since this right is no less restrictive of a free economy when exercised by a domestic rather than foreign corporation, only new legislation could eradicate completely the antitrust objections to section 526. As you know, the Supreme Court granted our motion and the district court, upon remand, also granted the motion to dismiss.<sup>14</sup>

## II. THE PROPOSED LEGISLATION

We and the other interested departments—Treasury, State, and Commerce—then worked out in a series of conferences proposed legislation designed to make it clear that trademark protection is not available to prohibit the importation of a product legitimately marked by an affiliate of the trademark owner. This legislation (H.R. 7234) would revise section 42 and repeal section 526. As revised, section 42 would, of course, still continue the protection against counterfeit marks, but would define "counterfeit" to exclude a mark used by a foreign manufacturer and registered to a person who is an agent, distributor, or subsidiary, or who is affiliated with or controlled by the foreign manufacturer. And, so that there can be no doubt as to the essential purpose of the bill, "affiliated" is defined to include any arrangement whereby the registrant has a continuing contractual relationship or understanding with the foreign manufacturer with regard to the mark. We shall, of course, fully support the bill before the appropriate committees and shall press for its enactment.

The argument will perhaps be made that the bill is unfair to the American company or person who risks substantial sums in advertising these foreign products, only to see other importers take a "free ride" on his expenditures by purchasing the products abroad and reselling them here. What this means, however, is simply that the sales and profits of the affiliated foreign company would be increasing at the expense of the American counterpart, because of the latter's insistence on selling at a relatively higher price. Perhaps there should be adjustment between the affiliates to compensate the American company for its advertising expenditures. But there is, we believe, no sound reason for giving these affiliated companies the special and drastic privilege of being able to set prices in the United States without fear of any competition from the resale of the products by those who have purchased them abroad. If, instead of domestic and foreign, the situation involved New York and San Francisco—by that, I mean

<sup>11</sup> To a lesser degree, the defendants also relied on sec. 42, as construed in *Bourjois v. Katzel*. But clearly there can be no question of "copying or simulating" where the mark on the imported goods and the registered mark are owned or under the control of the same person. Indeed, if the defendants were correct as to their sec. 42 arguments, their own substantial imports of packaged French perfumes are illegal and must cease. For, unlike sec. 526, sec. 42 has no consent clause. It bars without exception the importation of goods bearing marks which copy or simulate the domestically registered mark.

<sup>12</sup> *U.S. v. E. I. du Pont de Nemours & Co.*, 351 U.S. 377, 395.

<sup>13</sup> See 71 Congressional Record 3871-3876, 3896-3906.

<sup>14</sup> 358 U.S. 915; 172 F. Supp. 107.

sales at a higher price in San Francisco than in New York, with an intensive advertising campaign in the San Francisco area—the San Francisco affiliate could not seriously argue that he ought to be protected against the resale in his area of the identical products purchased in New York. Yet, in policy, the two situations are, we think, indistinguishable.

In sum, to cull from the Yale Law Journal's comment on this issue:<sup>45</sup>

"Trademark protection is a judicially developed and legislatively supported common law right which seeks to preserve three distinct but often conflicting interests: (1) the consumer's desire to get particular goods; (2) the trademark owner's interest in maintaining the good will of his business; and (3) the public policy in favor of free competition. None of these goals is furthered when sections 42 and 526 are used by related concerns to prevent price competition from firms which are willing to sell the authentic product at prices lower than those set by the owner of the domestic trademark. \* \* \* The rationale underlying trademark protection does not support the enforcement of an absolute import prohibition merely to preserve the profits independent importers expected to derive from monopolizing the American market.

"American businessmen would have adequate remedies available to protect their legitimate interests even if they were unable to use sections 42 and 526 to prevent the importation of genuine articles bearing trademarks similar or identical to their own. If a foreign manufacturer breaks his contractual obligations and tries to compete in the American market, the purchaser of the trademark can sue the foreign firm for breach of contract. And if the trademark vendor or another foreign concern attempts to market a spurious product within the United States, the American trademark owner can invoke sections 42 and 526 or sue for damages arising from trademark infringement. Although the present statutes grant an additional remedy, the trademark owner's absolute power of exclusion is too great a threat to consumer interests to justify its added convenience.

Mr. BICKS. I would like to treat just a few case histories here. Eastman Kodak is one that comes to mind. This consent judgment was entered December 21, 1954. Amateur users of Eastman color film were for the first time given the opportunity to benefit from free and open competition in the processing of color film, and the business of producing color film was opened to new entrants throughout the country. Of direct and immediate benefit to independent film processors were the requirements of the judgment that Eastman grant, upon request, licenses under its pertinent processing and materials patents upon reasonable royalties and make available technical literature and assistance to independent processors.

Within 4 months of the entry of the decree, nine regional or national firms had announced plans or had actually begun to seek business in color film finishing. Eighteen months after the judgment, eight companies had made investments of over \$100,000. Of these, one had invested \$650,000 and two firms had invested more than a million dollars. One small local photofinisher serving about 125 dealers in New York City bought \$70,000 of equipment from Eastman. Thus the Kodak decree expanded investment in a growing industry; introduced competition in price, quality, and service; and made a small but visible contribution to the growth and stability of the economy.

Another highlight of observable enforcement effects is *United States v. International Business Machines Company*. At the time of the suit, the complaint charged that IBM owned approximately 90 percent of all tabulating machines and sold 90 percent of all tabulating cards used in the United States; that IBM refused to sell its machines; and controlled the servicing of tabulating machines. The

<sup>45</sup> Yale Law Journal, vol. 64, pp. 561, 562, 567.

consent judgment in this case sought to spur the entry of new producers by making it possible for users and prospective users of tabulating machines to purchase and own them upon reasonable terms. It was also aimed at giving all tabulating machine manufacturers access, at reasonable royalties, to all existing IBM patents relating to IBM's tabulating and electronic machines. To insure that end, a sword of Damocles provision requires IBM to divest itself after 7 years of any part of its manufacturing capacity in excess of 50 percent of the domestic capacity unless IBM can show that substantial competition exists.

Within a year of the judgment's entry several companies had indicated plans to enter or had entered the business of (1) manufacturing and selling tabulating or electronic computer machines; (2) repairing and maintaining those machines; (3) manufacturing tabulating cards; and (4) conducting accounting and statistical functions on a fee basis.

These two examples, I think, highlight what a successful decree can do in helping new businesses to come into a market.

The CHAIRMAN. The circumstances in these two cases seem on the surface to be somewhat similar with that in shoe machinery. What is the situation in shoe machinery?

Mr. BICKS. I do not think that is as happy a result as these other two cases. I am not sure if one or two new companies have come in, but I doubt if there are more than that. There you had one major concern, United Shoe. I know that another firm, Compo, started to come in with a new competitive line, a full line of Moenus machinery. I know that another company, Schwabe, revamped its operations to offer additional competitive machines. This was the competitive picture as of 1955. But I do not know if today, 7 years after the suit, there are any more than three companies in the field. Of course, three is better than one, but it is not as graphic a result as the other two cases.

And, finally, consider impact of litigation against American and Continental Can Cos. Complaints under sections 1 and 2 of the Sherman Act and section 3 of the Clayton Act were filed against each company on August 27, 1946, and later consolidated under an amended complaint filed May 25, 1948. Trial of the issues against American Can Co. in 1949 resulted in a decision that American had violated the statutes as alleged by the Government (*United States v. American Can Co.*, 87 F. Supp. 18 (N.D. Calif. 1949)). A final decree was entered against American Can on June 22, 1950, and the decree against Continental, who agreed to be bound by the relief secured against American, was entered June 26, 1950.

The decrees, among other things, required defendants to license their patents on closing machines and other equipment royalty free to any applicant; to abandon full requirements contracts; to lease can-closing machines to canners regardless of the source from which they obtained their cans; to sell closing machines to any canner desiring to purchase them.

Termination of exclusive leasing resulted in the purchase of a large number of closing machines by lessees. By mid-1954 over 75 percent of the closing machines of both defendants had been sold and by the end of 1955 almost all had been sold. Although no new manufacturers

of packers' cans have entered the field since 1950, the packers have found greater freedom in buying and, as a consequence, some of the smaller can manufacturers have benefited. But more important is the growth of can manufacture by large packers. For example, Campbell Soup Co., after the 1950 decree, bought canmaking machinery and by manufacturing its own cans, became the Nation's third largest can manufacturer. Recently, California Packing Corp. installed canmaking machinery along with such large canners as Green Giant Co. and Stokely-Van Camp, while others such as Libby, McNeil & Libby have indicated their intention to make their own cans.

Thus, the 1950 judgments have brought significant changes in the canmaking industry by encouraging can manufacture by the large consumers of cans. In addition, the 1950 decrees appear to be responsible for an intensification of market rivalry between the two defendants. In 1958 and 1959, for the first time in 50 years, vigorous price competition appeared between American and Continental. It began in late 1958 with American's announcement that beginning November 1 it would introduce a new price policy relating can prices directly to costs instead of applying percentage factors to existing prices. Continental, departing from its traditional practice of following American's lead, held to a flat percentage increase. American retaliated with a series of price cuts estimated to have saved buyers several million dollars. Vigorous price competition has persisted to date, and a reliable source attributes its origin to the growth of can manufacture by packers.

Beyond Sherman Act section 2, most significant as an enforcement weapon, is newly amended Clayton Act section 7. We have treated thus far simple restraint-of-trade cases under Sherman Act section 1. I then proceeded to Sherman Act section 2, a larger monopolization area. I now turn to what I myself believe is the most significant anti-trust enforcement act for the future. That is Clayton Act section 7. Clayton Act section 7 proscribes any acquisition of stock or assets that may substantially lessen competition or tend to create monopolys in any line of commerce in any sector of the country.

There are two things to bear in mind. First, it applies only to acquisition. Sherman Act section 2 would apply to monopolization whether by acquisition or internal growth.

The CHAIRMAN. This was the so-called Kefauver amendment?

Mr. BICKS. Yes.

Second, unlike the Sherman Act, it does not require proof of actual competitive harm. It requires simply proof of the probability of harm in the future. It reflects, I suggest, a congressional desire to avoid the problems of monopolization by halting monopolizations or what is otherwise deemed excessive concentration, at its roots, by halting mergers that might threaten this effect.

This section is often misunderstood. I do not think it means by any stretch that all mergers are bad.

Representative WIDNALL. May I interrupt at this point?

Does the Campbell Soup Co. sell any cans to other producers now?

Mr. BICKS. No; I do not believe it does. But I am not sure of the significance of that, Congressman.

Representative WIDNALL. There is nothing binding to keep them from doing that?

Mr. BICKS. No; of course not.

Representative WIDNALL. So now, as a diversified industry, they could use the unconscionable profits they might make on use. And they are just specializing in cans. I am just characterizing that when I say "unconscionable profits." I am just interested in the problem. You are now creating something by way of diversification by Government edict, so that they can compete better because they are diversified than the person just originally in one field.

Mr. BICKS. Congressman, I am not sure it is diversification by Government edict. I would rather think it is diversification in response to a free market's pressures which the Government decreed made it possible to be felt. In other words, nobody forced Campbell Soup to start making its own cans. By virtue of the decree, for the first time they were free to do so if in their business judgment they deemed it advisable. They apparently deemed it advisable.

But I do not think I have answered your question. I think you really have highlighted a potentially significant problem. And that problem stems from the leverage which a significant, or dominant, if you will, producer in the field, in this case, soups, has when it goes into a related field. I think it is much the same problem raised by General Motors' purchase of Euclid, an earth-moving company. It is a very significant economic problem. I just do not know enough about Campbell Soup's particular situation to comment intelligently.

Well, section 7 was involved in the *Bethlehem-Youngstown* case. The court ruled that the merger would substantially lessen competition and tend to create a monopoly in many lines of commerce in many sections of the country. He relied upon, among other things, the substantial increase in the level of economic concentration in the steel industry that would result from the merger. In rejecting the affirmative defense that the merger would enable the companies to offer more competition to United States Steel, the court pointed out that other steel producers could, with equal force, argue that they should be permitted to merge in order to afford more challenging competition to United States Steel and Bethlehem and thus the already highly concentrated steel industry would head in the direction of "triopoly." The language is Judge Weinfeld's and not mine. Judge Weinfeld's opinion was the first to be rendered after a trial in a suit by the Government under Clayton Act section 7, as amended in 1950.

The new section 7 appears to be a most effective instrument of anti-trust policy. Vigorous enforcement of section 7, particularly in those sectors of our economy with the greatest growth potential—industries in their early stages of development—can shape their ultimate competitive structures to avoid loss of competitive vigor through excessive concentration.

For this reason section 7 enforcement is currently our most important activity, absorbing a good portion of the Antitrust Division's resources. First, section 7 enables presentation of essentially structural issues to courts in more manageable bites. Questions focus on one transaction—the acquisition—and its probable market consequences. Second, perhaps for such reasons, section 7 cases can be tried promptly. In *Youngstown-Bethlehem*, for example, trial was completed some 13 months or so after issues were joined. Finally, perhaps avoidable under section 7, are difficult problems of unscrambling assets long since joined together. Where mergers are halted prior to consummation relief problems diminish.

From these few generalizations, I think, appear the principal practical problems we face in antitrust enforcement. The big section 2 case may take years to prepare and try. It may drain the resources of our Division and, equally important, the resources of defendants. It may require tremendous dissipation of resources and expenses to prosecute and defend. However, we are devoting considerable care, considerable effort, to making sure that there is a prompt means of presenting these issues to courts. The biggest reason why this is important, I would suggest, is that markets change drastically while suits are pending. We have seen an example of that in our recent *West Coast Oil* case. The market we faced on the eve of trial bore small resemblance to the market we faced when the case was filed. I think a safe generalization is that antitrust cases, unlike whisky, hardly ever improve with age. Those are very rough generalizations, but they certainly guide our own judgment in emphasizing section 7 cases.

Senator BUSH. Very briefly, what does section 7 provide? Does that have to do with the exchange of stock for assets?

Mr. BICKS. It has to do, sir, with the acquisition of either stock or assets by one corporation or another. It does not apply to acquisition by individuals, and it applies only to those acquisitions of stock or assets that threaten prescribed anticompetitive consequences.

Senator BUSH. What was new about section 7? That is the point I would like to make.

Mr. BICKS. Before 1950, section 7 applied only to asset acquisitions. In 1950, as Chairman Douglas pointed out, section 7 was amended to apply not only to assets but stock acquisitions.

The CHAIRMAN. The same loophole now exists in the case of banks.

Mr. BICKS. Precisely.

The CHAIRMAN. You can acquire the assets of the bank and thus avoid the regulation?

Mr. BICKS. Avoid section 7 completely.

Senator BUSH. Why does that apply? Because banks are specifically exempted under the law?

Mr. BICKS. Yes, Senator Bush. It has a very curious legislative history. Apparently, the issue was never squarely presented to Congress. But through a difference in phraseology of definition, it became clear after the act was passed that acquisition of stock by banks had been dropped out. There is no mention of it at all in the House or Senate debates, no mention at all in the House or Senate reports. I do not know whether it was an inadvertence. I am inclined to think not. But I do think it is fair to say that there was no apparent congressional consideration of the problem then.

So, as I say, though the promise of section 7 enforcement lies in the future, a number of significant merger cases have been received and more are moving rapidly to trial. The economic impact of many of these cases has already been felt. For example, since the filing of the *General Shoe* and *Brown Shoe* cases, no significant mergers have been indicated in the shoe industry. Our container cases brought to a halt a flurry of merger activity in that industry. And, of course, the decision in *Bethlehem-Youngstown* has closed the door to anticompetitive mergers among the larger steel producers.

Finally, I should also point out that, while detection and prosecution of antitrust law violations represents the major activity of the Antitrust Division, the economic effect of a wide range of related functions have a significant impact on the economy. For example, in the post-World War II disposal of surplus Government property the views of the Department of Justice played a significant role in shaping the structure of the market affected by surplus property disposal but most particularly in the aluminum and synthetic rubber industries. Under our clearance procedures, we have reviewed annually a substantial number of business proposals affecting competition in a wide range of industries on which our views are sought. By revealing whether or not we would take enforcement action should the proposed plan be undertaken, we have shaped the course of many businesses without instituting a single lawsuit.

These case examples suggest the pragmatic approach of the administrator in gaging antitrust results. But how reliable is this approach?

There are at least two tests which confirm our judgment of enforcement results. First is the test applied by nondefendant third parties; that is, competitors, customers, and suppliers of defendants in antitrust actions whose voices are promptly raised if the remedies obtained by the Government are ineffective. A second test is the review of the operation of antitrust decrees. From time to time decrees are subject to review on petition of either party; as a result of complaints of violation of the decree; or by the terms of the decree, providing opportunities for further relief on a showing by the Government of the need for additional remedies. Such review either by the Antitrust Division or by the courts provides a sound basis for assessment of the effectiveness of enforcement in specific cases.

Chairman Douglas, as you know, in your own State, now, we are engaged in an exhaustive court proceeding initiated by the major meatpackers. The meatpackers now have petitioned the court to be relieved of the strictures of the old meatpackers' decree. They would like to integrate forward into the grocery and allied retailing lines. So we are currently in the process of developing evidence, evidence under oath, so that the court can make some rational judgment as to what the economic consequences will be of removing the strictures of that decree. That is typical of the sort of examination to which I refer.

I turn next to your third point of interest—the criteria used by the Antitrust Division in the selection of cases. I preface the discussion of the criteria of case selection with this brief explanation that on the whole the course of antitrust enforcement tends to be plotted not only by a system of case selection but also by the flow of intelligence from complainants and interested persons in all sectors of the economy. This stream of intelligence pinpoints the focus of competitive injury and adapts enforcement to the dynamics of our economy. In every large measure, however, enforcement is shaped by a number of legal, economic, and administrative considerations.

Among the legal criteria considered are (a) the volume of interstate commerce affected; (b) the uniqueness of the principles of law involved and the state of the court's interpretation of the statute; (c) the need for enforcement action as revealed by the volume and frequency of complaints received with respect to the alleged violation;

(*d*) the complexity of the problems likely to be encountered in prosecution of the case; and (*e*) the legal remedies necessary to the dissipation of the effects of the violation and the probabilities of obtaining such relief by litigation or negotiation.

The economic criteria applied to case selection include the following: (*a*) the economic significance of the industry or market affected by production, sales, employment, investment, et cetera; (*b*) the economic importance of the industry to the consumer and to national defense; (*c*) the potential impact of the case on the level of prices, investment, and growth of the industry or market affected; (*d*) the stage of development of the industry—*young, mature, or declining*; (*e*) the complexity of the economic remedies essential to the restoration of competition and the feasibility of permanently dissipating the economic effects of the violation; (*f*) the impact of the case on the technology of the industry; (*g*) the geographic scope of the market—*national, regional, or local*; and (*h*) the economic effects of the case on foreign trade and investment.

And finally, a number of administrative criteria are considered before a case is selected for prosecution such as: (*a*) the staff resources necessary (quality, experience, and numbers) to prosecute the case and the availability of such resources; (*b*) the effect of the allocation of staff resources on the prosecution of other cases and the overall enforcement activities of the Antitrust Division; (*c*) the condition of the court's calendar in the jurisdiction in which the case would have to be filed; and (*d*) the monetary cost of the prosecution of the case and the state of the Antitrust Division's budget.

The CHAIRMAN. Mr. Bicks, I have not had a chance to review the entire list of your prosecutions, and, as I said, I have a general very high opinion of you and your Division. I have felt, however, that of certain cases that have come to my attention you picked out relatively unimportant fields for action. If my memory serves me correctly, you brought a suit against some strawberry growers down in Louisiana. Is that not true?

Mr. BICKS. Yes.

The CHAIRMAN. Do you think that was a very vital field of monopoly down there?

Mr. BICKS. That is very interesting that you mentioned that case, because I think it highlights another problem that this committee may be interested in. That case is over, it has been concluded, and I feel no restriction in discussing quite candidly what it accomplished and what it did not accomplish.

Senator BUSH. What was that case?

The CHAIRMAN. The strawberry growers in the State of Louisiana.

Mr. BICKS. I think some strawberry growers were obviously getting hurt. The union, which in fact included as members independent businessmen engaged in growing strawberries, was engaged in fixing prices at which fresh strawberries would be sold at auction and prices at which strawberries would be sold to processors. The indictment charged that the defendants compelled and coerced processors and handlers to enter into price-fixing agreements and to purchase strawberries only from defendant union's members.

It further charged that growers who were not members of the union were being coerced into joining the union and prevented from market-



ing their strawberries. The nonmember growers were prevented by acts of physical force and violence from marketing their product. Initially we were reluctant to bring this case because of its limited economic significance but we acted because nonmember strawberry growers were obviously being seriously injured because of their inability to market their production. Realistically we had no choice but to proceed. On April 28, 1954, the union and six individual defendants entered pleas of guilty. Fines totaling \$9,000 and prison sentences were imposed. The sentences were suspended and the defendants placed on probation for 1 year.

If you were to ask me if I think it is wise to devote more than a very small percentage of our resources to that sort of case, I would say, "No, it is not." But I do think that we must remain responsive to particularly egregious injustices in particular cases, even though they may have no national economic impact.

There is another area where I think we have been subject to criticism, some of it valid.

Representative CURTIS. May I ask a question here?

You mentioned earlier that the States have taken on some of this burden. How about the State in this instance?

Mr. BICKS. I think that would have been a wonderful opportunity to pursue. We did not pursue it. I do not know if it would have been effective. But following up on your question, at the last conference of State attorneys general, a resolution was passed approving a pattern of cooperation that the Antitrust Division had worked out with two States, Texas and New York, both of which attorneys general were particularly interested in antitrust. We have been invited to a conference of State attorneys general in November where we have been asked to present a plan to integrate all of the attorneys general.

I think the question is an important one. And I think we have waited too long to deal with it intelligently, but at least we can offer, I think, the promise of some progress. I do not know how it is going to work out. But I think it is something we are obliged to try.

Representative WIDNALL. Mr. Bicks, do you not think it is very important that the people of the United States should know that even if they are an individual strawberry grower they have so many to go to, and it is not just a case of a \$2 million corporation as against a \$20 million corporation? To me, that seems far more important than some of the other things that we talk about.

Mr. BICKS. That was the point. I agree with you; yes.

The CHAIRMAN. I do not know if this is a proper question or not, Mr. Bicks, and if it is not, I hope you will just not answer it.

I have had some complaints about your suits in the women's clothing industry of Pennsylvania and in particular the International Ladies Garment Workers Union, which in general has had a very good reputation, and feels aggrieved that they should be coupled with racketeers and gangsters, who, they say, they have been fighting. And I believe you sought criminal indictments against both groups. And they feel that their name has been coupled with people whom they have been opposing rather than assisting.

Now, as I say, I think this case has not yet gone to trial, and perhaps I should not ask this question at all, because I should not try to influence in any way your decision, because I do not believe in the

legislative branch dictating to the administrative branch what they should do in such areas. But if it is proper, if you would be willing to go into that case, I would appreciate it.

Mr. BICKS. Senator, I would like to answer that in two ways. First, what you have reported as a criticism of the case was formally raised by the defendants before the judge. The precise issue raised was the propriety of joining that particular union with one defendant who had been labeled publicly by the press as a racketeer. The judge rejected that contention.

Second, there are very many significant enforcement issues that case raises. However, since a principal ground of the defendant's motion was possibility involving the case following its bringing, I do not think it is fair for me to talk about it publicly. I would really welcome the chance at some time to talk to you about it privately, because I do believe that our program involving application of the antitrust laws will in the years to come be a significant part of our enforcement effort. I think we have fallen down a bit, in the Department, in publicly explaining what we are doing. I think the average member of the public feels, "Well, the antitrust laws just don't apply to union activities." Well, that is not true. Over the years, as part of our effort, antitrust has brought numerous cases in that area and have been almost uniformly successful in the courts.

Representative CURTIS. May I ask: Is that not through the union's utilization of management?

Mr. BICKS. In part, Congressman Curtis, but we have been trying another theory, and that is this: That where any corrupt union official accepts a payoff to act to the detriment of his union, to the benefit of the payer employer, and to the competitive disadvantage of a rival of the employer-payor, he by himself becomes an ordinarily corrupt individual, loses his union immunity, and is subject to suit.

That was one of the theories involved in the union suit, Chairman Douglas, that was just terminated a while ago out in Chicago. I do not know if you are familiar with it, but it is the Chicago Boilermakers proceeding. It involved that theory, and pleas were tendered, nullo pleas, after the court sustained the legal sufficiency of the indict-

ment. So that, Congressman Curtis, our view of the law is that a conspiracy between a labor and management group is not a prerequisite to application of the antitrust laws as to corrupt union official's activities.

Representative CURTIS. Your theory is that the corruption takes away any shield of exemption that they might be using?

Mr. BICKS. Yes, because he seeks to act as a union official and really is acting to feather his own nest and really loses the exemption.

Another area that does not involve a labor-management conspiracy I think is highlighted by our case on the west coast. There we have indicted a Teamster local, and it raises very sharply the legality of Mr. Hoffa's efforts to organize the self-employed. As you know, he has announced quite a campaign to bring within the Teamsters Union a variety of people who own small businesses—gasoline station operators, in this case grease renderers. People who own one, two, or three trucks bought greases from restaurants and sold it to soap companies. Our position is that certainly self-employed businessmen may band together in associations. But when they do so, they are subject to the antitrust laws whether or not they are labeled union or trade associations. That case will be tried early next year.

But I think as these few questions have brought out, we have fallen down quite badly in explaining publicly what we have been trying to do in the union field. And I think this hurts us, because we are not receiving the volume of complaints we should. People do not realize that if they do complain to us, businessmen squeezed out, for example, we will have either the inclination or the power to act. This is really what I tried to indicate, the need for public understanding of what we are trying to do. It affects directly the volume of complaints that we get.

Well, the other two questions that you raised are limitations, substantive limitations on our enforcement activities. I would say the principal ones are exemptions created by Congress. I have here a study of a variety of exemptions, so that you can have it included in the record, or not.

(The material referred to is as follows:)

# Exemptions From Antitrust Coverage

Having considered the main substantive antitrust problems, we now turn to antitrust exemptions for certain conduct by members of regulated industries, by labor unions, and by agricultural cooperatives. To further some economic, political, or social objectives, Congress has shielded various activities from the rigors of competition.

It is not within the bounds of our antitrust survey to judge the importance of these asserted goals or the extent to which any one of them might be achieved without antitrust exemption. Instead, we first seek to mark out the precise limits of each exemption. Then, where exemption flows from agency action, we appraise the extent to which such bodies give effect to whatever Congressional standards relating to competition appear in any given statute; and where courts initially construe any exemption, we similarly evaluate such interpretations in the light of Congressional objectives.

## A. REGULATED INDUSTRIES

Congress has decided that in some industries competition shall not be entirely free. Pursuant to that policy, a regulatory body is authorized. It may either by its own action or by approval of private conduct, control market entry,<sup>1</sup> eliminate existing competition,<sup>2</sup> or fix

<sup>1</sup> Section 7 (e) of the Natural Gas Act provides, for example, that the Federal Power Commission shall issue a certificate "to any applicant \* \* \* if it is found that the applicant is able and willing properly to do the acts and the proper service which \* \* \* is or will be required by the present or future public convenience and necessity." Cf. 15 U. S. C. § 717f (1952), as amended 47 U. S. C. § 214 (1952); and *Panhandle Eastern Pipe Lines Co. v. Federal Power Commission*, 169 F. 2d 881, 884 (D. C. Cir. 1948), *cert. denied* 335 U. S. 854 (1948). Similarly, the Federal Communications Act directs the Commission to grant a license to any qualified applicant "if the public convenience, interest or necessity will be served." 47 U. S. C. § 307a (1952). The Civil Aeronautics Act negatively directs the Board to deny an application unless the purpose served "is required by the public convenience and necessity." 49 U. S. C. § 481d (1952); similarly, note the Motor Carriers Act, 49 U. S. C. § 307 (1952).

<sup>2</sup> Consolidation of existing or potential rivals is generally limited only by the requirement that the transaction be "consistent with the public interest." See, e. g., Interstate Commerce Act, 49 U. S. C. § 5b (1952); Federal Communications Act, 47 U. S. C. § 221a, 222 (c) (1) (1952); similarly, note the Federal Power

Source: Report of the Attorney General's National Committee to Study the Antitrust Laws, March 31, 1955.

rates or prices.<sup>3</sup> Private actions approved by such regulatory bodies are, in some instances, exempt from antitrust attack.<sup>4</sup> Where no such exemption is specified, however, there may still remain difficult problems of accommodating regulatory standards with the antitrust laws.<sup>5</sup>

One member feels that "the Committee fails to deal with the fundamental problem of whether the antitrust laws should be applied at all to firms whose prices and products are directly controlled by government. It is hard to conceive that two systems of economic control, the competitive and interventionist, could usefully be employed at the same time and with respect to the same enterprises. Apparently the Committee assumes that competition can play some role even in the most highly regulated industries, but query whether this is not comparable to two captains on a ship."

Act, 16 U. S. C. § 824b (1952) ; cf. Civil Aeronautics Act, 49 U. S. C. § 488b (1952), barring Board approval of a merger "which would result in creating a monopoly \* \* \* and thereby restrain competition or jeopardize another air carrier." Compare *American Airlines, Inc., Acquisition of Control of Mid-Continent Airlines, Inc.*, 7 C. A. B. 365, 379 (1946) (merger rejected since it "would impair the competition we deem requisite to insure the development and maintenance of an adequate transportation system") with *TWA, Inc. v. Civil Aeronautics Board*, 184 F. 2d 66 (2d Cir 1950), *cert. denied* 340 U. S. 941 (1950).

<sup>3</sup>The Reed-Bulwinkle Act, for example, authorizes the ICC to approve rate agreements among carriers provided they are "in furtherance of the national transportation policy" and accord "to each party the free and unrestrained right to take independent action either before or after any determination arrived at through such procedure." 49 U. S. C. § 5b (1952). See also the Civil Aeronautics Act which requires filing with and approval by the Board of understandings "relating to the establishment of transportation rates." 49 U. S. C. § 492 (1952).

<sup>4</sup>For example the Interstate Commerce Act provides that "any carriers \* \* \* participating in a transaction approved or authorized \* \* \* are relieved from the operation of the antitrust laws \* \* \*." 49 U. S. C. § 5 (11) (1952), and see 49 U. S. C. § 5b (9) (1952) pertaining to relief from liability for rate-making agreements. Similarly, the Shipping Act states that "every agreement \* \* \* lawful under this section shall be excepted from the provisions of Sections 1-11 and 15 of Title 15 \* \* \*." 46 U. S. C. § 814 (1952). And the Civil Aeronautics Act provides that "any person affected by any order made under sections \* \* \* shall be \* \* \* relieved from the operations of the 'antitrust laws' \* \* \* in so far as may be necessary to enable such person to do anything authorized, approved, or required by such order." 49 U. S. C. § 494 (1952). Finally, the Federal Communications Act provides that "the Commission shall enter an order approving \* \* \* such consolidation \* \* \*, and thereupon any \* \* \* laws making consolidations \* \* \* unlawful shall not apply \* \* \*." 47 U. S. C. § 222 (1952). Even under these express exemptions, however, difficult problems of construction may arise.

<sup>5</sup>*Georgia v. Pennsylvania Railroad Co.*, 324 U. S. 439, 456 (1945) ; *United States v. Borden Co.*, 308 U. S. 188, 198-199 (1939) ; *S. S. W., Inc. v. Air Transport Assn. of America*, 191 F. 2d 658, 661 (D. C. Cir. 1951) ; *Penna. Water & Power Co. v. Consol. Gas, Electric Light and Power Co.*, 184 F. 2d 552, 560 (4th Cir. 1950), *cert. denied* 340 U. S. 906 (1950) ; later opinion in independent proceedings, 194 F. 2d 89 (4th Cir. 1952), *cert. denied* 343 U. S. 963 (1952).

Treating both types of statutes, we consider, first, the extent regulatory agencies give weight to competitive factors in formulating or approving plans for merger or rate agreements.<sup>6</sup> We then proceed more generally to analyze the effect of primary jurisdiction on consideration of competitive factors in regulated industries.

### 1. *Mergers*

The first Federal statute<sup>7</sup> regulating railroads, passed some three years before the Sherman Act, neither expressly treated mergers nor exempted railroads from antitrust prohibitions.<sup>8</sup> Indeed, for more than three decades a strict test of legality was enforced in Sherman Act cases against railroad combinations.<sup>9</sup> Since entry into the railroad industry was so difficult, these cases suggest that possibly preservation of existing rail competition may have been especially important. In any event, they make clear that the mere existence of a regulatory scheme to prevent some abuses of monopoly power offers no ground for relaxation of antitrust policy.

In the Transportation Act of 1920, however, Congress sought affirmatively to encourage railroad combination and thus provided an express antitrust exemption for Interstate Commerce Commission approved consolidations.<sup>10</sup> The Commission was directed to plan for a "limited number" of integrated "competitive systems" and was admonished that "competition shall be preserved as fully as possible." That statute, in addition, authorized railroad consolidation, first, in accord with the Commission's master plan and, second, after a Commission finding that "the public interest will be promoted by the consolidation." Consolidations thus approved were expressly exempted from the antitrust laws.<sup>11</sup> Although these provisions for a master consolidation plan were stricken from the Act in 1940, the statutory exemption for mergers found "consistent with the public interest" was retained.<sup>12</sup>

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<sup>6</sup> Though we recognize that no rigid demarcation is always feasible, here we consider only activities of agencies concerned with regulation of competition; thus agency regulation involving, for example, safety or health, is not within the scope of our study.

<sup>7</sup> The Act to Regulate Commerce of February 4, 1887 (24 Stat. 379).

<sup>8</sup> See, e. g., *United States v. Trans-Missouri Freight Ass'n.*, 166 U. S. 290, 311-327 (1897).

<sup>9</sup> Compare *Northern Securities Co. v. United States*, 193 U. S. 197 (1904); *United States v. Union Pacific Railroad*, 226 U. S. 61 (1912); *United States v. Reading Co.*, 253 U. S. 26 (1920); *United States v. Southern Pacific Co.*, 259 U. S. 214 (1922) with *United States v. United States Steel Corporation*, 251 U. S. 417 (1920).

<sup>10</sup> See Section 407 of the Transportation Act of 1920 (41 Stat. 456, 480-482) amending Section 5 of the Interstate Commerce Act.

<sup>11</sup> 54 Stat. 898, 905-910.

<sup>12</sup> Interstate Commerce Act, 49 U. S. C. § 5 (1952).

Construing this exemption, it was early held that a combination illegal under the Sherman Act could nonetheless be found by the Commission to be "consistent with the public interest."<sup>13</sup> In *United States v. Southern Pacific Co.*, the Supreme Court held that Southern Pacific's ownership of Central Pacific was barred by the Sherman Act and directed separation of the two roads.<sup>14</sup> Soon after, Southern Pacific applied to the Commission for authority to reacquire control of Central Pacific.<sup>15</sup> Finding the merger in the "public interest," the Commission concluded that "the result [of separate operation] would be more expensive and less efficient and satisfactory service than can be rendered under unified control. The two systems would be weakened both financially and from the standpoint of service."<sup>16</sup> Approval, however, was on condition that the combined roads would assure competitors access to certain of their facilities. Thus, though competitive considerations were not ignored, the Commission found public benefits which, to its view, outweighed the importance of any competitive injury.

Similarly, in more recent proceedings, the Commission has again made it clear that effect on competition is a factor to be weighed in determining whether a merger is "consistent with the public interest."<sup>17</sup> In *Chesapeake & Ohio Railway Co.*,<sup>18</sup> for example, the Commission withheld approval of a proposed merger between certain New York Central and Chesapeake and Ohio lines. Supporting its conclusion, the Commission found that a result of the proposed merger would be loss of the "extensive competition between the Chesapeake & Ohio and the New York Central \* \* \*."<sup>19</sup> In addition, to give effect to the regulatory goal<sup>20</sup> of assured adequate rail service, the Commission also relied on evidence as to "possible adverse effects on the part of the public served by the Virginian [an individual competitor of the Chesapeake & Ohio] and other carriers."<sup>21</sup>

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<sup>13</sup> Compare *Control of Central Pacific Railway by Southern Pacific*, 76 I. C. C. 508 (1923) with *United States v. Southern Pacific Co.*, 259 U. S. 214 (1920).

<sup>14</sup> 259 U. S. 214 (1922).

<sup>15</sup> *Control of Central Pacific Railway by Southern Pacific*, 76 I. C. C. 508 (1923).

<sup>16</sup> *Id.* at 520.

<sup>17</sup> See e. g., *Pere Marquette Ry. Co. Merger*, 267 I. C. C. 207, 233 (1947). *Chesapeake & Ohio Ry. Co. Purchase, etc.*, 271 I. C. C. 5 (1948).

<sup>18</sup> 271 I. C. C. 5 (1948).

<sup>19</sup> *Id.* at 38.

<sup>20</sup> See *Texas & Pacific Ry. Co. v. Gulf, Colorado and Santa Fe Ry. Co.*, 270 U. S. 266, 277-278 (1926).

<sup>21</sup> *Chesapeake & Ohio Ry. Co. Purchase, etc.*, 271 I. C. C. 5, 39 (1948). The public interest standard in the Federal Communications Commission Act, as construed in *Federal Communications Commission v. Sanders Bros. Radio Station*, 309 U. S. 470 (1940), highlights the different weight to be accorded competitive factors, depending upon the varying regulatory ends. There the Court held that "economic injury to a rival station is not, in and of itself, and apart from con-

Though identical statutory standards govern both motor carrier and rail consolidations, their legislative backgrounds differ. The demand for motor carrier regulation came, not from shippers, as in railroads, but from the roads themselves, who urged that virtually unregulated motor carrier competition threatened railroad financial stability. This view was also supported by the Interstate Commerce Commission, and the Federal Coordinator of Transportation who, in his 1934 and 1935 reports, recommended legislation regulating interstate motor carriers. In addition, during hearings on proposed legislation, many truck operators, previously opposed to Federal regulation, favored such control because they feared the effects of unrestrained competition on the motor carrier industry itself. The result was legislation, enacted in 1935, which from the first placed considerable restraint on motor carrier competition.<sup>22</sup>

Entry was controlled by certificates of convenience and necessity; those already in the field were given a preferred position by the grandfather clauses, assuring not only the right to continue in operation, but also to expand within the areas or between the points which they already served. Moreover, the Commission was empowered to establish minimum as well as maximum rates. And this minimum rate power was soon utilized by the Commission both to protect the railroads from motor carrier competition as well as to safeguard the motor carrier industry from "destructive" competition within its own ranks. Indeed, from the inception of motor carrier regulation to the present day, the power to fix minimum rates has been more significant than the authority to fix maximum charges. Finally, combination of motor carriers, either among themselves or with other forms of transportation, was subjected to Commission control; and such combinations, once approved, were exempted from antitrust.

The principal decision construing this power to exempt carrier consolidation is *McLean Trucking Co. v. United States*.<sup>23</sup> There the Commission approved, and the Supreme Court upheld, consolidation of the seven largest eastern motor carriers. The Commission found that before consolidation the carriers competed with each other for more

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sideration of public convenience, interest or necessity, an element" as to which the Commission must make findings "in passing on an application for a broadcasting license." *Id.* at 473. Essential to the public interest, the Court continued, may be inquiry "into an applicant's financial qualifications" to determine if he may "render the best practicable service to the community reached by his broadcasts"; moreover, the Court stated that: "Plainly it is not the purpose of the Act to protect a licensee against competition but to protect the public. Congress intended to leave competition in the business of broadcasting where it found it, to permit a licensee who is not interfering electrically with other broadcasters to survive or succumb according to his ability to make his program attractive to the public." *Id.* at 475.

<sup>22</sup> 49 U. S. C. § 314 (1952).

<sup>23</sup> 321 U. S. 67 (1944).



than a third of the mileage of their combined routes.<sup>24</sup> Nonetheless, the Commission concluded "that on completion of the merger 'there would remain ample competitive motor-carrier service throughout the territory involved.'"<sup>25</sup> In addition, the Commission felt that, as a result of the consolidation, "movement of freight would be simplified and expedited, equipment would be utilized more efficiently, terminal facilities improved, handling of shipments reduced, relations with shippers and public regulatory bodies simplified, safe operation promoted and substantial operating economies would be achieved."<sup>26</sup>

On appeal, a principal issue was whether the Commission "failed to give due weight to the prohibitions and policies of the antitrust laws."<sup>27</sup> The majority upheld the Commission reasoning that "as a factor in determining the propriety of motor-carrier consolidations, the preservation of competition among carriers, although still a value, is significant chiefly as it aids in the attainment of the objectives of the national transportation policy."<sup>28</sup> Weighing the significance of any factor in each case, the majority stated that, "the wisdom and experience of that Commission, not of the courts, must determine whether the proposed consolidation is 'consistent with the public interest.'"<sup>29</sup>

Challenging the weight accorded competitive factors by the Commission, the dissent argued that "exercise of the administrative authority to grant exemptions from the anti-trust laws should be closely confined to those where the transportation need is clear."<sup>30</sup> The Commission's "public interest" guide, the dissent continued, "includes the principles of free enterprise, which have long distinguished our economy \* \* \*."<sup>31</sup> And Congress could hardly have intended these principles "\* \* \*" to be swept aside unless they were in fact obstacles to the realization of the national transportation policy."<sup>32</sup>

Were motor carrier entry unrestricted, rarely, if ever, would a consolidation raise important antitrust problems. Apart from Commission permission to operate over a given route, either by direct certification or by purchase of operating rights from another carrier, the cost of entry is so low that competition would be an adequate safeguard against private regulation of the market by would-be monopolists. Because entry is limited, however, the principal motivation for most acquisitions is the desire to obtain additional operating

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<sup>24</sup> *Id.* at 67.

<sup>25</sup> *Id.* at 71.

<sup>26</sup> *Id.* at 72.

<sup>27</sup> *Id.* at 69.

<sup>28</sup> *Id.* at 85-86.

<sup>29</sup> *Id.* at 87-88.

<sup>30</sup> *Id.* at 93.

<sup>31</sup> *Id.* at 94.

<sup>32</sup> *Ibid.*

rights. Those rights have substantial value, reflected, of course, in higher fixed costs of motor carrier operation and therefore higher rates to the public. The competitive consequences of a motor carrier merger depend largely, therefore, on its effect on combining carriers' operating rights.

More basic than the effect of motor carrier consolidations, however, is whether entry should be restricted to protect railroads and motor carriers from unrestrained competition. With restricted entry, the question whether two carriers may combine is comparable to whether a second carrier should be permitted to enter a field presently occupied by only one. In either case the issue is whether the public interest will be better served by two competitors or by one carrier. All other factors being equal, the policy of the antitrust laws would clearly favor competition by two to service by one. If, therefore, the statutory standard of "public interest" gives any effect at all to antitrust policy, in a case in which all other factors neutralize one another, it should require a regulatory agency to resolve such an issue in favor of competition rather than monopoly.

Construing the Federal Communications Act, however, the Supreme Court suggested the contrary in *Federal Communications Commission v. R. C. A. Communications, Inc.*<sup>33</sup> Authorizing establishment of an overseas radiotelegraph service, the Commission "found that competition, that is, duplication of radiotelegraph facilities would not impair the ability of the existing radio carrier, RCAC, and cable carriers to render adequate service. \* \* \* For such reasons the Commission concluded that competition was 'reasonably feasible.'"<sup>34</sup> In addition, the Commission noted "that 'overall competition for telegraph traffic generally' would be increased, and more effective radiotelegraph competition introduced, \* \* \*" and, therefore, "concluded that duplicate facilities should be authorized because of the 'national policy in favor of competition.' From this policy, the Commission said, it follows that 'competition' is in the public interest where competition is 'reasonably feasible.'"<sup>35</sup>

On appeal, the Court felt "it is improper for the Commission to suppose that the standard it has adopted is to be derived without more from a national policy defined by legislation and by the courts. Had the Commission clearly indicated that it relied on its own evaluation of the needs of the industry rather than on what it deemed a national policy, its order would have a different foundation. There can be no doubt that competition is a relevant factor in weighing the public interest. \* \* \* Our difficulty arises from the fact that while the Commission recites that competition may have beneficial effects,

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<sup>33</sup> 346 U. S. 86 (1953).

<sup>34</sup> *Id.* at 88.

<sup>35</sup> *Id.* at 89.

it does so in an abstract, sterile way.”<sup>36</sup> Thus, the Commission relied “not on its independent conclusion, from the impact upon it of the trends and needs of this industry, that competition is desirable but primarily on its reading of national policy, a reading too loose and too much calculated to mislead in the exercise of the discretion entrusted to it.

“To say that national policy without more suffices for authorization of a competing carrier wherever competition is reasonably feasible would authorize the Commission to abdicate what would seem to us one of the primary duties imposed on it by Congress.”<sup>37</sup> As a result, the Court would require the Commission, not to “make specific findings of tangible benefit,” but merely to “warrant, as it were, that competition would serve some beneficial purpose such as maintaining good service and improving it.”<sup>38</sup> More generally, the Court observed “That there is a national policy favoring competition cannot be maintained today without careful qualification. It is only in a blunt, indiscriminating sense that we speak of competition as an ultimate good. Certainly, even in those areas of economic activity where the play of private forces has been subjected only to the negative prohibitions of the Sherman Law, this Court has not held that competition is an absolute.”<sup>39</sup>

In contrast to the Motor Carriers Act construed in the *McLean* case, the Civil Aeronautics Act specifies, among its objectives comprising the “public interest” standard, “competition to the extent necessary to assure the sound development of an air transportation system.”<sup>40</sup> Applying this standard, the Board, for example, disapproved American Airlines’ proposed acquisition of Mid-Continent.<sup>41</sup> Reaching this conclusion, the Board emphasized the effect of American’s absorption of Mid-Continent’s strategic linking routes<sup>42</sup> both on American’s incentive to develop competitive routes and on foreclosure of Mid-Continent’s competitors from American’s business over the link routes.

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<sup>36</sup> *Id.* at 94.

<sup>37</sup> *Id.* at 95.

<sup>38</sup> *Id.* at 96–97.

<sup>39</sup> *Id.* at 91–92.

<sup>40</sup> 49 U. S. C. § 402 (1952); see also *Air Freight Case*, 10 C. A. B. 572 (1949), *aff’d* 192 F. 2d 417 (D. C. Cir. 1951) (Civil Aeronautics Board granted certification to new air freight applicants though existing passenger and freight carriers introduced evidence suggesting their ability adequately to handle foreseeable traffic load).

<sup>41</sup> 7 C. A. B. 365 (1946).

<sup>42</sup> Thus the Board found that “for some past periods, connecting traffic has accounted for more than 50 percent of dollar volume of Mid-Continent’s business.” *Id.* at 373; see also 379. The Board found, however, that “American’s participation in connecting business with Mid-Continent uniformly has been very minor both relatively in comparison with participation of other carriers and alone in absolute numbers.” *Id.* at 374.

The beginning point for the Board's analysis "was the size and competitive position of American" as the "largest of the domestic air carriers."<sup>43</sup> The Board concluded that a result of the proposed merger "would be proportionally less economic pressure upon the American controlled system to work out efficient complementary services."<sup>44</sup> In addition, the Board found that American's absorption of Mid-Continent "must reasonably be expected to produce so great a diversion of traffic from other air carriers as would \* \* \* impair the competition we deem necessary to assure an adequate air transportation system."<sup>45</sup>

This Committee, we repeat, endorses competition as the major rule in our private enterprise economy. We recognize that competition can be impaired either by conduct transgressing the antitrust laws or by government regulation fixing prices or rates or restricting freedom of entry. The Committee notes an apparent trend toward such government control. We call attention to the fact that such regulation tends to beget further regulation. For if one industry is regulated then it may be urged that its competitors should, in fairness, also be regulated. Apart from the need for regulation in any particular industry, we urge that moves toward regulation be taken only with full recognition of the effects of such exceptions to the policy favoring competition which, as a general rule, we endorse.

While the whole Committee accepts these general principles, views diverge in other respects. Some members feel that, since we have made no factual study of each regulated area, the Committee should refrain from any recommendation for general congressional review of the need for regulation. Others favor a general recommendation to Congress that the trend toward regulation should be checked or even reversed. They emphasize, however, that any such readjustment must make adequate provision to avoid undue hardship to the interests affected. Several Committee members favor specifying the motor carrier industry as an example of unnecessary restriction of competition through regulation of entry and minimum rates.

Even in the areas where Congress has adopted the policy that "competition' may [not] have full play,"<sup>46</sup> we feel that unless Congress has expressly provided to the contrary, the regulatory guide consistent with the "public interest" as applied to mergers must "include the principles of free enterprise which have long distinguished our economy."<sup>47</sup> It is no longer subject to challenge that "competition is a relevant factor in weighing the public interest."<sup>48</sup>

<sup>43</sup> *Id.* at 377.

<sup>44</sup> *Id.* at 382.

<sup>45</sup> *Id.* at 379.

<sup>46</sup> *Federal Communications Commission v. R. C. A. Communications, Inc.*, 346 U. S. 86, 92 (1953).

<sup>47</sup> *McLean Trucking Co. v. United States*, 321 U. S. 67, 94 (1944) (dissenting opinion).

<sup>48</sup> *Federal Communications Commission v. R. C. A. Communications, Inc.*, 346 U. S. 86, 94 (1953).

In any instance, the weight to be accorded competitive factors in measuring "public interest" turns, of course, on Congressional intent. At the outset, this issue is one for agency determination. The agency must make some "independent conclusion"<sup>49</sup> concerning the Congressionally intended role for competition as well as indicate in any case the effect on "public interest" of promoting competition.<sup>50</sup>

Ultimately, however, the agency's interpretation of Congressional design is clearly a proper subject for judicial review.<sup>51</sup> True, the "wisdom and experience of \* \* \* [the agency]', not of the courts, must determine whether the proposed consolidation is 'consistent with the public interest.'<sup>52</sup> Equally true, however, it is the Court's "responsibility to say whether the Commission has been guided by proper consideration in bringing the deposit of its experience \* \* \* to bear \* \* \* in [determining] the public interest."<sup>53</sup> Where Congress has been silent, the basic policy of our antitrust laws requires the Court's conclusion that competition, at least where all other considerations involved are equal, is in the "public interest." In all instances, the courts, in reviewing agency discretion, should recognize that "administrative authority to grant exemptions from the antitrust laws should be closely confined to those (instances) where the \* \* \* (regulatory) need is clear."<sup>54</sup>

## 2. Rate Agreements, Bureaus and Conferences Under the Regulatory Statutes

Three principal regulatory statutes immunize certain private rate agreements, upon agency approval, from antitrust coverage. Thus, the Reed-Bulwinkle Act provides that certain carriers may apply to the Interstate Commerce Commission for approval of agreements relating to "rates, fares, classifications, divisions, allowances or charges."<sup>55</sup> The Commission may approve agreements meeting prescribed standards, and these, as a result, are exempt from antitrust. Similarly, the Civil Aeronautics Act requires filing of agreements "relating to the establishment of transportation rates, fares, charges or classifications"

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<sup>49</sup> *Id.* at 95.

<sup>50</sup> *Id.* at 96. However, the Court has noted that an agency "is not required to make specific findings of tangible" effect. For in "the nature of things, the possible benefits of competition do not lend themselves to detailed forecast." *Id.* at 96-97.

<sup>51</sup> Cf. *Federal Communications Commission v. R. C. A. Communications, Inc.*, 346 U. S. 86 (1953).

<sup>52</sup> *McLean Trucking Co. v. United States*, 321 U. S. 67, 87-88 (1944).

<sup>53</sup> *Federal Communications Commission v. R. C. A. Communications, Inc.*, 346 U. S. 86, 91 (1953).

<sup>54</sup> *McLean Trucking Co. v. United States*, 321 U. S. 67, 93 (1944) (dissenting opinion); see also *United States v. Borden Co.*, 308 U. S. 188, 198-199 (1939).

<sup>55</sup> 49 U. S. C. § 5b (1952).

and directs the Board to approve agreements "that it does not find to be adverse to the public interest."<sup>56</sup> Finally, "every common carrier by water" is required to file with the Maritime Commission all agreements "fixing or regulating transportation rates or fares" or otherwise "preventing, or destroying competition."<sup>57</sup> The Maritime Commission, in turn, is authorized to "disapprove, cancel or modify any agreement" found to be "unjustly discriminatory or unfair as between carriers, shippers, exporters, importers, or ports" or otherwise "in violation of that statute."<sup>58</sup>

In enacting Section 5a of the Interstate Commerce Act, Congress sought some accommodation between "two important policies. \* \* \* One is the policy set forth in the antitrust laws, that restraint of commerce is not in the public interest. The other is the policy set forth in the Interstate Commerce Act, particularly in the national transportation policy."<sup>59</sup>

On the one hand, Section 5a implicitly recognizes that "rate bureau and classification-committee methods have been considered a necessary part of the process of rail rate making."<sup>60</sup> They may encourage "the establishment and maintenance of 'reasonable charges for transportation services, without unjust discrimination, undue preferences, or advantages, or unfair or destructive competitive practices.'"<sup>61</sup> On

<sup>56</sup> 49 U. S. C. § 492 (1952).

<sup>57</sup> 46 U. S. C. § 814 (1952).

<sup>58</sup> 46 U. S. C. § 814 (1952).

<sup>59</sup> H. R. Rep. No. 1100, 80th Cong., 1st Sess., 12 (1948). Section 5a can best be understood against a background of prior legislation and litigation over rate agreements. The Interstate Commerce Act of 1887, responding principally to complaints about discriminatory rates and rebates (Sen. Rep. 46, Part 1, 49th Cong., 1st Sess., 180-181 [1886]) was held to give the Commission no power to prescribe future rates or approve rate agreements. (See *United States v. Trans-Missouri Freight Ass'n.*, 166 U. S. 290, 315 [1897]). Soon after, existing rate agreements, pooling traffic, distributing earnings to each member, and prescribing money penalties for violation of their rate decisions were held illegal under the Sherman Act. (*United States v. Trans-Missouri Freight Assn.*, 166 U. S. 290 [1897] and *United States v. Joint Traffic Ass'n.*, 171 U. S. 505 [1898].) In apparent response, the Elkins Act of 1903, the Hepburn Act of 1906, and the Mann-Elkins Act of 1910 facilitated Commission proceedings for carrier deviation from published rates and empowered Commission fixing of future and joint rates, as well as Commission suspension of proposed rate changes. The Transportation Act of 1920 further added to Commission responsibilities by enabling the fixing, not only of maximum just and reasonable, but also minimum or precise rates by groups or territories. In addition, the Commission was empowered, in compliance with legislative standards, to approve pooling and certain rate agreements. Antitrust immunity, however, did not necessarily follow from such approval. (See *Georgia v. Pennsylvania Railroad Co.*, 324 U. S. 439, 456-457 [1945].) Section 5a followed.

<sup>60</sup> *Application for Western Traffic Association Agreement*, 276 I. C. C. 183, 190 (1949).

<sup>61</sup> *Id.* at 211.

the other hand, the Commission may not approve any agreement "with respect to a pooling" or a "division" and more affirmatively, the Commission must find "that under the agreement, there is accorded to each party the free and unrestrained right to take independent action either before or after any determination arrived at through such procedure."<sup>62</sup>

Under this provision, more than thirty applications for approval of carrier agreements have thus far been submitted to the Commission. *Application of Western Traffic Association Agreement*<sup>63</sup> is typical of the Commission's construction of Section 5a. There some 112 railroads, the Western Traffic Association, sought approval of agreements "relating to procedures for joint consideration or establishment of rates, fares, classifications, divisions [or] allowances."<sup>64</sup> Briefly described, the Western Agreement provided for a number of special bureaus located in different geographical areas or concerned with various sorts of shipments. Within each bureau, rate proposals were first to be processed by Standing Rate Committees, made up of full time employees, who conduct public hearings upon notice to shippers. These Committees make recommendations to member lines, who, if no objection is received, publish the tariff charge. Any objections were to be considered by a committee of Freight Traffic Managers, whose decision might be appealed to another committee made up of the Chief Traffic Officers of the member lines. The Agreement finally reserved to each member of the Association "the free and unrestrained right to take independent action either before or after any determination is arrived at after any provision herein provided."<sup>65</sup>

Opposing approval, the Department of Justice urged first that the agreement "does not actually accord to each party thereto the free and unrestrained right to take independent action as required by Par. (6) of § 5a."<sup>66</sup> Second, the Department contended that it went so

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<sup>62</sup> 49 U. S. C. § 5b (1952).

<sup>63</sup> 276 I. C. C. 183 (1949).

<sup>64</sup> *Id.* at 183. As the Commission noted, this agreement "continues in form and substance the organization and procedures as presently exist in this area." *Id.* at 184. Relevant here is the Association's contention that "between 80 percent and 90 percent of all traffic transported" by them "moves on rates \* \* \* prescribed by the Commission as part of its scheme for closely integrated rate adjustments by the western district and between that district and other territories." *Id.* at 198.

<sup>65</sup> *Id.* at 197. Two other types of appeals were specified. First, a proposal pending before a particular bureau, upon a majority vote of the member lines of another bureau, might be referred to the Executive Committee of the Western Traffic Association for final action. Second, the chairman of the several rate bureaus might appeal any decision of the lower ranking committees of traffic officers to the Executive Committee.

<sup>66</sup> *Id.* at 207.

"far beyond the Congressional purpose to permit approval of carrier conferences" that "the Commission may not find that the national transportation policy will be so furthered by the agreement as to outweigh its disadvantages to the public interest to be guarded against by the antitrust laws."<sup>67</sup>

Rejecting the Department's contentions, the Commission, with minor exceptions, approved the proposed agreement. Referring to the provision expressly asserting each member's right to independent action, the Commission reviewed procedures for objection and then found "that resort to independent action has not been infrequent."<sup>68</sup>

Turning, then, to consideration of its "public interest" guide, the Commission first stated its conclusion that such agreements formed "a necessary part of the process of railroad rate making."<sup>69</sup> It pointed out that no "party to the proceeding [including the Department of Justice] denies the need, as a practical matter, for the joint consideration of many proposed changes in rates at the 'grass roots' level."<sup>70</sup> Then, emphasizing the necessity of such agreements in fulfilling "public interest" objectives, the Commission concluded that rate adjustments must be viewed only against the background of "the effects they will have on the entire structure and the need for as much stability of rates as is practicable."<sup>71</sup> Thus, the Commission found that there "is no alternative to procedures calling for such initial joint consideration of proposed rate changes" to avoid that "cutthroat competition \* \* \* so strongly condemned in the Commission's early \* \* \* reports and which clearly would be inconsistent both with the basic nature of rates and obligations imposed on railroads by the act."<sup>72</sup>

Despite this admitted damper on railroad price rivalry, the Commission nevertheless found that "the present agreement would not contribute to the decline of essential competition."<sup>73</sup> The competition envisioned, however, was from other modes of transportation. As the Commission stated: "Since the advent of motor carrier and air transportation, competition is a more potent factor in rate making than it has ever been."<sup>74</sup>

<sup>67</sup> *Ibid.*

<sup>68</sup> *Id.* at 210. Cf. the conclusion of Lloyd K. Garrison, sitting as special master in *Georgia v. Pennsylvania Railroad Co.* Despite like procedures, he found that these "agreements and understandings do not destroy the right of independent action, but to some extent they dampen down the frequency of its use and serve as a deterrent, self-imposed and noncoercive to the freedom of rate making." 17 I. C. C. Pract. J. 864, 869 (1950).

<sup>69</sup> *Application of Western Traffic Association Agreement*, 276 I. C. C. 183, 190 (1949).

<sup>70</sup> *Id.* at 213.

<sup>71</sup> *Ibid.*

<sup>72</sup> *Id.* at 214.

<sup>73</sup> *Id.* at 214.

<sup>74</sup> *Id.* at 214-215.



Perhaps greater emphasis on intra-industry price competition is reflected in the Civil Aeronautics Board's treatment of proposed rate agreements.<sup>75</sup> In the *Air Freight Tariff Agreement Case*, for example, the Board considered an agreement between certified air carriers relating to the fixing and maintenance of air freight tariffs. Provisions requiring parties to "give the common filing agent at least fifteen days' advance notice before any new tariff or any revision \* \* \* is filed with the Board," were included in the agreement. The proposal demanded, in addition, that parties "discuss with one another contemplated changes in [freight] rates, charges, \* \* \* and services."<sup>76</sup>

Rejecting the carriers' contention that the advance notice provision was needed to enable other carriers promptly to meet competitive changes, the Board found that "compulsory filing of advance notices of proposed tariff provisions, would tend to eliminate individual incentives in this area as it would deprive a carrier of the opportunity of obtaining a competitive advantage for such an initiative."<sup>77</sup> Sim-

<sup>75</sup> The Civil Aeronautics Act provides for filing with the Board of agreements between air carriers "relating to the establishment of transportation rates, fares, charges, or classifications," and for Board approval of those agreements "it does not find to be adverse to the public interest." Included among its objectives comprising the "public interest", we repeat, is "competition to the extent necessary to assure the sound development of an air transportation system." 49 U. S. C. §§ 402, 492 (1952).

<sup>76</sup> *Air Freight Tariff Agreement Case*, 14 C. A. B. 424, 428, 430 (1951).

<sup>77</sup> *Id.* at 429. The decision in *International Air Traffic Association Conference Resolution of 1945* (6 C. A. B. 639 [1946]) is not at odds with this concern for allowing reflection of competitive advantages in rate differences. I. A. T. A. embraced almost all international airlines. Its 1945 Conference Resolution proposed a system of regional traffic conferences made up of carriers serving each region. The Board noted that the Conference Agreement provided "broad powers to reach agreements on rates for all international air services." (*Id.* at 640.) However, the Board concluded that the Agreement provision requiring "that the conference act, by unanimous vote, is to preserve the right of any carrier to take independent action." (*Id.* at 645.) And the Board noted that any "agreements between the members of I. A. T. A." must "in the case of United States air carriers" be submitted to the Civil Aeronautics Board "for its approval or disapproval." (*Id.* at 641.) Most important was the Board's finding of British and French "fears concerning uncontrolled, competitive rate making by international air carriers" and the insistence of those governments that "American flag carriers operating on routes to and from territories controlled by them shall charge rates that have been approved by an appropriate international governmental agency or rates that have been fixed by agreements of all carriers operating throughout a given region." (*Id.* at 642.) Accordingly, the Board noted that the present resolution "establishes the only presently available machinery whereby the United States Government through this Board can share and have a voice in the regulation of the rates of our international air carriers," (*Id.* at 644) and approved the proposed agreement "for the limited period of one year in order that we may be in a position to evaluate it on the basis of actual experience gained from its operation." (*Id.* at 641.) Cf. *American Airlines, Inc., Certificate of Public Convenience and Necessity*, 2 C. A. B. 16 (1940), and *North-east Airlines, Inc. et al., North Atlantic Route*, 6 C. A. B. 319 (1945).

ilarly, in refusing approval for compulsory prediscussion of local rate changes, the Board found that these "must inevitably tend toward the discouragement of individual rate making based upon competitive considerations. It is also obvious" the Board continued, "that a forum for discussion of competitive rates not open to the public nor a regulatory agency presents a situation conducive to the establishment of rate levels by agreement rather than by competitive forces."<sup>78</sup> The Board concluded that such discussion should not be sanctioned unless we are prepared to abandon the concept of individual rate making in the air transport field."<sup>79</sup>

In final analysis, these conclusions were reached because of the Board's concern with the "important policy objective" of preserving competition to the extent necessary to assure the sound development "of an air transportation system."<sup>80</sup> The Board was "not unmindful" of its obligation to protect "against unfair or destructive competitive practices."<sup>81</sup> However, the Board concluded that between "the areas of unfair or deceptive practices on the one hand, and unreasonable charges on the other," there exists "an area for individual initiative in the development of a sound air freight rate structure."<sup>82</sup>

Though rate agreements by shipping conferences are concededly authorized under the Shipping Act, the legality of contract or dual rate provisions which such agreements sometimes include is not yet settled.<sup>83</sup> Under such provisions, rates are cut to shippers who promise to ship exclusively with conference members for a specified time to a given area.<sup>84</sup>

Counsel for the Maritime Board once stated that the dual rate system "should be frankly recognized as a device tending toward the monopolization of ocean commerce in particular trades by the [conference]. \* \* \* [I]f a contract system is wholly effective, it will result in a complete monopoly in the sense that all cargo moving in a trade

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<sup>78</sup> *Air Freight Traffic Agreement Case*, 14 C. A. B. 424, 431 (1951). The Board suggested, however, that where circumstances warranted, it could "grant specific permission to the parties to discuss local rates, subject to appropriate safeguarding conditions, including perhaps, the condition that such discussion be open to members of the Board's staff."

<sup>79</sup> *Ibid.*

<sup>80</sup> *Id.* at 429.

<sup>81</sup> *Ibid.*

<sup>82</sup> *Ibid.*

<sup>83</sup> See *Isbrandtsen Co., v. United States*, 96 F. Supp. 883, 889 (S. D. N. Y. 1951) *aff'd* by equally divided court, 342 U. S. 950 (1952). See also *United States Navigation Co., Inc. v. Cunard Steamship Co., Ltd.*, 284 U. S. 474, 487 (1932).

<sup>84</sup> Such a system is not employed in coastal or intercoastal shipping or by railroad conferences under the Interstate Commerce Act. We have made no independent factual inquiry of the extent to which existing conferences employ such system.

where the system is used will move in ships of conference carriers.”<sup>85</sup>

The Shipping Act of 1916 authorizes the Board to approve agreements “fixing or regulating transportation rates or fares” which are found not to be “unjustly discriminatory or unfair” or to “operate to the detriment of the commerce of the United States” or “to be in violation of this Act.”<sup>86</sup> The Act further provides, however, that no shipping line may “directly or indirectly \* \* \* retaliate against any shipper by \* \* \* resort to \* \* \* discriminating or unfair methods because such shippers patronized any other carrier.”<sup>87</sup>

The Departments of Justice<sup>88</sup> and Agriculture along with a non-conference steamship company have urged that the latter provision outlaws all dual contract provisions. Rejecting this position, the Board reasoned: “Such an interpretation would be contrary to the interpretation \* \* \* uniformly given since the adoption of the Act in 1916; \* \* \* would make impossible any harmonious administration of the act as a whole; \* \* \* [and] would extend the application of section 14 (3) to carriers’ activities generally, whereas we think application is limited to such retaliation as is there described.”<sup>89</sup>

In essence, the Board’s position rests on the conclusion that, for conferences to operate effectively “something more than voluntary shipper cooperation must be agreed to;” and that “the dual rate system is the device which has been developed for that purpose.”<sup>90</sup> In the Board’s view, the result is that “such a provision may be authorized \* \* \* unless the Board finds that it is ‘unjustly discriminatory or unfair as between carriers, shippers, exporters, importers, or ports.’”<sup>91</sup>

To date no court has resolved these conflicting interpretations.

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Resolution turns initially on construction of the language and design, not of any antitrust statute, but of the Shipping Act.<sup>92</sup> The Committee feels that this requires a factual judgment concerning first, the role of shipping conference activity in our national shipping policy and second, the necessity of the dual rate system to such conferences.

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<sup>85</sup> 96 F. Supp. 883, 888, at n. 13 (1951).

<sup>86</sup> 46 U. S. C. § 814 (1952).

<sup>87</sup> 46 U. S. C. § 812 (1952).

<sup>88</sup> See for example, *Isbrandtsen Co. v. United States*, 96 F. Supp. 883 (S. D. N. Y. 1951).

<sup>89</sup> *Isbrandtsen Co. v. North Atlantic Continental Freight Conference et al.*, 3 F. M. B. 235, 240 (1950).

<sup>90</sup> *Id.* at 245.

<sup>91</sup> *Isbrandtsen Co. v. United States*, 96 F. Supp. 883, 886 (S. D. N. Y. 1951).

<sup>92</sup> The arguments for and against each position are detailed by Circuit Judge Frank in a special appendix to *Isbrandtsen Co. v. United States*, 96 F. Supp. 883, 893-900 (1951). Several members believe that the Shipping Act should be interpreted to condemn dual rate agreements.

Even if the dual contract system should, upon factual inquiry, be deemed essential to shipping policy and authorized by the statute, this Committee recommends that the Board require that conference membership be open to all qualified shipping companies.<sup>93</sup> In any event, we feel that the conference plus the dual rate system should not be extended beyond whatever is its proper rate stabilizing function to enable private groups to limit the supply of competing bottoms. Should the Board feel legitimate need for the control of shipping supply, then they should seek additional legislation lodging such controls, not in private hands, but rather in a system for certificates of public convenience and necessity.

Similarly, we pass no judgment on the necessity of rate agreements by railway bureaus<sup>94</sup> or airlines. Approving such agreements, our analysis suggests that the Civil Aeronautics Board apparently gives different weight to intra-industry price competition. In part, this may merely reflect the differing statutory objectives comprising the "public interest" under the two regulatory statutes.<sup>95</sup> To the extent this differing emphasis is not required by statute, however, it suggests the necessity for closer court scrutiny of the extent to which each agency, in promoting its "public interest" objective, gives effect to whatever congressional standards relating to competition appear in its enabling statute.<sup>96</sup>

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<sup>93</sup> The policy of the Board in this regard has not always been unambiguous. Compare *Waterman Steamship Corp. v. Arnold Bernstein Line*, 2 U. S. M. C. 238 (1939); *Olsen v. Blue Star Line, Ltd.*, 2 U. S. M. C. 529 (1941); *Black Diamond Steamship Corp. v. Compagnie Maritime Belge, S. A.*, 2 U. S. M. C. 755 (1946), with *Hind, Rolph & Co., Inc. v. French Line*, 2 U. S. M. C. 138 (1939) and *Application of Thorden*, 2 U. S. M. C. 77 (1939). The suggestion has been offered that Board decisions reveal the policy that "sufficient facts exist to validate (a dual contract system) \* \* \* if it appears merely that any carrier may join the conference and that the dual rate provision will create 'stability' by tending to drive competing nonconference carriers into the conference or out of business." (*Isbrandtsen Co. v. United States*, 96 F. Supp. 883, 889 [S. D. N. Y. 1951].) Denying the existence of such a uniform pattern, the three judge court in *Isbrandtsen* noted that "(perhaps due to the way in which the statutory powers have been frequently shifted from one agency to another) the decisions of the Board (none of which approving a dual rate provision has heretofore come to court) have lacked uniformity and consistency; and, in such circumstances, administrative interpretations have little weight." (*Id.* at 890-891.)

<sup>94</sup> Corollary to the question of the necessity for rate agreements by railroad bureaus is the issue of the extent, within such bureaus, independent action should be encouraged.

<sup>95</sup> Unlike the Interstate Commerce Act, the Civil Aeronautics Act, as we have noted, specifies among its objectives comprising the "public interest," "competition to the extent necessary to assure the sound development of an air transportation system." 49 U. S. C. § 402 (1952).

<sup>96</sup> Cf. *Federal Communications Commission v. R. C. A. Communications, Inc.*, 346 U. S. 86 (1953).

### 3. Primary Jurisdiction

The timing of such judicial scrutiny, as well as whether or not conduct is to be tested by antitrust or only regulatory statutory standards, may ultimately depend on whether a court applying the doctrine of "primary jurisdiction" bars a plaintiff from proceeding until some or all of the matters complained of have been considered by the appropriate regulatory agency. The rationale for such judicial restraint finds recent expression in *United States v. Far East Conferences, et al.*<sup>97</sup>

There the Antitrust Division sought to enjoin a shipping conference from use of the dual rate system. Though the basic conference agreement had been approved by the Federal Maritime Board's predecessor, the dual contract system had not been submitted.<sup>98</sup> Had the dual rate system been approved by the Board, antitrust attack might have been barred.<sup>99</sup>

For its rationale, the Court relied on "a principle, now firmly established, that in cases raising issues of fact not within the conventional experience of judges, or cases requiring the exercise of administrative discretion, agencies created by Congress for regulating the subject matter should not be passed over. This is so even though the facts, after they have been appraised by specialized competence, serve as a premise for legal consequences to be judicially defined. Uniformity and consistency in the regulation of business entrusted to a particular agency are secured, and the limited functions of review by the judiciary are more rationally exercised, by preliminary resort for ascertaining and interpreting the circumstances underlying legal issues to agencies that are better equipped than courts by specialization, by insight gained through experience and by more flexible procedure."<sup>100</sup>

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<sup>97</sup> 342 U. S. 570 (1952).

<sup>98</sup> *Id.* at 578-579.

<sup>99</sup> 46 U. S. C. § 814 (1952). That immunity, however, would depend upon whether the Board has authority to approve any such dual rate system—an issue, as we have noted, never precisely passed upon by the Court. See discussion, *supra*.

<sup>100</sup> *United States v. Far Eastern Conference, et al.*, 342 U. S. 570, 574-575 (1952). The first pronouncement of "primary jurisdiction" in *Texas & Pacific Ry. Co. v. Abilene Cotton Oil Co.*, 204 U. S. 426 (1907), similarly emphasized a uniform regulatory pattern. In that non-antitrust case, the Court ordered dismissal of a shipper's action against a rail carrier in a state court for recovery of unreasonable freight charges prior to an administrative determination of their reasonableness. For analogous reasons the Supreme Court, in *Keogh v. Chicago & Northwestern Ry. Co.*, 260 U. S. 156 (1922), held not merely that Commission proceedings were preferred over court determinations of reasonableness, but also that the Commerce Act remedies were exclusive, superseding the antitrust remedies of treble damages recoverable in the district court—even though plaintiff offers to prove that the alleged damaging rates result in a combination illegal under the antitrust laws. Cf. *Georgia v. Pennsylvania Railroad Co.*, 324 U. S. 439, 455 (1945).

Refusing to entertain the Conference suit, the Court reasoned that "the allegations" of antitrust illegality "either constitute direct and basic charges of violation of" the Shipping Act or "are so interrelated with such charges as to be in effect a component part of them. \* \* \*". The Court concluded that "The matter, therefore, is within the exclusive preliminary jurisdiction of the Shipping Board."<sup>101</sup> Accordingly, the Court dismissed the complaint pending "proceeding before the Board and subsequent judicial review of its order."<sup>102</sup> The Court noted that a later "similar suit \* \* \* if appropriate was not barred."<sup>103</sup>

*Seatrains Lines, Inc. v. Pennsylvania Railroad Co.*<sup>104</sup> similarly emphasized that the conduct subjected to antitrust challenge fell within the regulatory statute as a warrant for refusing judicial action. There, Seatrain, operator of a rail car ferry service, charged that competitor rail lines conspired with its customer roads "to exchange cars freely with each other, but not with Seatrain" and thus deprive Seatrain of its loaded car cargo.<sup>105</sup>

The court found that Seatrain's car exchange provisions with roads having through route connections with Seatrain were "carried out under sanction of the Interstate Commerce Commission."<sup>106</sup> Affirming the Commission's primary jurisdiction over these exchange provisions, the court relied not only on "judicial policy" but also on "Section 16 of the Clayton Act [which] expressly deprives private persons of access to the federal courts for equitable relief against a carrier 'in respect of any matter subject to the regulation, supervision,' or other jurisdiction of the \* \* \* Commission."<sup>107</sup> The court indi-

<sup>101</sup> *United States v. Far Eastern Conferences, et al.*, 342 U. S. 570, 574 (1952). See *United States Navigation Co. v. Cunard Steamship Co.* 284 U. S. 474, 485 (1932). Compare *Georgia v. Pennsylvania Railroad Co.*, 324 U. S. 439 (1945). There the United States charged that defendants fixed arbitrary and noncompetitive rates "for transportation of freight by railroads to and from Georgia so as to prefer the ports of other states over the ports of Georgia." (*Id.* at 443). The Court conceded that "the Commission has authority to remove discriminatory rates of the character alleged to exist here;" nonetheless, it felt that the charged "combination \* \* \* [exceeded] the limits of the collaboration authorized" by the Commission and involved "a conspiracy over which the Commission has no authority but which if proven to exist can only hinder the Commission in the tasks with which it is confronted." (*Id.* at 459-460.) Finally, the Court noted that even if "these rates had been approved by the Commission, \* \* \* proceedings by the Government" would not be barred. (*Id.* at 458.) (But see 49 U. S. C. § 5b [1952].)

<sup>102</sup> *United States v. Far Eastern Conferences, et al.*, 342 U. S. 570, 577 (1952).

<sup>103</sup> *Ibid.*

<sup>104</sup> 207 F. 2d 255 (3d Cir. 1953) cert. denied 345 U. S. 916 (1953).

<sup>105</sup> *Id.* at 260.

<sup>106</sup> *Id.* at 260.

<sup>107</sup> *Id.* at 259. As to exchange provisions within Commission jurisdiction, the court reviewed Commission action already taken to aid Seatrain which declared "the duty of through rate participants to permit Seatrain to use their cars." *Id.* at 258.

cated, however, that Seatrain might file an amended complaint alleging conspiracy "to cause individual railroads which do not share through routes with it to deny Seatrain permission to use and carry their freight cars;" for the "Commission has plainly ruled that it has no control or authority over such withholdings."<sup>108</sup>

However, the *Air Transport Ass'n.*<sup>109</sup> case suggests that even where "the allegations of the complaint reveal that" the regulatory act "covers the dominant facts alleged \* \* \* as constituting a violation of the Antitrust Act," antitrust recovery may merely be postponed rather than forever barred when the regulatory statute affords no remedy comparable to that embodied in the antitrust statutes. The court there noted that "The same set of facts may give rise to both a violation of the Civil Aeronautics Act and a violation of the Antitrust Act. \* \* \* [A] combination of the two statutes and of the remedial provisions thereof can best be accomplished \* \* \* [if the district court retains] jurisdiction of the antitrust suit while an appellant seeks his remedies from the Board. \* \* \* The proceedings before the Board will result in a determination by it to the extent of its jurisdiction over the subject matter. In addition, they will produce a record, findings of fact and conclusions of law as to whether the specific practices complained of are legal or illegal under the Civil Aeronautics Act."<sup>110</sup> The court acknowledged that such a "pro-

<sup>108</sup> *Id.* at 261.

<sup>109</sup> *S. S. W., Inc. v. Air Transport Ass'n. of America*, 191 F. 2d 658, 662 (D. C. Cir. 1951).

<sup>110</sup> *Id.* at 664. Cf. *Slick Airways v. American Airlines, Inc.*, 107 F. Supp. 199 (D. N. J. 1951), appeal dismissed 204 F. 2d 230 (3d Cir. 1953), *cert. denied* 346 U. S. 806 (1953). That complaint charged that certificated air carriers conspired to drive competitive air-freight carriers out of business by (1) "abuse of the privilege of intervention and participation in C. A. B. proceedings \* \* \* controlling plaintiffs \* \* \* authority to engage in the air-freight business" and (2) waging a "campaign of unfair competitive practices designed to appropriate the business" (*Id.* at 203). Refusing to remand plaintiff's cause to the Board, the court, distinguishing *Air Transport*, noted that the "practice of which plaintiff principally complains is that of predatory rate policies, a matter which has previously been before the Board upon extended hearings and has been the subject of findings and prospective relief" (*Id.* at 216). Accordingly, unlike *Air Transport*, the court found "there do not presently appear administrative problems which must be committed to the Board for its determination" (*Id.* at 216). At this point, we register our belief that a mere allegation that activity within regulatory jurisdiction is pursuant to an antitrust conspiracy to injure the plaintiff should not be sufficient to oust agency jurisdiction.

More generally, regarding reference to administrative agencies for specialized fact finding, with a stay of judicial proceedings in the interim, see Mr. Justice Frankfurter dissenting in *Montana-Dakota Utilities Co. v. Northwestern Pub. Serv. Co.*, 341 U. S. 246, 263-266 (1951) and cases cited; see also *Bruce's Juices, Inc. v. American Can Co.*, 320 U. S. 743, 745-746 (1947); *United States v. Aluminum Co. of America*, 148 F. 2d 416, 446-447 (2d Cir. 1945). Compare the provision of Section 7 of the Federal Trade Commission Act, 15 U. S. C. § 47,

cedure" may "make for considerable delay. But absent specific congressional action to deal with the problem, we see no other way in which to accommodate these conflicting statutory schemes and principles which follow in their wake."<sup>111</sup>

Apart from whether the substance of the activities charged is covered by a regulatory statute, the question whether the regulatory statute "embodies a remedial system that is complete and self-contained," whether "it prescribes a fitting remedy which \* \* \* was meant to be exclusive," is also relevant in determining primary jurisdiction.<sup>112</sup> As the court put it in the *Air Transport Ass'n.* case, when "the same set of facts \* \* \* give rise to both a violation"<sup>113</sup> of a regulatory and antitrust enactment, the availability of antitrust remedies turns on Congressional design in fashioning remedies under the regulatory statute. The court there noted that the "Civil Aeronautics Act, unlike the Shipping Act, does not authorize the reward of damages by the Board for violation of its provisions."<sup>114</sup> Moreover, the Act further provides that its "provisions \* \* \* are in addition to such remedies" now "existing in common law or by statute."<sup>115</sup> Accordingly, though that cause was remanded for the Board to determine if the acts complained of were "legal under the Civil Aeronautics Act," the court suggested that acts the Board held beyond its jurisdiction or not legal under the Act, might warrant treble damage recovery if later proved illegal under the antitrust laws.<sup>116</sup>

Aside from the question of remedies, courts may be less willing to postpone or bar antitrust action where the regulatory statute involved

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for the framing of equity decrees by the Federal Trade Commission as a master in chancery.

<sup>111</sup> *S. S. W., Inc. v. Air Transport Ass'n. of America*, 191 F. 2d 658, 664-665 (D. C. Cir. 1951).

<sup>112</sup> *Terminal Warehouse Co. v. Pennsylvania Railroad Co.*, 297 U. S. 500, 514 (1936). See also *United States Navigation Co., Inc., v. Cunard Steamship Co., Ltd.*, 284 U. S. 474, 485 (1932).

<sup>113</sup> 191 F. 2d 658, 664 (1951).

<sup>114</sup> *Id.* at 663. Cf. *Terminal Warehouse Co. v. Pennsylvania Railroad Co.*, 297 U. S. 500, 514 (1936); *United States Navigation Co., Inc., v. Cunard Steamship Co., Ltd.*, 284 U. S. 474, 484-485 (1932); *Keogh v. Chicago & Northwestern Ry. Co.*, 260 U. S. 156, 163, 164 (1922) (all suggesting that where specific damage provisions are included in regulatory statutes, the same set of facts may not give rise to treble damage antitrust recovery). But see *Georgia v. Pennsylvania Railroad Co.*, 324 U. S. 439 (1945) where the court noted injunctive relief under the antitrust laws might be granted, not "against the continuance of any tariff," but rather against the "alleged rate-fixing combination." (*Id.* at 455.) For "that is a matter over which the Commission has no jurisdiction." (*Id.* at 455.)

<sup>115</sup> *S. S. W., Inc. v. Air Transport Ass'n. of America*, 191 F. 2d 658, 664 (D. C. Cir. 1951).

<sup>116</sup> *Ibid.* Similarly, note *Slick Airways v. American Airlines, Inc.*, 107 F. Supp. 199, 211 (D. N. J. 1951), appeal dismissed, 204 F. 2d 230 (3rd Cir. 1953), *cert. denied* 364 U. S. 806 (1953).



does not provide "for detailed and comprehensive economic regulation."<sup>117</sup> *United States v. Borden Co.*,<sup>118</sup> for example, involved an alleged conspiracy to restrain and monopolize the production and marketing of fluid milk in the Chicago areas. Before the Court was the propriety of the District Court's dismissal of the indictment on the ground that "by the Agricultural Marketing Act, the Congress had committed to the \* \* \* Secretary of Agriculture full and complete plenary powers over the production and marketing in interstate commerce of \* \* \* milk."<sup>119</sup> Reviewing the Secretary's powers, the Court concluded that, "the Agriculture Act is a limited statute with special references to particular transactions." Hence the Secretary is granted a right of only "limited" action.<sup>120</sup> Reversing the District Court, the Supreme Court held that such a "limited procedure" was not meant to "substitute for the provisions of the Sherman Act."<sup>121</sup>

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A general approach to accommodation of court and agency roles emerges from analysis of these cases. In "each case brought against a regulated company under the antitrust laws, the subject matter and remedy afforded by the regulatory statute are compared with that of the antitrust laws. If the latter either covers subject matter outside the scope of the Commission's power or provides a remedy which the Commission may not give, then they remain in effect to that limited extent. This sort of approach gives the greatest possible effect to Congressional intent. It subjects problems tended to be dealt with in a uniform manner within the framework of a particular industry to the agency empowered to regulate that industry. At the same time it gives effect to the antitrust laws in those areas not carved out from them by more specific economic regulations."<sup>122</sup>

It seems clear that if the essence of an antitrust action is an agreement already approved by agency action within the scope and policy of an enabling statute which provides for antitrust exemption, then the antitrust charge should be dismissed.

The problem is more difficult where no express statutory exemption is provided, but the agency, acting in accord with a regulatory statute, has approved the action comprising the heart of the antitrust charge. Where the agency has found that the challenged conduct is necessary to carry out duties imposed on the defendants by the regulatory statute, again we feel that such conduct cannot form the sole basis for antitrust

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<sup>117</sup> *S. S. W., Inc. v. Air Transport Ass'n.*, 191 F. 2d 658, 662 (D. C. Cir. 1951). Cf. *United States v. Borden Co.*, 308 U. S. 188, 196-198, 206 (1939).

<sup>118</sup> 308 U. S. 188 (1939).

<sup>119</sup> *Id.* at 196-197.

<sup>120</sup> *Id.* at 198.

<sup>121</sup> *Id.* at 206.

<sup>122</sup> *S. S. W. Inc. v. Air Transport Ass'n.*, 191 F. 2d 658, 661-662 (D. C. Cir. 1951).

suit.<sup>123</sup> However, where there is no finding that the challenged conduct is required by regulatory goals but the agency has found such conduct not inconsistent with regulatory provisions, disagreement arises.<sup>124</sup>

Some Committee members feel that even this agency approval, if in accord with regulatory guides, warrants dismissal of the antitrust complaint. They believe, in the language of the *McLean Trucking* case, that "the preservation of competition among carriers, although \* \* \* still of value, is significant chiefly as it aids in the attainment of the [regulatory] policies."<sup>125</sup> Accordingly, where the challenged conduct has been approved by the agency entrusted with its regulation, no added antitrust appraisal should be superimposed.

Other Committee members feel, however, that, though agency approval of disputed conduct should normally bar its antitrust litigation, that fact alone in all cases may not warrant denial of antitrust relief. There may be instances, they urge, where the challenged conduct, though not violative of the regulatory statute, should nonetheless be condemned under the antitrust laws. They believe that in the absence of express antitrust exemption, Congress did not intend that administrative agencies should, in all cases, be the sole forum for determination of antitrust questions stemming from conduct subject to their jurisdiction. This is especially so, they believe, since it is by no means clear that the courts will closely scrutinize agency determinations of the weight given to factors in evaluating "public interest."<sup>126</sup>

These two positions may in part be reconciled by our suggested standard for court review of agency action. We have thus far considered conduct approved by an agency as either essential to, or merely not inconsistent with, regulatory objectives. Even where such approval occurs, it is clearly a proper subject for judicial scrutiny to determine whether or not the agency has accorded whatever Congressionally intended weight to promotion of competition the par-

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<sup>123</sup> Cf. Special Master's Report in *Georgia v. Pennsylvania Railroad Co.*, published in 17 I. C. C. Pract. J., 864, 869 (1950).

<sup>124</sup> No treatment of this distinction appears in the statement by the court in the *Air Transport Ass'n* case that "there can be no antitrust violation if a matter within the Board's jurisdiction is found by it to be legal under the Civil Aeronautics Act." 191 F. 2d 658, 664 (D. C. Cir. 1951). In either event, where the conduct alleged in the complaint is within the jurisdiction of the regulatory agency, we feel that the court should stay its hand until the regulatory agency has considered the challenged conduct. Whether or not the action should be dismissed, as in *Far East*, or merely held in abeyance, would appear to rest primarily upon whether rights may be lost to the plaintiff as a result of dismissal should it be ultimately determined that the conduct is not within agency jurisdiction or in violation of agency standards.

<sup>125</sup> *McLean Trucking Co. v. United States*, 321 U. S. 67, 85-86 (1944).

<sup>126</sup> *Federal Communications Commission v. R. C. A. Communications, Inc.*, 346 U. S. 86, 89-96 (1953).

ticular statute requires. For, as we have noted, it is clearly the courts' "responsibility to say whether the Commission has been guided by proper considerations in bringing the deposit of its \* \* \* experience \* \* \* to bear \* \* \* in [determining] the public interest."<sup>127</sup> In all instances, judicial review of agency action, we feel, should recognize that "administrative authority to grant exemptions from the anti-trust laws should be closely confined to those [instances] where the transportation need is clear."<sup>128</sup> Reluctance to make exclusive recourse to administrative forums might diminish if that policy of judicial review were firmly set.

Apart from instances where an agency has approved conduct subject to antitrust challenge, there are situations where agency sanction has been denied.<sup>129</sup> Where failure to approve rested on lack of agency jurisdiction,<sup>130</sup> then the antitrust action should in all cases proceed. On the other hand, where the challenged conduct was held short of agency regulatory standards, then survival of the antitrust action should depend on whether the remedy provided in the regulatory statute is substantially comparable in character and effect to antitrust sanction.<sup>131</sup>

Going beyond cases where an agency has already passed on conduct at bar, antitrust proceedings may embrace charges some of which might helpfully be determined initially by an agency. Typical examples might be allegation of predatory<sup>132</sup> or unfairly discriminatory rate practices.<sup>133</sup> In such instances, "it is established practice that courts may entertain actions brought before them, but call to their aid the appropriate administrative agency on questions within its

<sup>127</sup> *Id.* at 91.

<sup>128</sup> *McLean Trucking Co. v. United States*, 321 U. S. 67, 93 (1944) (dissenting opinion); see also *United States v. Borden Co.*, 308 U. S. 188, 198-199 (1939).

<sup>129</sup> See e. g., *Slick Airways v. American Airlines, Inc.*, 107 F. Supp. 199, 216 (D. N. J. 1951), appeal dismissed, 204 F. 2d 230 (3d Cir. 1953), *cert. denied* 364 U. S. 806 (1953); *Seatrains Lines, Inc. v. Pennsylvania Railroad Co.*, 207 F. 2d 255 (3d Cir. 1953), *cert. denied* 345 U. S. 916 (1953).

<sup>130</sup> See *Seatrains Lines, Inc. v. Pennsylvania Railroad Co.*, *supra*, 207 F. 2d 255 at 261; see also *Georgia v. Pennsylvania Railroad Co.*, 324 U. S. 439 (1945) where the Court, rejecting a claim of primary jurisdiction, noted that the complaint charged an illegal "rate-fixing Combination \* \* \* a matter over which the Commission has no jurisdiction." (*Id.* at 455.)

<sup>131</sup> Compare *Keogh v. Chicago & Northwestern Ry. Co.*, 260 U. S. 156 (1922) with *S. S. W. Inc. v. Air Transport Ass'n. of America*, 191 F. 2d 658, 663-664 (D. C. Cir. 1951), and *Slick Airways v. American Airlines, Inc.*, 107 F. Supp. 199, 211 (D. N. J. 1951), appeal dismissed 204 F. 2d 230 (3d Cir. 1953), *cert. denied* 364 U. S. 806 (1953).

<sup>132</sup> See e. g., *S. S. W., Inc. v. Air Transport Ass'n. of America*, 191 F. 2d 658, 660, 664 (D. C. Cir. 1951).

<sup>133</sup> See e. g., *Georgia v. Pennsylvania Railroad Co.*, 324 U. S. 439, 443 (1945); see also *Montana-Dakota Utilities Co. v. Northwestern Pub. Serv. Co.*, 341 U. S. 246, 263-266 (1951).

administrative competence.”<sup>134</sup> Most Committee members feel, however, that, since such agency opinions are “‘only a preliminary interim step’ towards final judgment”, they should be “reviewed only as a part of the judgment entered by the district court.”<sup>135</sup> Committee members agree, however, that in such cases the scope of agency jurisdiction necessarily raises questions of law—subject to the same court review as appeal from an original agency proceeding.

Whether added legislation is needed is basic to this as well as other “primary jurisdiction” issues. Whether and when courts entertain antitrust proceedings involving matters subject to regulatory agency jurisdiction, as we have seen, now turns on whether Congress intended those competitive considerations specified in the given regulatory statute, rather than general antitrust norms, to govern the conduct at bar. This determination, in turn, may depend on factors like the comprehensiveness of the particular regulatory scheme, the extent to which the challenged conduct falls within that scheme, and the relation between remedies afforded by the regulatory and antitrust statutes. This approach reflects the differing scope and purposes of each regulatory statute as well as the varied conduct each controls. It seems clear that the standards and procedures of any statute would have to be tailored to the diverse factors present in each regulated area.

The question still remains whether in a given regulated area there is need for a statute marking out roles of agency and courts where challenged conduct fits under statutes within the jurisdiction of both. The answer in any one case largely depends on the extent to which an agency presently gives effect to any particular statute’s competitive standards and, more basically, on whether, consistent with particular regulatory goals, general antitrust norms should apply. We suggest that such inquiry is primarily factual and might best be carried on by Congressional Committees expert in specific regulated areas.<sup>136</sup>

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<sup>134</sup> *Montana-Dakota Utilities Co. v. Northwestern Public Service Co.*, 341 U. S. 246, 264 (1951). We note, however, that an agency will determine only legal or factual issues relevant to standards of its governing regulatory statutes.

<sup>135</sup> *Id.* at 265. Some Committee members feel that such reference procedure is appropriate only where matters referred lie within the exclusive jurisdiction of the agency, for purpose of agency regulation, and may be presented to the agency under its own procedures. To that extent, determinations by the agency are reviewable only in accord with the regulatory statute and are conclusive in antitrust proceedings only as they define respective jurisdictions of the agency and courts enforcing antitrust laws.

<sup>136</sup> Some Committee members are inclined to the view that, because of the skeletonized character of its regulation, reliance on agency “primary jurisdiction” in antitrust cases involving the shipping industry is most debatable. More generally, three recent *Penn. Water* cases highlight the need for Congressional clarification. The two arising in the Fourth Circuit involved actions to declare certain supply contracts between Penn. Water and another utility

Until this occurs, some liaison procedure between the Antitrust Division and regulatory agencies seems needed. At present, no formal Antitrust Division policy requires consultation with regulatory agencies regarding complaints involving matters subject to their regulation. When the Department of Justice is called upon to support administrative orders on review, however, the present Attorney General has required discussion with the agency involved before the Department determines whether or not to support the agency's order or confess error. Similarly, responses from several regulatory agencies suggest that their procedures do not require consultation with the Antitrust Division regarding agency action which may immunize conduct from the antitrust laws. However, such agencies do report to the Department of Justice possible antitrust violations which may come to their attention.

This Committee believes that broader and more formalized liaison procedures are in order. We recognize, of course, that the Antitrust Division, in discharging its obligations, cannot be bound by any administrative agency's view of Division jurisdiction. Nonetheless, some Committee members feel that it is highly inappropriate for the Division to institute criminal proceedings regarding matters over which an agency exerts regulatory jurisdiction. Further, the Committee feels that complaints relating to such "regulated industries" might initially be referred to an appropriate agency for review and some indication of what action it proposes to take. At least, pending timely consideration of such conduct by the agencies, the Antitrust Division should not institute antitrust proceedings.

Similarly, we recognize that agency action, though resulting in antitrust immunity, must be guided not solely by antitrust considerations

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unenforceable as in restraint of trade. The third proceeding originated before the Federal Power Commission as an investigation into the rates provided for under these contracts, and resulted in a rate order directing the subject utilities to effect relationships which they had theretofore done voluntarily by contract. Sustaining this rate order in the face of attacks on the validity of the contracts, the Circuit Court of Appeals for the District of Columbia declared that the "comprehensive and detailed regulation" provided for in the Federal Power Act left "only a limited area for application of antitrust consideration to Commission decisions." *Penna. Water & Power Co. v. F. P. C.*, 193 F. 2d 230, 235 (D. C. Cir. 1951) (one judge dissenting).

The Fourth Circuit, however, held the contracts invalid and, relying strongly on *Georgia, Borden*, and *Alkali Export* declined to acknowledge primary jurisdiction in the Federal Power Commission. *Penna. Water & Power Co. v. Consol. Gas, Electric Light & Power Co.*, 184 F. 2d 552 (4th Cir. 1950), *cert. denied*, 340 U. S. 906 (1950); later opinion in independent proceedings, 194 F. 2d 89 (4th Cir. 1952), *cert. denied* 343 U. S. 963 (1952).

The Supreme Court affirmed the rate order in the District of Columbia proceeding without ruling on any questions of primary jurisdiction, and denied certiorari in the Fourth Circuit proceedings. *Penna. Water & Power Co. v. Federal Power Commission*, 343 U. S. 414 (1952) (two judges dissenting).

but rather by the agency's "public interest" guide. Accordingly, we believe that, though the Antitrust Division may not attack agency exempted conduct as violative of the antitrust laws, it may properly intervene before the agency or on review urge that regulatory standards require, in any given case, consideration of antitrust criteria. To this end, the Antitrust Division should continue to have opportunity to present its views regarding any agency action the result of which is to exempt conduct from the antitrust laws.<sup>137</sup>

Some members of the committee disagree with the basic approach of the Regulated Industries section. Their position may be summarized in the words of Gilbert H. Montague:

In questioning the desirability of administrative regulation and in suggesting changes in the weight to be given 'public interest' factors in the administration of regulatory statutes, the majority of the Committee still ventures into important and specialized areas which it has not had an opportunity to study. Contrary to its stated intentions, it indulges in indirect and casual judgments as to the relative value of the goals of Congress in establishing systems of administrative regulation.

The majority would invoke a "presumption" in favor of competition in the regulation of industries, such as the railroads, motor carriers, airlines and common carrier communications. Doing so blinks the plain Congressional purpose, disregards the provisions for detailed systems of administrative restraints, and is inconsistent with the cases interpreting these statutes. Competition in regulated industries is but one of many public interest considerations to take into account and its benefits, if any, are to be determined on a *factual basis* in each case.

The majority urges that the basic policy of the antitrust laws requires overturning *McLean Trucking Co. v. United States*<sup>138</sup> and *Federal Communication Commission v. RCA Communications, Inc.*<sup>139</sup> Yet both of these cases arose under statutes where Congress deliberately substituted administrative regulation for the free play of competitive forces and the antitrust laws were intended to remain applicable only to the limited extent that administrative regulation had not occupied the field. The recommendation that the courts should compel agencies to limit statutory exemptions from

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<sup>137</sup> Gilbert H. Montague disagrees with the Committee's comments and conclusions regarding *Federal Communication Commission v. R. C. A. Communications, Inc.*, 346 U. S. 86 (1953).

<sup>138</sup> 321 U. S. 67 (1944).

<sup>139</sup> 346 U. S. 86 (1953).

the antitrust laws only to cases where the exemption is *essential* rather than, as is now the law, where exemptions are desirable or even consistent with the legislative purpose of the regulatory statute, would involve a profound change in substantive law.<sup>140</sup> Insistence that there should be a presumption in favor of competition in the grant of a franchise, contrary to the *RCAC* case, perhaps even more clearly deals with a matter neither stated by the Committee nor within the scope of this Report.

Although competition may well be the "major rule in our private enterprise economy", we do not share the majority's apparent restiveness because administrative agencies establish rates and limit freedom of entry in regulated industries. Nor do we find any evidence of the "trend" towards such administrative regulation which the Committee "notes." Except for national emergencies, such regulation is largely confined to areas where public utility regulation has generally and historically been regarded as essential to protect the public interest.

In the paragraphs introductory to sub-division A the Committee stated the guiding principle that it proposed to follow:

'To further some economic, political, or social objectives, Congress has shielded various activities from the rigors of competition.

*'It is not within the bounds of our antitrust survey to judge the importance of these asserted goals or the extent to which any one of them might be achieved without antitrust exemption.'* [Emphasis supplied.]

The Committee should not have departed from this guiding principle.

In contrast, commenting on the entire Regulated Industries section, Louis B. Schwartz and several members add:

One of the most disturbing phenomena in the antitrust field is the proliferation of exemptions from the law, discussed in Chapter VI of the Report. Every exemption cuts down the area of our economy governed by free competitive enterprise; and, while one must recognize that competition alone will not always provide adequate protection of the public interest, the inroads of protectionism in domestic trade should be kept to a minimum. One would suppose that the first duty of a Committee like this would be to advise the administration whether the exemption process had gone

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<sup>140</sup> It will be noted that the Committee relies on the *dissent* in the *McLean* case for its conclusions in this regard.

too far. Yet the Exemption Chapter opens with a declaration that the Majority will not attempt to pass judgment on this question of policy. Instead, the Report undertakes merely to say whether existing statutes are being interpreted in accord with "legislative intent." Since we have not felt bound by existing legislation in other parts of the Report, which recommend a number of changes in present law, I am unable to account for the Majority's diffidence here. Much of the legislation reviewed in this part of the Report, *e. g.*, the Motor Carrier Act, the Federal Communications Act, the Civil Aeronautics Act, was passed during the Depression of the Thirties. It was a time of desperation when we nearly abandoned free competition entirely in favor of industry self-regulation under NRA. Surely it is time for a fresh look at policies born in this atmosphere. Congress may wish to change its intent.

Even within the self-imposed limitations of the Majority, it is regrettable that the Report does not clearly disavow a number of judicial, administrative and executive actions which have unduly expanded the exemptions. For example, the motor truck business is one that almost any disinterested economist would say should be competitive. Yet the 1935 Act restricted entry and empowered the Interstate Commerce Commission to authorize mergers that would otherwise violate the Antitrust Law. The *McLean* case discussed in the Majority Report involved a tremendous merger of truck lines into Associated Transport Inc. The ICC approved it over the opposition of the then Attorney General and the Department of Agriculture. The Supreme Court, by a vote of 5-4, refused to require the Commission to find, as a prerequisite to approval, that merger on this scale was requisite to effectuating the national transportation policy. Instead, the Commission was told in effect that where a given transportation objective can be achieved either through merger or by some other means not involving impairment of our competitive system, its decision to take the merger route will not be questioned. The beneficial effect attributed to the Associated Transport merger was the creation of a single ownership through-service from Florida to the Northeast. However, the lines which were consolidated were not only linked end to end on the North-South route; they also were in competition on parallel routes over thousands of miles. This competition was eliminated by the merger. Another way to achieve integrated through-service would have been to permit several of the companies then operating on seg-



ments of the route to extend their service, as they would have been glad to do. We would then have had all the benefits of the merger, plus competition on the long haul, but without sacrifice of the competitive mileage. The full extent to which public interest has been subordinated to private gain in mergers is revealed by the fact that our regulatory bodies have not been given power to compel mergers in the public interest. They can only approve mergers voluntarily submitted by the industry groups. The situation clearly calls for Congressional reconsideration.

Another serious inroad on competition is the growing practice in the transportation industry to subject rates of individual companies to industrywide discussion and agreement. The Majority's treatment of this subject is necessarily emasculated by the preliminary decision not to pass judgment on the necessity for these arrangements, but only to debate what existing law seems to require or permit. For this same reason the Report is equivocal also regarding restrictive practices in the steamship trade, where, by agreement among the members of the shipping conferences, a ten or twenty percent penalty rate is charged against shippers who do not refrain from patronizing non-conference vessels. It is to the credit of the Committee that the discussion does reveal a genuine concern with the extent to which this cartelization has been permitted to go.

The Report fails to identify several quite important statutory exemptions that ought to be reexamined in any thorough appraisal of the antitrust laws. The multi-billion dollar insurance business, for example, has been singularly successful in retaining its freedom to cartelize its share of interstate and foreign commerce. For a long time there has been on the books an unqualified exemption of marine insurance. The rest of the insurance business secured an exemption under the McCarran Act, which purports to make the federal antitrust law inapplicable to the extent that the business is regulated by the State. This has a plausible "states rights" sound, until one recalls that regulation is not a substitute for competition but only a supplement. Most assuredly *state* regulation is not going to provide any substitute for competition in keeping insurance rates down. In the first place, state regulation is primarily concerned with the financial security of the insurers, *i. e.*, adequacy of reserves and propriety of investments. Gradually the industry has swung the state regulators towards the notion that the best way to guarantee safety is to prevent rate cutting. This idea gets

its start in legitimate cooperative "risk-rating" bureaus where the companies pool information on losses. Soon the collective risk-rating turns into collective premium setting, despite the fact that the loss experience of different companies varies widely in accordance with their selection of risks and the greater success of some companies in making profitable investments and trimming selling costs. State insurance regulation ranges from excellent to mere formal control carried out by incompetent political hacks with inadequate staffs. There is a place both for state regulation of solvency and federal requirement of competition; one is not a substitute for the other.

Another field in which great power over federal commerce has been turned over to state regulation is petroleum. Here there is no explicit exemption from the antitrust laws; but a system of price maintenance by the state officials has been preserved by periodically renewing Congressional approval of an Interstate Compact on Oil. Under the authority so granted the few oil producing states coordinate their oil production so as to control the price that the rest of the country must pay. This arrangement, like other exemptions, traces back to exigencies of the Great Depression and wears the protective coloration of a "conservation" measure. The fact of the matter is, however, that state regulation of production long ago detached itself from engineering considerations and proceeds primarily on the basis of realizing a profitable price for most producers. The Texas Railroad Commission has not even troubled to disguise its true role as price-maker for domestic and even imported petroleum, but calls to account integrated oil companies that dare to import crude petroleum, with the implied threat that continued importation will lead to cuts in allowable domestic production. Thus the foreign commerce of the United States in a strategic material is governed by local officials, who in turn cannot help becoming the spokesmen for dominant industry groups.

The oil industry also furnishes the most remarkable illustration of a tendency toward exemption from the antitrust law by action of the executive branch of the federal government. The tendency to give more discretion to the executive department manifests itself in the proposal of the Majority to expand the consent decree practice and in the recommendation of legislation authorizing the President to grant exemptions in pursuance of national defense objectives. But the most striking recent exercise of executive discretion to

dispense with competition was in the case of the Iranian Oil Cartel, where, without legislative authority, five leading American companies were permitted to join with dominant foreign interests in the greatest international oil cartel the world has seen. Its membership comprises the producers of no less than 87% of the free world's oil. In essence, what occurred was this. The Iranian government decided to nationalize the properties of Anglo-Iranian Oil Co., a British enterprise holding an exclusive franchise in Iran. There was disagreement over the amount to be paid and other terms. Western governments and oil companies having concessions in other Middle-East countries supported the British. An impasse led to shut-down of Iranian production and an economic and political crisis in Iran. Iranian public feeling made it necessary that the hated British monopoly be at least partially displaced. The new international cartel was the answer. Perhaps it was the right answer, from the military-diplomatic point of view, despite some indications that we may have succeeded in diverting a portion of Iranian ill-will from the British to ourselves, and despite rumblings of protest already heard in Europe against the economic consequences of the Near-East oil cartel.<sup>141</sup> But objections to the plan from the standpoint of American antitrust policy are formidable. Here were huge enterprises already established on various concessions in the Middle East with more than adequate reserves of oil. Some of them had already been officially accused of conspiring to maintain an artificially high price for this cheap Middle Eastern petroleum. The *Wall Street Journal* reported the open secret that one of their main concerns in entering this pool was to see to it that Iranian production *should not return to the world market too rapidly* so as to hurt the world price. Only the antitrust laws stood in the way. This obstacle was surmounted by an extraordinary dispensation granted by the executive department, without sanction of any statute of Congress.<sup>142</sup> Moreover this executive exemption contained no conditions designed to safeguard the public interest or the interest of American oil refiners who must buy foreign crude. When the American Five and their European partners meet to discuss Iranian production policy they must inevitably take into account their production and sales from other conces-

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<sup>141</sup> *New York Times*, March 18, 1955, p. 41: U. N. unit attacks oil prices.

<sup>142</sup> In its daring invocation of the President's defense powers to transcend legislative authorization it is comparable to the seizure of the steel plants in 1952.

sions and even at home. Discussion of production becomes in the end discussion of the market and of price. No representative of the American public sits in on these discussions. There is no guarantee of any sort that this private cartel coordinating production of the world's cheapest oil will give the public the benefits of its low cost.

The history of executive intervention in antitrust policy is not reassuring, whether we look at President Theodore Roosevelt's approval of some early U. S. Steel expansionism, or at executive disposition of surplus steel and rubber plants to dominant firms since World War II, of Big Steel's acquisition of the \$200,000,000 plant at Geneva, Utah, or at the concentration of defense orders in the largest companies, or at the exercise of Presidential prerogative in controlling competition in international aviation. Executive decisions are generally and often necessarily made in comparative secrecy without detailed supporting explanation. These references to the dangers should not be taken as an argument for disabling the executive completely in this area. All that is suggested is that *Congress* define the exemption power, and place as much of the fact finding and decision making as possible in the normal deliberative tribunals. Executive intervention should be limited to a veto or modification on defense grounds, based on a finding that the defense objective cannot feasibly be achieved except by exemption from the normal requirements of the antitrust laws.

Finally, I must record my reservations as to the Majority's disposition of the "primary jurisdiction" controversy. In particular, the Report ought to disapprove the judicially created exemption for anticompetitive behavior in regulated industries where the parties engage in it without any attempt to comply with the statutory requirements for exemption.

## B. ORGANIZED LABOR

At the outset, we emphasize that appraisal of the Nation's labor-management relations policy goes beyond this antitrust study. It follows that we assume, as Congress recently "declared," the "policy of the United States" to be elimination "of certain substantial obstructions to the free flow of commerce" by "encouraging \* \* \* collective bargaining and by protecting \* \* \* workers' \* \* \* full freedom of association [and] self-organization \* \* \* for the purpose of negotiating the terms and conditions of their employment or other mutual aid or protection."<sup>143</sup>

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<sup>143</sup> 29 U. S. C. § 151 (1952).

Accordingly, our inquiry considers only those union activities, not directed at such established union ends, but instead at direct restraints on commercial competition. This Committee believes that union actions aimed at directly fixing the kind or amount of products which may be used, produced or sold, their market price, the geographical area in which they may be used, produced or sold, or the number of firms which may engage in their production or distribution are contrary to antitrust policy. To the best of our knowledge, no national union flatly claims the right to engage in such activities. We believe that where the concession demanded from an employer as prerequisite to ordering the cessation of coercive action against him is participation in such a scheme for market control, this union conduct should be prohibited by some statute.

Within this scope of our inquiry, we consider, first, the extent to which judicial interpretations of the Clayton<sup>144</sup> and Norris-LaGuardia Acts<sup>145</sup> remove these labor practices from the Sherman Act. Second, we analyze whether these union restrictions, not reached by antitrust, were intended by Congress to be outlawed by the Labor-Management Relations Act of 1947.<sup>146</sup>

### 1. *Antitrust Coverage*

Some twenty years after the passage of the Sherman Act, the Supreme Court, in *Danbury Hatters*,<sup>147</sup> considered its application to union activities. There the union inspired a nationwide consumers' boycott of plaintiff's non-union-made hats. The result was a substantial drop in shipments of plaintiff's hats to out-of-state customers. The Supreme Court held this activity by the union a violation of the Sherman Act, apparently because the union sought to and did restrain interstate commerce in plaintiff's hats.

In apparent response, Sections 6 and 20 of the Clayton Act sought to exclude certain activities in the course of a "labor dispute" from the antitrust laws. Section 6 declares that "the labor of a human being is not a commodity or article of commerce." It further provides that "nothing contained in the antitrust laws shall be construed to forbid the existence and operation of labor \* \* \* organizations, instituted for the purposes of mutual help, and not having capital stock or conducted for profits, or to forbid or restrain individual members of such organizations from lawfully carrying out the legitimate objects thereof; nor shall such organizations, or the members thereof, be held or construed to be illegal combinations or conspiracies in restraint of

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<sup>144</sup> 15 U. S. C. §§ 12 *et seq.* (1952).

<sup>145</sup> 29 U. S. C. §§ 101-110, 113-115 (1952).

<sup>146</sup> 29 U. S. C. §§ 141-188 (1952).

<sup>147</sup> *Loewe v. Lawlor*, 208 U. S. 274 (1908).

trade under the antitrust laws.” Supplementing that provision, Section 20 barred issuance of Federal injunctions prohibiting activities such as strikes, boycotts or picketing “in any case between an employer and employees, or between employers and employees, or between employees, or between persons employed and persons seeking employment, involving, or growing out of, a dispute concerning terms or conditions of employment.” Section 20 concludes with the broad language: “[N]or shall any of the acts specified in this paragraph be considered or held to be violations of any law of the United States.”

The Supreme Court narrowed this exemption in the *Duplex*<sup>148</sup> and *Bedford Cut Stone*<sup>149</sup> cases. There the scope of Section 20 was limited to disputes between an employer and his own employees. Both these involved economic pressures created by concerted refusals to work on rather than to consume, as in *Danbury Hatters*, the plaintiff's product.

Thus in *Duplex*, members of the International Association of Machinists and other craft union members in New York refused to install plaintiff's presses manufactured in Michigan with non-union labor and shipped to out-of-state markets. This attempt to reduce the shipment of Duplex presses was held to violate the Sherman Act.

The *Bedford Cut Stone* case differed only in that the plaintiffs, an association of employers producing and shipping around 70 percent of the cut stone used throughout the country, had ceased recognition of the union and were threatening its very survival in the quarries. Members of the union employed by building contractors in various states refused to handle cut stone shipped by any of the plaintiffs; and the resulting cessations of stone shipment were declared to be restraints illegally caused by the union.

The immunity under Section 20 was also marked out in the *Coronado Coal*<sup>150</sup> cases. These involved no boycott but rather a mine shut-down caused in part by a concerted walkout and in part by wanton destruction of the mine's physical facilities. Obviously Section 20 of the Clayton Act did not immunize such acts of violence. Nevertheless, the Supreme Court found that the resulting stoppage had only an “indirect effect” on interstate commerce and, accordingly, held that there was no violation of the antitrust laws. However, when the plaintiff later showed that the union intended to keep the plaintiffs' non-union mined coal out of interstate markets, thus eliminating its competition with

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<sup>148</sup> *Duplex Printing Press Co. v. Deering*, 254 U. S. 443 (1921).

<sup>149</sup> *Bedford Cut Stone Co., v. Journeymen Stone Cutter's Association*, 274 U. S. 37 (1927).

<sup>150</sup> *United Mine Workers of America v. Coronado Coal Co.*, 259 U. S. 344 (1922); *Coronado Coal Co. v. United Mines Workers of America*, 268 U. S. 295 (1925).

union mined coal, the Court held that this specific intent made the restraint "direct" and thus violative of the Sherman Act.<sup>151</sup>

A partial reaction to the *Duplex*<sup>152</sup> and *Bedford Cut Stone*<sup>153</sup> restrictions of Clayton Act Section 20, was the Norris-LaGuardia Act of 1932.<sup>154</sup> This aimed "to restore the broad purpose which Congress thought it had formulated in the Clayton Act but which was frustrated, so Congress believed, by unduly restrictive judicial construction."<sup>155</sup> Accomplishing this end, "labor dispute" was there defined to include "any controversy concerning terms or conditions of employment \* \* \* regardless of whether or not the disputants stand in the proximate relation of employer and employee."<sup>156</sup> In addition, Section 20 barred Federal injunction of enumerated union organizational and economic pressure activities.<sup>157</sup>

In *Apex Hosiery Co. v. Leader*,<sup>158</sup> the Court found it unnecessary to rely on Norris-LaGuardia in holding that an organizational strike, though interfering with interstate hosiery shipments, did not violate the Sherman Act. That Act, the Court noted, aimed at "restraints," like those this Committee now considers, "upon commercial competition in the marketing of goods or services."<sup>159</sup> In *Apex*, however, it was "plain that the \* \* \* [union] did not have as its purpose restraint upon competition in the market for petitioner's product. Its object was to compel petitioner to accede to the union demands" for organization.<sup>160</sup> From this decision there emerges a distinction, deemed essential by this Committee, between union activities aiming, on the one hand, at furthering rightful union objectives and, on the other, at directly "suppressing [commercial] competition or fixing prices" of commercial products.<sup>161</sup>

The antitrust impact of Norris-LaGuardia was first construed by the Supreme Court in *United States v. Hutcheson*.<sup>162</sup> There involved was a strike by one union against an employer who had assigned work to a competing union's members. Removing such conduct from the Sher-

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<sup>151</sup> This result was later confirmed, where the restraint was effected solely through the exercise of peaceful economic pressures. *Alco-Zander Co. v. Amalgamated Clothing Workers*, 35 F. 2d 203 (E. D. Pa. 1929).

<sup>152</sup> *Duplex Printing Press Co. v. Deering*, 254 U. S. 443 (1921).

<sup>153</sup> *Bedford Cut Stone Co. v. Journeymen Stone Cutter's Association*, 274 U. S. 37 (1927).

<sup>154</sup> 29 U. S. C. §§ 101-110, 113-115 (1952).

<sup>155</sup> *United States v. Hutcheson*, 312 U. S. 219, 236 (1941).

<sup>156</sup> 29 U. S. C. § 113 (c) (1952).

<sup>157</sup> 29 U. S. C. § 104 (1952).

<sup>158</sup> 310 U. S. 469 (1940).

<sup>159</sup> *Id.* at 495.

<sup>160</sup> *Id.* at 501.

<sup>161</sup> *Ibid.*

<sup>162</sup> 312 U. S. 219 (1941).

man Act, the Court held that Congress, by the passage of the Norris-LaGuardia Act, had in effect overruled the *Duplex* construction of Section 20 of the Clayton Act. As a result, the Court concluded that all union self-help conduct specified in the concluding clause of Section 20, as well as Section 4 of Norris-LaGuardia, was now immunized from Sherman Act sanctions.

*Hutcheson's* rationale, however, was, in its own language, limited to "where a union acts in its own self-interest and does not combine with nonlabor groups,<sup>163</sup> \* \* \*" While *Hutcheson* treated union pressure which fell short of coercing employer participation, *Allen-Bradley Company v. Local No. 3*,<sup>164</sup> decided some five years later, involved a consummated union-employer scheme. There, Local No. 3, comprised of electrical workers in the New York area, agreed with "contractors \* \* \* to purchase equipment from none but local manufacturers who also had closed-shop agreements with Local No. 3," and with manufacturers "to confine their New York City sales to contractors employing the Local's members."<sup>165</sup> These contracts, the Court found, were "but one element in a far larger program in which contractors and manufacturers united \* \* \* to monopolize all the business in New York City."<sup>166</sup> This fact of union-employer combination was held to distinguish *Allen-Bradley* from *Hutcheson* and, in turn, to subject Local No. 3 to the Sherman Act.<sup>167</sup>

It is not yet settled whether *Allen-Bradley* permits antitrust prohibition of an agreement between one union and one employer requiring conduct whose object is some direct market restraint. The majority there assumed, without deciding, that "such an agreement standing alone would not have violated the Sherman Act."<sup>168</sup> However, as the separate opinion emphasized, employer inspired agreements were not solely involved; instead some respondents were "individually coerced by the union's power to agree to its terms. It is, therefore, inaccurate," that opinion went on, "to say that the employers used the union to aid and abet them to restrain interstate commerce."<sup>169</sup> Accordingly, it may be that the employer connivance which *Allen-*

<sup>163</sup> *Id.* at 232.

<sup>164</sup> 325 U. S. 797 (1945).

<sup>165</sup> *Id.* at 799.

<sup>166</sup> *Id.* at 809.

<sup>167</sup> Similarly note *Brotherhood of Carpenters v. United States*, 330 U. S. 395, 399-400 (1947); see also *Philadelphia Record Co. v. Manufacturing Photo-Engravers Ass'n. of Philadelphia*, 155 F. 2d 799 (3d Cir. 1946); but see *Albrecht v. Kinsella*, 119 F. 2d 1003 (7th Cir. 1941).

<sup>168</sup> 325 U. S. 797, 809 (1945); see also *Id.* at 818.

<sup>169</sup> *Id.* at 814.



*Bradley* requires might be inferred largely from a labor-management contract agreed to at union insistence.<sup>170</sup>

Even in the absence of such connivance, where the activity involved both aims, in the language of the *Apex* decision, at "suppressing [commercial] competition or fixing prices"<sup>171</sup> and is not sanctioned by the Labor-Management Relations Act, antitrust proceedings may not be foreclosed. In *Hawaiian Tuna Packers v. International Longshoremen and Warehousemen's Union*,<sup>172</sup> for example, fish canners sought treble damages from Local 150, made up of some crew members and boat owners who apparently were also crewmen. The complaint alleged that Local 150 demanded that the plaintiff canner contract to buy a season's catch at fixed rates per pound. Upon plaintiff's refusal, the union cut off its fish supply and, as part of its plan to coerce plaintiff to fix prices, agreed with fishermen in competing waters to boycott plaintiff. Upholding the complaint against the defendant's motion to dismiss, the court held that a demand to fix prices made by a combination of crewmen and owner crewmen brought the case within *Allen-Bradley*.<sup>173</sup>

Beyond connivance, however, that court held that the facts alleged failed to state a case involving or growing out of, as the Norris-LaGuardia Act requires, a "labor dispute." That Act, the court reasoned, "was not intended to have application over the disputes over the sale of commodities \* \* \* [or] to include controversies upon which the employer-employee relationship has no bearing."<sup>174</sup>

Supporting the suggestion that a dispute involving the object of direct market control may not constitute a "labor dispute" within Norris-LaGuardia are analogous decisions upholding state action restricting labor activities not sanctioned by Taft-Hartley.<sup>175</sup> *Giboney*

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<sup>170</sup> In *Loews Inc. v. Basson*, 46 F. Supp. 66 (S. D. N. Y. 1942), a union comprising projectionists, deliverers and cutters sought to compel a movie producer-distributor to license only exhibitors who employed union projectionists. The producer-distributor objected, but the court held nonetheless its entry into the proposed contract would constitute an illegal "combination between a union and a nonlabor group" (*id.* at 72); cf. *Anderson-Friberg Inc. v. Justin R. Clary & Son*, 98 F. Supp. 75, 82 (S. D. N. Y. 1951); but see *Meier and Pohlmann Furniture Co. v. Gibbons*, 113 F. Supp. 409 (E. D. Mo. 1953).

<sup>171</sup> 310 U. S. 469, 501 (1939).

<sup>172</sup> 72 F. Supp. 562 (D. Hawaii 1947).

<sup>173</sup> *Id.* at 566.

<sup>174</sup> *Id.* at 566; similarly, note *Columbia River Packers Ass'n. v. Hinton*, 315 U. S. 143 (1942); see also *Louisville & N. R. Co. v. Local Union No. 432*, 104 F. Supp. 748 (S. D. Ala. 1952); *Pacific Gamble Robinson Co. v. Minneapolis and St. Louis Ry. Co.*, 85 F. Supp. 65 (D. Minn. 1949).

<sup>175</sup> See, for example, *Giboney v. Empire Storage & Ice Co.*, 336 U. S. 490 (1949); *Whitaker v. State of North Carolina*, 335 U. S. 525 (1949); *Lincoln Federal Labor Union v. Northwestern Iron & Metal Co.*, 335 U. S. 525 (1949); *AFL v. American Sash & Door Co.*, 335 U. S. 538 (1949).

v. *Empire Storage Co.*,<sup>176</sup> for example, involved picketing by union peddlers of an ice supply plant to bar ice sales to nonunion peddlers. If Empire had agreed to stop selling ice to nonunion deliverers, the Supreme Court concluded that such conduct would have violated the state antitrust statutes. Accordingly, since no question of conflict with the Federal labor relations scheme was even raised,<sup>177</sup> the Court upheld application of the state policy whose "purpose \* \* \* is to secure competition and preclude combinations which tend to defeat it."<sup>178</sup>

Summing up, our analysis of these "three 'interlacing statutes'"<sup>179</sup> suggests that commercial restraints by unions may be vulnerable to antitrust proceedings:

(1) Where the union engages in fraud or violence and intends or achieves some direct commercial restraint;<sup>180</sup>

(2) Where the union activity is not in the course of a labor dispute as defined in the Norris-LaGuardia Act.<sup>181</sup> Construing this statute, the Supreme Court has recognized "its responsibility to try to reconcile" two "declared Congressional policies." The "one seeks to preserve a competitive business economy; the other to preserve the rights of labor to organize to better its conditions through an agency of collective bargaining." Accordingly, its task is in each case to determine "how far Congress intended activities under one of these policies to neutralize the results envisioned by the other."<sup>182</sup> Accomplishing this task may require giving content to the Norris-LaGuardia Act's general definition of "labor dispute." We have noted that recent decisions suggest that courts may infer Congressional intent to apply antitrust

<sup>176</sup> 336 U. S. 490 (1949).

<sup>177</sup> It was not necessary for the Court to consider there whether the union activity involved ran afoul of the Taft-Hartley subsection 8 (b) (4) (A). Its legality under that provision, however, seems open to question. Initially, it seems clear that "an object" of the picketing was, as that section requires, to foreclose Empire from "doing business with any other person." The primary issue would be whether the union activity constituted, within the meaning of that provision, encouraging "the employees of any employer to engage in a \* \* \* concerted refusal in the course of their employment to \* \* \* handle \* \* \* any material \* \* \* or to perform any services." Cf. *National Labor Relations Board v. International Rice Milling Co.*, 341 U. S. 665, 670 (1951).

<sup>178</sup> *Giboney v. Empire Storage Co.*, 336 U. S. 490, 495 (1949).

<sup>179</sup> *Allen-Bradley Co. v. Local No. 3*, 325 U. S. 797, 806 (1945).

<sup>180</sup> Cf. *Apex Hosiery Co. v. Leader*, 310 U. S. 469, 501-504 (1940); 29 U. S. C. § 104 (i) (1952); *Coronado Coal Co. v. United Mines Workers of America*, 268 U. S. 295 (1925).

<sup>181</sup> See 29 U. S. C. § 113 (c) (1952).

<sup>182</sup> *Allen-Bradley Co. v. Local No. 3*, 325 U. S. 798, 806 (1945).

to those labor activities, not sanctioned by the Taft-Hartley Act, which aim at direct commercial restraint.<sup>183</sup>

(3) Where a union combines with some nonlabor group to effect some direct commercial restraint.<sup>184</sup>

In each of these areas, liability of any union, officer, or member may also depend on construction of Section 6 of the Norris-LaGuardia Act. That provision, in relevant part, reads: "No officer or member \* \* \* and no association or organization participating or interested in a labor dispute, shall be held \* \* \* liable \* \* \* for the unlawful acts of individual officers, members or agents, except upon clear proof of actual participation in, or actual authorization of, such acts, or of ratification of such acts after actual knowledge thereof."

Section 6 was construed by the Supreme Court in *Brotherhood of Carpenters v. United States*,<sup>185</sup> involving an antitrust conspiracy between various manufacturers and dealers in mill work and lumber as well as the United Brotherhood of Carpenters and Joiners with various of its locals. All defendants were convicted after their request for a charge in the language of Section 6 was denied. On appeal, this refusal coupled with an instruction "that stated a different concept of law"<sup>186</sup> was held reversible error. In reaching this conclusion, the Court held that the "purpose and effect [of Section 6] was to relieve organizations, whether of labor or capital, and members of those organizations from liability for damages or imputation of guilt for lawless acts done in labor disputes by some individual officers or members of the organization, without clear proof that the organization or member charged with responsibility for the offense actually participated, gave prior authorization, or ratified such acts after actual knowledge of their perpetration."<sup>187</sup>

Challenging this construction, the dissent noted that: "For practical purposes [the majority's elucidation of Section 6] immunizes unions and corporate officials for acts which their agents perform because they are agents and, as such, endowed with authority. For practical purposes, a union or a corporation could not be convicted on any evidence likely to exist, if the trial court has to judge what the Court now holds to be required by § 6."<sup>188</sup>

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<sup>183</sup> See e. g., *Hawaiian Tuna Packers v. International Longshoremen & Warehousemen Union*, 72 F. Supp. 562 (D. Hawaii 1947); see also *Columbia River Packers Assoc. v. Hinton*, 315 U. S. 143 (1942); cf. *Giboney v. Empire Storage Co.*, 336 U. S. 490 (1949).

<sup>184</sup> See e. g., *Allen-Bradley Co. v. Local No. 3*, 325 U. S. 797 (1945).

<sup>185</sup> 330 U. S. 395 (1946).

<sup>186</sup> *Id.* at 407.

<sup>187</sup> *Id.* at 403.

<sup>188</sup> *Id.* at 417.

## 2. *Relevant Provisions of the Labor-Management Relations Act of 1947*

Against this background of possible avenues for antitrust suits, Congress in 1947 considered amendments to the National Labor Relations Act. The bill passed by the House, the Conference Committee Report notes, "contained a provision amending the Clayton Act so as to withdraw the exemption of labor organizations under the anti-trust laws when such organization engaged in combination or conspiracy in restraint of commerce where one of the purposes or a necessary effect of the combination or conspiracy was to join or combine with any person to fix prices, allocate costs, restrict production, distribution, or competition, or impose restrictions or conditions, upon the purchase, sale, or use of any product, material, machine, or equipment, or to engage in any unlawful concerted activity."<sup>189</sup> Explaining omission of such provisions from the enacted Bill, the Conference Report continued: "Since the matters dealt with in this Section have to a large measure been effectuated through the use of boycotts, and since the conference agreement contains effective provisions directly dealing with boycotts themselves, this provision is omitted from the conference agreement."<sup>190</sup>

The so-called boycott provisions provide in relevant part that "it shall be an unfair labor practice for a labor organization or its agents to engage in, or to induce or encourage the employees of any employer to engage in, a strike or a concerted refusal in the course of their employment to \* \* \* handle or work on any \* \* \* materials \* \* \* or to perform any services, where an object thereof is: (A) forcing or requiring \* \* \* any employer or other person to cease using \* \* \* or otherwise dealing in the products of any other producer \* \* \* or to cease doing business with any other person \* \* \*" or "(D) forcing or requiring any employer to assign particular work to employees in a particular labor organization or in a particular trade, craft, or class rather than to employees in another labor organization or in another trade, craft, or class \* \* \*."<sup>191</sup> Moreover, it further provides that "Whoever shall be injured in his business or property by reason of any violation" of these provisions "may sue therefor \* \* \* and shall recover the damages by him sustained and the cost of the suit."<sup>192</sup>

<sup>189</sup> 93 Cong. Rec. 6380 (1947).

<sup>190</sup> *Ibid.*

<sup>191</sup> 29 U. S. C. § 158 (1952). The language of subsection (D), incidentally, would in all probability encompass the union activities held not subject to antitrust coverage in *United States v. Hutcheson*, 312 U. S. 219 (1940). Similarly note *United States v. Carrozzo*, 37 F. Supp. 191 (N. D. Ill., 1941), *aff'd sub nom* 313 U. S. 539 (1941).

<sup>192</sup> 29 U. S. C. § 187 (b) (1952); see, e. g., *Longshoremen's and Warehousemen's Union v. Juneau Spruce Corp.*, 342 U. S. 237 (1952).

These provisions have been applied to enjoin certain union activities aimed<sup>193</sup> at restricting the use of competing products in a given area.<sup>194</sup> *United Brotherhood of Carpenters and Joiners of America v. Sperry*,<sup>195</sup> for example, involved union picketing and blacklisting of a builder using prefabricated building material. The court, granting an injunction pending hearing, found that such union actions "handicapped" the builder and "delayed [him] in carrying forward \* \* \* [his] program of purchasing and erecting" prefabricated houses.<sup>196</sup> These labor activities were later held by the Board to be an unfair labor practice and its order requiring their cessation was ordered enforced by a circuit court.<sup>197</sup>

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<sup>193</sup> Relevant here is a Supreme Court holding that "under this section it is not necessary to find that the *sole* object of the union activity was an illegal one." (See *National Labor Relations Board v. Denver Building and Construction Trades Council*, 341 U. S. 675, 689 [1951].)

<sup>194</sup> For cases ordering cessation of some union efforts to block use of more efficient products see *Joliet Contractors Association v. National Labor Relations Board*, 202 F. 2d 606 (70th Cir. 1953); *cert. denied* 346 U. S. 824 (1953); *National Labor Relations Board v. United Brotherhood of Carpenters and Joiners of America*, 184 F. 2d 60 (10th Cir. 1950).

Note also *In re Washington and Oregon Shingle Weavers Council*, 101 N. L. R. B. 1159 (1952) (Shingle Weavers Council order to "cease and desist from \* \* \* encouraging their members to \* \* \* strike" against a shingle company (*Id.* at 1163) as part of the union effort to eliminate "all unfair Canadian or other 'nonunion' shingles from the United States market." [*Id.* at 1168]), order enforced *National Labor Relations Board v. Washington-Oregon Shingle Weavers District Council*, 211 F. 2d 149 (9th Cir. 1954); *In re Bakery Drivers Local 276*, 100 N. L. R. B. 1092 (1952) (Bakery Drivers Union ordered to cease and desist from encouraging employees of various retail outlets to engage in a concerted refusal to handle bakery products of a company which the union was seeking to organize). Similarly, note *Construction and General Laborers Local 320*, 93 N. L. R. B. 751 (1951); *In re International Brotherhood of Teamsters, Chauffeurs, Warehousemen and Helpers of America, Local 87*, 87 N. L. R. B. 720 (1949), order enforced, *National Labor Relations Board v. Service Trade, Chauffeurs, Salesmen & Helpers, Local 145*, 191 F. 2d 65 (2d Cir. 1950). For cases where the Board has enjoined a union, as part of a scheme to pressure an employer of a plant already organized, from encouraging workers of a customer concertedly to refuse to handle the product of the employer involved in the dispute, see *In re Metal Polishers Local 171*, 86 N. L. R. B. 1243 (1949); *In re Wine, Liquor and Distillery Workers Union, Rectifying and Wine Workers International Union of America, A. F. of L. Local 1*, 78 N. L. R. B. 504 (1948), order enforced, *National Labor Relations Board v. Wine, Liquor and Distillery Workers Union, Rectifying and Wine Workers International Union of America, Local 1*, 178 F. 2d 584 (2d Cir. 1949).

<sup>195</sup> 170 F. 2d 863-869 (10th Cir. 1948).

<sup>196</sup> *Id.* at 867.

<sup>197</sup> See *United Brotherhood of Carpenters and Joiners of America* (Wadsworth), 81 N. L. R. B. 802 (1949), order enforced, *National Labor Relations Board v. United Brotherhood of Carpenters and Joiners of America*, 184 F. 2d 60 (10th Cir. 1950).

Similarly, *Joliet Contractors Association v. National Labor Relations Board*<sup>198</sup> involved a union by-law which, one circuit court found left members with no "choice but to refuse to work when discovery was made the preglazed sash was being used."<sup>199</sup> The record there revealed, moreover, that in several instances glaziers on a job, in compliance with this by-law, walked off the job when preglazed sash was purchased. As to these instances of restraint, the circuit court affirmed the Board's order requiring a union to "desist from applying its bylaws \* \* \* to induce and encourage \* \* \* a strike or concerted refusal in the course of \* \* \* employment \* \* \* where an object thereof is to require their employer \* \* \* or other person to cease doing business with any other employer or any person who uses or sells preglazed sash."<sup>200</sup>

As these two instances suggest, certain means for curbing union activities aimed directly at suppressing commercial competition may be proscribed by the boycott provisions of the Labor-Management Relations Act. However, only those activities "specifically provided for' in the Act"<sup>201</sup> are restricted. The result, in the language of the Court in the *Joliet Contractors*<sup>202</sup> case may be "numerous apparent incongruities." There, for example, "if two or more glaziers refuse to accept employment because of the use of preglazed sash there is no violation as they have not concertedly refused to work in the course of their employment. However, if they discover the use of preglazed sash after they are on the job and then refuse to work, it is a violation because they have done so in the course of their employment. At the same time, if there is only one glazier on each of several jobs and they each refuse to work, it is not a violation because their refusal is not concerted. These incongruities and others which could be mentioned are unavoidable because of the plain unambiguous language employed by Congress in enumerating the elements required to constitute a violation."<sup>203</sup>

<sup>198</sup> 202 F. 2d 606 (7th Cir. 1953), cert. denied 346 U. S. 824 (1953).

<sup>199</sup> *Id.* at 612.

<sup>200</sup> *Id.* at 611. There the Board had held as an unfair labor practice the union's inducement of glaziers already on a job to cease installing preglazed sash (99 N. L. R. B. 1391, 1410, 1415 [1952]). However, the Board held not within the Act union inducement of its members, not yet on a job, not to work on preglazed sash (*Id.* at 1412-1413). The result, in the language of the court affirming this order, may be "numerous apparent incongruities," *Joint Contractors Association v. National Labor Relations Board*, 202 F. 2d 606, 611 (7th Cir. 1953), cert. denied 346 U. S. 824 (1953), thus permitting certain union pressures against use of new products.

<sup>201</sup> *National Labor Relations Board v. International Rice Milling Co., Inc.*, 341 U. S. 665 (1951).

<sup>202</sup> 202 F. 2d 606, 611 (7th Cir. 1953) ; cert. denied 346 U. S. 824 (1953).

<sup>203</sup> *Id.* at 612.

### 3. *Conclusions and Recommendations*

As the limitations of our inquiry require, no one of our conclusions or recommendations implies any change of labor's freedom under the antitrust laws to act in concert in order to promote union organization or bargain collectively over wages, hours, or other employment conditions. Reported cases indicate, however, that some unions have engaged in some practices aimed directly at commercial market restraints by fixing the kind or amount of products which may be sold in any area<sup>204</sup> or their market price.<sup>205</sup> Such activities run counter to our national antitrust policy.

Some means for carrying them out may be enjoined by the Labor-Management Relations Act,<sup>206</sup> whose enforcement, we note, is presently dependent on receipt of formal complaints. Moreover, such union activities are, to some but as yet unfixed extent, now subject to antitrust coverage. As a practical matter, these union restraints usually gain commercial significance to the extent that there is employer participation—either voluntary or coerced.<sup>207</sup> However, to repeat, we believe that where the concession demanded from an employer as prerequisite to ceasing coercive action against him is participation in or submission to such a scheme for market control or commercial restraints, this union conduct should be prohibited by statute. Accordingly, to the extent that such commercial restraints not effectively curbed by either antitrust or Labor-Management Relations Act exist, then we recommend appropriate legislation to prohibit these union efforts at outright market control.

Regarding such legislation, this Committee recommends:

a. It should cover only specific union activities which have as their direct object direct control of the market, such as fixing the kind or amount of products which may be used, produced or sold, their market price, the geographical area in which they may be sold, or the number of firms which may engage in their production or distribution. By "object" this Committee means only the immediate concession demanded

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<sup>204</sup> See e. g., *Allen-Bradley Co. v. Local No. 3*, 325 U. S. 797 (1945); *Joliet Contractors Association v. National Labor Relations Board*, 202 F. 2d 606-611 (7th Cir. 1953), cert. denied 346 U. S. 824 (1953); *United Brotherhood of Carpenters and Joiners of America v. Sperry*, 170 F. 2d. 863 (10th Cir. 1948); cf. *United States v. American Federation of Musicians*, 47 F. Supp. 304 (N. D. Ill. 1942), aff'd 318 U. S. 741 (1943); *United States v. Carrozzo*, 37 F. Supp. 191 (N. D. Ill. 1941); aff'd sub. nom. 313 U. S. 539 (1941).

<sup>205</sup> See e. g. *Columbia River Packers Association v. Hinton*, 315 U. S. 143 (1942); *Hawaiian Tuna Packers v. International Longshoremen and Warehousemen Union*, 72 F. Supp. 562 (D. Hawaii, 1947).

<sup>206</sup> See cases n. 194, *supra*.

<sup>207</sup> Cf. *Allen-Bradley Co. v. Local No. 3*, 325 U. S. 797, 809 (1945).

from an employer as a condition precedent to halting coercive action against him. In drafting such legislation, greatest care should be given to protecting labor's "full freedom of association [and] self-organization \* \* \* for the purpose of negotiating the terms and conditions of their employment or other mutual aid or protection" as now provided in 29 U. S. C. § 151 (1952).

b. Unlike the present Labor-Management Relations Act,<sup>208</sup> the Government should have power to proceed, on its own initiative, without formal complaints from others. A coerced employer, for example, might find it advantageous to acquiesce rather than complain. Thus, were the Government dependent upon formal complaints of others to initiate actions, some wrong to the public interest might go uncorrected.

c. Unlike the Sherman Act, such legislation should not contain provisions for private injunction. In the labor-management area, private injunctive remedies under the Sherman Act have in the past been subject to abuse. In any legislation, therefore, primary reliance should be on Government-initiated enforcement.

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Walter Adams dissents from this majority report. In his words:

Should Congress find that union commercial restraints not curbed by antitrust or Taft-Hartley are widespread, the majority suggests a possible approach for halting them. This suggestion, however, is so general that its enactment would confuse rather than clarify existing law. Moreover, because of its vagueness, it might be construed—erroneously perhaps—as prohibiting some union activities generally regarded as normal and necessary.

Thus the majority suggestion aims at 'specific union activities which have as their direct object control of the market.' To the extent that the limits of challenged union conduct are defined in terms of 'object' (i. e., intent), the proposal is subject to potential abuse. Unlike the Taft-Hartley Act, it does not pinpoint specific malpractices in terms of a clearly delineated course of conduct. Instead, it makes broad recommendations of an undefined and unknown impact.

In dissenting, I am not unmindful of the concern over allegedly widespread labor abuses. I believe, however, that

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<sup>208</sup> 29 U. S. C. § 160 (b) (1952) provides that the Board may issue complaints and hold hearings apparently only "[w]henever it is charged that any person has engaged in or is engaging in any such unfair labor practice."



corrective legislation—if, when and by whomsoever proposed—should be based on a careful and comprehensive investigation of all the facts within the context of market reality. Such legislation, if and when enacted, should become part of our labor-management code, and not part of the antitrust laws. Raymond Dickey joins in this dissent, but adds his view ‘that present Labor-Management Relations Act and antitrust provisions can effectively curb those commercial restraints by unions which concern the majority.’

### C. AGRICULTURAL COOPERATIVES

Congress has exempted various agricultural cooperative activities from the full scope of antitrust coverage. Chief among the objectives of this policy are (1) preservation of the family farm as the primary unit of agricultural production; (2) assurance of an adequate year-round supply of agricultural products; and (3) the need for offsetting the weakness of the individual farmer faced with greater bargaining power in the markets where he buys and sells.

So it is that Congress enacted a series of statutory provisions aimed at achieving checks and balances in the forces differentiating agriculture markets from some of their industrial counterparts. Thus, Section 6 of the 1914 Clayton Act provides that “nothing \* \* \* in the antitrust laws shall \* \* \* forbid the existence and operation of \* \* \* agricultural or horticultural organizations, instituted for \* \* \* mutual help, and not having capital stock or conducted for profit \* \* \*. Nor shall such organizations, or the members thereof, be held or construed to be illegal combinations or conspiracies in restraint of trade under the antitrust laws.”<sup>209</sup> This Section’s limitation to organizations “not having capital stock” as well as its failure expressly to sanction certain cooperative marketing activities led in 1922 to the Capper-Volstead Act.<sup>210</sup> There Section 1 specifies that agricultural producers may “act together in associations, corporate or otherwise, *with or without capital stock*,” for the purpose of “collectively processing, \* \* \* handling, and *marketing* [their] products.”<sup>211</sup> To prevent misuse of these rights the Capper-Volstead Act, in addition, empowers the Secretary of Agriculture to order any such group to cease and desist if he finds that it “monopolizes or restrains trade \* \* \* to such an extent that the price of any agricultural product is unduly enhanced

<sup>209</sup> 15 U. S. C. 17 (1952).

<sup>210</sup> 7 U. S. C. 291–292 (1952).

<sup>211</sup> Italics added. Also legalized by Section 1 are necessary contracts and agreements to carry out such purposes. That provision’s coverage, however, is limited to associations operated for members’ mutual benefit which either restrict each member to one vote or limit dividends to eight percent.

by reason thereof.”<sup>212</sup> Four years after Capper-Volstead, Congress provided in the Cooperative Marketing Act of 1926 that agricultural producers and their associations might legally acquire and exchange “past, present, and prospective” pricing, production, and marketing data. Finally, to place cooperatives’ internal organization within the law, Section 4 of the Robinson-Patman Act.<sup>213</sup> provides that limitations on price discriminations shall not prevent “a cooperative association from returning to its members \* \* \* net earnings on surplus \* \* \* in proportion to their purchases or sales from, to, or through the association.”<sup>214</sup>

These enactments are rooted, of course, in political and social as well as economic considerations. This Report considers their justification in light of the competitive organization of the farm sector of our economy. Beyond that, in some of the enactments at least, Congress articulated certain antitrust safeguards and we also consider their effectiveness. Finally, we make recommendations for whatever improvement is needed.

### 1. *Extent of antitrust coverage*

The precise bounds of no one of these enactments have been fully marked out by administrative or judicial decisions. Existing court precedents, however, reveal judicial awareness that these statutory exemptions do not foreclose applications of antitrust prohibitions when agricultural cooperatives go beyond their Congressionally sanctioned aims.

*United States v. King*<sup>215</sup> first interpreted the scope of the exemption in Section 6 of the Clayton Act. There a cooperative, handling a sub-

<sup>212</sup> 7 U. S. C. §§ 291–292 (1952).

<sup>213</sup> 15 U. S. C. § 136 (1952). Similarly, note like proviso contained in the Packers and Stockyards Act of 1921, 42 Stat. 165, 7 U. S. C. § 207 (f) (1952).

<sup>214</sup> The fundamentals of Congressional farm parity price policy are not considered in this study. True, this program sets the limits within which the farm segment competes for the sale of its products. Since antitrust represents a broad policy favoring competition, and the parity price program sets bounds within which competition may work, the two are to some degree interrelated. Nonetheless, we believe that problems of agricultural organization and policy, like labor relations, should be primarily treated in the context of their special legislation. Only feasible and directly relevant, therefore, in this antitrust study are consideration of areas where antitrust problems are more directly raised. Accordingly, we do not treat marketing agreement and order provisions contained in the Agricultural Marketing Act of 1937 (7 U. S. C. 601–610 [1952]) which aims to “establish \* \* \* to the farmers, parity prices.”

Similarly, we do not consider the related Anti-Hog-Cholera and Hog-Cholera Virus Marketing Agreement Act, 7 U. S. C. 851–855 (1952). We also merely note the State Tobacco Compacts Act, 7 U. S. C. 515 (1952), which has not been used since the tobacco quota program became effective under the Agricultural Adjustment Act of 1938.

<sup>215</sup> 229 F. 275 (D. Mass. 1915), 250 F. 908, 910 (D. Mass. 1916).

stantial share of the Maine potato crop, circulated among member and non-member commission merchants and others a "blacklist" urging boycott of dealers delinquent in payments for their purchases from the cooperative. The court noted that Section 6 permits the cooperative form of association among competitive producers. Nonetheless, an indictment against a conspiratorial secondary boycott was there sustained as an illegal restraint of trade beyond the lawful means of achieving the sanctioned cooperative objects.

Paralleling *Allen Bradley's*<sup>216</sup> later prohibition of labor union schemes in connivance with employers to effectuate an unlawful anti-trust restraint, a few recent cases similarly point to the conclusion that Section 6 does not shield cooperatives when they act in illegal concert with non-cooperatives. This was the dictum in *United States v. Dairy Cooperative Association*.<sup>217</sup> Similarly, in *United States v. Borden Company*,<sup>218</sup> Section 6, as well as the Capper-Volstead and Agricultural Marketing Agreement Acts, were held not to authorize a price-fixing conspiracy among a milk producers' cooperative, a milk wagon drivers' union, a milk distributors' trade association and others.

The exemption in Section 6 of the Clayton Act was enlarged and clarified by the Capper-Volstead Act. Section 1 expressly sanctions marketing cooperatives having capital stock, permits common marketing agencies, and authorizes contracts and agreements necessary to collective processing, handling, and marketing of their products.

While not expressly covered, federated cooperatives seem to be within Capper-Volstead.<sup>219</sup> The inclusion of other patterns of cooperative operation, for example, ownership by marketing agencies of manufacturing and processing subsidiaries, seems less certain.

It is still not clear how far Section 2 of the Capper-Volstead empowers the Secretary of Agriculture to issue a cease and desist order against any association if he finds that it monopolizes or restrains commerce and the price of any agricultural product is thereby unduly enhanced. The Attorney General may institute court proceedings to enforce the Secretary's order.

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<sup>216</sup> 325 U. S. 797 (1945).

<sup>217</sup> 49 F. Supp. 475 (D. Ore. 1943).

<sup>218</sup> 308 U. S. 188 (1939).

<sup>219</sup> The Attorney General has so ruled, 36 Op. Atty. Gen. 326, 339-340 (1930): "The statute imposes no restriction upon business forms of cooperation and association which may be employed to effectively organize cooperative associations of agricultural producers for handling and marketing their products. Obviously, it is convenient, if not indeed necessary, to any effective cooperative association, that local associations should act through centralized marketing agencies in disposing of the products of their members, and that they should, in representation of their members, hold stock in such centralized marketing agencies; I cannot doubt, in view of the purpose of the Capper-Volstead Act, that such methods of cooperation and association between agricultural producers were intended to be authorized under the very broad language of this statute."

A pivotal question is whether a cooperative qualified under the Act may acquire or use economic monopoly power completely free from the Sherman Act's prohibition against monopolization. This is relevant where some cooperatives may come close to complete market control of certain agricultural products in particular areas.

The Capper-Volstead Act apparently allows cooperatives, under certain circumstances, to exert monopoly power so long as the price of the monopolized product is not "unduly enhanced." The only Supreme Court case construing the Act, *United States v. Borden Company*<sup>220</sup> dealt only indirectly with this issue. *Borden* involved a conspiracy to fix prices in violation of Section 1 of the Sherman Act whereby a milk producers' cooperative acted in connivance with a drivers' union and a group of milk distributors. That decision held that the Act "cannot be deemed to authorize any combination or conspiracy with other persons in restraint of trade that these producers may see fit to devise."<sup>221</sup> In so holding, the Court said, however, it was "unable to accept" the view of the District Court that "The Capper-Volstead Act does not condemn any kind of monopoly or restraint of trade, or any price fixing, unless such monopoly or price fixing unduly enhances the price of an agricultural product."<sup>222</sup>

This left imprecise both the nature of the Secretary of Agriculture's authority and the extent to which he can immunize cooperatives with monopoly power from the clutch of the Sherman Act. In the absence of a conspiracy between cooperatives and noncooperatives or others clearly within the Sherman Act, *Borden* stated it was "\* \* \* sufficiently clear \* \* \*" that Section 2 of "Capper-Volstead does not cover the entire field of the Sherman Act \* \* \*", which authorizes criminal proceedings and penalties beyond Capper-Volstead's civil proceedings, and also "hits at attempts to monopolize as well as actual monopolization."<sup>223</sup> Thus the Court found no grounds for saying that the limited procedure under Section 2 of Capper-Volstead was "a substitute for the provisions of the Sherman Act."<sup>224</sup>

Subsequent cases settle some implications of the *Borden* opinion. Thus in *Cape Cod Food Products v. National Cranberry Association*,<sup>225</sup> the jury charge apparently limited the Capper-Volstead immunity to situations where such power was achieved by methods the statute sanctions. Thus the court charged:

[I]t is not a violation of the Sherman Act or any other antitrust act for a Capper-Volstead cooperative to acquire

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<sup>220</sup> 308 U. S. 188 (1939).

<sup>221</sup> *Id.* at 204, 205.

<sup>222</sup> *Id.* at 203.

<sup>223</sup> *Id.* at 206.

<sup>224</sup> *Ibid.*

<sup>225</sup> 119 F. Supp. 900, 907 (D. Mass. 1954).

a large, even a 100 percent, position in a market if it does it solely through those steps which involve cooperative purchasing and cooperative selling.

On the other hand, it would be a violation of the law, and it would be a prohibited monopolization for a person or group of persons to seek to secure a dominant share of the market through a restraint of trade which was prohibited, or through a predatory practice, or through the bad faith use of otherwise legitimate devices.

It would be a prohibited monopolization if a group of persons used their power to lend money and their power to foreclose on loans, not with the intent of forwarding their banking or credit or like interests, but with the purpose of stifling actual or potential competition. That is to say, it would be unlawful for a group of persons to agree to take steps which were directed at excluding actual or potential competition with the intent of accomplishing that particular result, rather than with the intent of doing something innocent to further their general credit, banking, or like policies.<sup>226</sup>

The same legal standard is apparently suggested by *Hinton v. Columbia River Packers Ass'n.*,<sup>227</sup> construing a marketing cooperative exemption under the Fishermen's Collective Marketing Act<sup>228</sup> comparable to Capper-Volstead and administered by the Secretary of the Interior.<sup>229</sup>

In both *Cape Cod Food Products* and *Hinton*, there was no attempt to proscribe the mere gathering of all or most producers into a cooperative association with monopoly power. Any attempt by such associations to exert leverage by combining with outsiders or by imposing exclusive arrangements upon customers is, however, outside the bounds of exempted monopoly.

*United States v. Maryland and Virginia Milk Producers Ass'n. Inc.*,<sup>230</sup> is the most recent case on this question. The cooperative, which controlled a large percentage of the milk in the District of Columbia

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<sup>226</sup> From stenographic record of trial before *Wyzanski*, U. S. D. J., and a jury, *Cape Cod Food Products, Inc. v. National Cranberry Association, et al.*, Boston, February 11, 1954, *charge to the jury*, vol. VII, pp. 938-939.

<sup>227</sup> 131 F. 2d 88 (9th Cir. 1942).

<sup>228</sup> 15 U. S. C. § 521 (1952).

<sup>229</sup> *Borden* has been cited in two other fishermen's cooperative cases, *Manaka v. Monterrey Sardine Industries, Inc.*, 41 F. Supp. 531 (N. D. Cal. 1941), where the plaintiff prevailed in a treble damage suit for violation of the Sherman Act and *Local 36 of International Fishermen's Union v. United States*, 177 F. 2d 320 (9th Cir. 1949), *cert. denied* 339 U. S. 947 (1949), a criminal conviction under the Sherman Act upheld on the strength of the *Columbia River Packers* and *Borden* cases.

<sup>230</sup> 179 F. 2d 426 (D. C. Cir. 1949), *cert. denied* 338 U. S. 831 (1949) and 193 F. 2d 907 (D. C. Cir. 1951).

metropolitan area, entered into full-supply contracts with some of the major milk distributors. As a defense to indictment under Section 3 of the Sherman Act, the Capper-Volstead Act's exemptions were invoked. The Court of Appeals reinstated the indictment, apparently relying on a charge of concerted action between the cooperative and outsiders, as in the *Borden* case. On the second appeal the Court reversed conviction of defendants for failure to show that the agreements were made for the purpose of eliminating competition from independent sources of supply. This appears to make permissible a marketing cooperative's sales contracts which require purchasers to obtain their full supply from the association, where the contracts are reasonably ancillary to effectuation of the cooperative's legitimate marketing objectives.

Section 4 of the Robinson-Patman Act is properly restricted to the main purpose of permitting a cooperative to pay patronage dividends. Agricultural cooperatives are there treated equally with other types of cooperative associations. Under this limited exception, it is clear that cooperatives are otherwise subject to the prohibitions of the Robinson-Patman Act against discriminatory prices in the sale of their products and liability as purchasers for knowingly inducing or receiving discriminatory prices.

## **2. Conclusions and Recommendations**

These statutory exceptions should not reduce antitrust prohibitions to a ghostly residuum. Congressional encouragement of agricultural cooperatives need not be incompatible with antitrust prohibitions against concerted restriction on agricultural output, coercion of competitors or customers, and monopoly power either achieved by means not within Capper-Volstead Section 1 or used to "unduly enhance" prices under that Act's Section 2.

Beyond the *Borden* case prohibition against concerted action with non-cooperatives, the Congressionally sanctioned goals of cooperatives would not be frustrated by limited additional antitrust coverage. Thus, where cooperatives attempt to or actually obtain monopoly power by means not sanctioned by Section 1 of Capper-Volstead, the Sherman Act should apply even though the monopolized product's price is not unduly enhanced.

This would allow a cooperative to acquire or retain monopoly power solely by the lawful means of attracting voluntary membership sufficient to attain market control. But, as indicated in the *Borden* case, it would proscribe attempts to monopolize or actual monopolization, apart from any undue enhancement of price, by conduct not sanctioned by Section 1 of Capper-Volstead. This approach should tend to resolve any ambiguities left by the *Borden* case. It seems that, at the

least, *Borden* properly rejected the contention that Capper-Volstead created complete immunity outside the provision of the general standards of the Sherman Act.

This recommendation should not be taken to mean that agricultural cooperatives presently offer any serious threat to effective competition. Statutory limitations upon their organization and operation, the vagaries of weather and seasons, the time lag between decision to produce and maturing of crops, surpluses and fluctuations in supply, all militate against frequent and serious antitrust problems arising from market control of the national supply of a commodity by a single cooperative. However, the growth of centrally controlled cooperative, the federated cooperative and the use of joint marketing agencies is not to be ignored. These developments may permit control over the supply of a specific product or class of products in particular regional markets,<sup>231</sup> and may in other respects weaken self-imposed restraints of such cooperatives against antitrust transgressions beyond the bounds of exempted conduct.

Some members, in addition, point to the sequence of amendments which permit inclusion in marketing agreements and orders—and consequent total exemption from antitrust scrutiny—of provisions covering production controls, surplus pools, allocation of raw materials, standardization, unfair methods of trade and unfair competition, techniques of marketing, etc. Historically these provisions paralleled, and analytically they incorporate, most of the anti-competitive vices of the N. R. A. These members feel their impact upon processors and distributors and consumers, as well as their erosion of antitrust policy in wide areas, warrant close re-examination.

As a final recommendation, we believe there is room for improvement in the procedures under Section 2 of the Capper-Volstead Act. To avoid conflict between Capper-Volstead and anti-trust prohibitions, we recommend that the Secretary of Agriculture reappraise administrative procedures to assure case by case consideration by the Department of Justice and the Federal Trade Commission of antitrust questions involving the agricultural cooperative exemption arising under Section 2 of Capper-Volstead. This requires two steps: first, the formulation of administrative criteria, particularly for the guidance of smaller cooperatives, in determining whether or not particular conduct comes within the exemption; and second, a more formalized coordination between the Secretary and Government anti-

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<sup>231</sup> *United States v. California Fruit Growers Exchange*, Case No. 669 CCH Federal Antitrust Laws No. 669 (1952) (criminal), (*nolo contendere* pleas entered Aug. 31, 1943), and *Id.* No. 742 (civil), (consent decree entered Nov. 18, 1942); *United States v. Cranberry Cannery, Inc.*, *id.* No. 647 (criminal) (pleas of *nolo contendere* entered Nov. 2, 1942).

trust agencies for exchanging information involving complaints and investigations pertinent to agricultural cooperatives charged with antitrust violation. In this way, possible conflicts between these agencies can be avoided or minimized.

Some members would add that the failure of the Secretary of Agriculture over two decades to institute a single proceeding against an agricultural cooperative at least suggests that enforcement responsibility be put elsewhere. Experience indicates that the recommended reappraisal of "administrative procedures" in the Department of Agriculture to "assure case by case consideration" by the Antitrust Division and the Commission will be unnecessarily cumbersome and futile.



Mr. BICKS. And the final question you raise is what changes we suggest. I think that the President in his last four economic reports has suggested some particular legislative changes. Those are the ones on which we think the greatest emphasis should rest.

Beyond that, I would just single out one particularly for discussion. I think by far the most important is the civil investigative demand. This would enable us to get data before a complaint is filed in the civil area. As those of you who have been studying economic and fiscal problems over the years all know, the biggest problem is lack of data. What we really need is a means of compelling production of data before suit is filed. This is necessary to enable an intelligent decision as to whether or not to sue. It is necessary second to enable speedy process to trial after a suit is filed by minimizing need for postcomplaint discovery. This is the principal legislative change I would emphasize.

I would like to conclude by putting our work a bit in the frame of reference that this committee has been selected for its own. This committee, reading through its past hearings, has been much concerned with problems of inflation, problems of economic growth, problems of the broad direction of the economy.

Turning first to the problems of the broad direction of the economy: I think it has always been helpful, for me, at least, to view antitrust as the sole form of Government action, designed to obviate the necessity for Government regulation. Truly, I think this is its unique aspect as a form of Government action. Its prime goal is to help the free market's work. When the public has confidence in the free market's operations it is at least less likely to resort to Government operation of the market and eventually to Government taking over of markets.

Second, in terms of this committee's concern with inflation, I think antitrust can be of help in two ways. Initially, in the short run, as I indicated, restraint-of-trade cases are cases designed to eliminate artificial rigging of prices in particular markets. Such cases can make those markets immediately more responsive to other policies such as fiscal weapons designed to curb inflation.

Secondly, section 2 cases can move in the direction of promoting a more competitive structure in other sectors of the economy. However, those effects are long run and not short run.

Third, as to the problem of growth: Here I think Antitrust can be of principal help in assuring or attempting to promote that competitive product innovation, the better product, new means of merchandising and distributing product, which traditionally, at least, has been thought to be at the heart of our system's growth.

This, briefly, is the way I think what we have been doing may relate to matters within your concern.

I would be happy to answer whatever I may.

The CHAIRMAN. I understand from the concluding pages of your testimony that you are asking for three legislative changes: first, to extend the present section 7, so that it would apply to the acquisition of assets as well as of stock in the case of banks as well as of other corporations.

Mr. BICKS. That is right.

The CHAIRMAN. Second, that there should be premerger notification.

Mr. BICKS. That is right.

The CHAIRMAN. And third, that you should have the power to obtain documents from corporations, partnership papers, and associations, during the investigative stage of similar proceedings.

Mr. BICKS. That is true. Mr. Chairman.

The CHAIRMAN. It is hard to keep track of the progress of these matters. What is the status of them?

Mr. BICKS. I do not think the banking proposal has ever been given serious congressional consideration. It has come up before Senator Bush's Banking and Currency Committee, as you can remember, in the form of a variety of alternative proposals.

Before that committee, we attempted to work out some procedure to meet the committee's sentiment that bank problems should be treated initially at least by the appropriate banking agencies and not by the courts. We therefore suggested that the same procedure be applied to banks that Congress had already applied to bank holding companies. This involves an initial consideration by a banking agency; consultation between the banking agency and the Department of Justice; and enables any difference between the two to be tested in court. It is that procedure that of course was employed in our recent suit against the bank holding company merger on the west coast, the Firstamerica acquisition of the California Bank. This procedure I believe you supported, Chairman Douglas, and the committee. I believe the Banking and Currency Committee rejected it by one vote. I am not at all sure. That is the context in which that proposal has come up.

Second, the civil investigative demand has passed the Senate without dissent in this last session and is now before the House. I think our principal task would be to interest the House Judiciary Committee in the proposal next year. Premerger notification is still in both committees, in the Senate and the House.

The CHAIRMAN. This morning we were discussing the question as to whether or not it might not be desirable from the standpoint of public policy to split General Motors up into several corporations, just as Standard Oil was divided into several corporations about a half century ago. I somehow gathered either from the grapevine or otherwise that there are grand jury proceedings in the *General Motors* case. Am I correct in that?

Mr. BICKS. There are, sir.

The CHAIRMAN. Has the case in the Department of Justice been made public?

Mr. BICKS. Oh, no. It would be a breach of the canons of ethics for me to discuss it.

The CHAIRMAN. What court is that in?

Mr. BICKS. We, for over 8 months now, have had a grand jury considering this matter in the southern district of New York. I would say that probably 20 percent of the resources of the Antitrust Division have been devoted to the problem which you are speculating on, Senator.

The CHAIRMAN. I congratulate you on that.

Now I have been going over the hearings of the Kefauver committee, and I find that last year Senator Kefauver suggested to you the possibility of similar proceedings in the case of United States

Steel Corp. If my understanding is correct, you said at that time that you were studying the matter for the representatives of the Department of Justice.

Mr. BICKS. I think I can answer your question as to the status of that in two ways—the status of that inquiry.

First, for 6 months, we have had a grand jury pending on the west coast focusing on one aspect of steel operations.

Second, for the past 4 months we have had one senior economist and one senior lawyer in the Department of Justice pushing beyond the preliminary stages a study as to what our action should be on the broader problem of steel prices. I do not think it would be responsible for me to say anything more than that publicly.

The CHAIRMAN. You have undoubtedly noticed the report of the Committee on Administered Prices in Steel in March 1958. On pages 70 and 71, I find that while the share that United States Steel produces of the total supply of steel has on the whole been diminishing in recent years, and while the total share is somewhere around 30 percent now, the share is 54 percent in tie plates, 42 percent in nails and staples, 41 percent in barbwire, 43 percent in blanks, 50 percent in standard rails, and so forth, so that it is dominant in a great many of the subdivisions of the industry, even though others such as Bethlehem and Republic and National have been gaining. I wondered if you had considered this problem of the subgroups, as related to the figure for the industry as a whole.

Mr. BICKS. I certainly have, Mr. Chairman. This is one of the overall factors in compiling of all industry statistics.

The CHAIRMAN. Have you paid much attention to the basing point system?

Mr. BICKS. Yes, over the years.

The CHAIRMAN. Do you think there has been a decrease in the use of basing point in steel and cement?

Mr. BICKS. Well, there certainly has, I believe, in steel.

The CHAIRMAN. They have substituted a multiple-basing-point system?

Mr. BICKS. Well, not even a multiple-basing point. One of the striking phenomena in steel sales in recent years has been the penetration of regional markets by producers who have fairly well limited themselves to markets closer to home. I cannot generalize as to the percentage of gross national product. I do not know whether the percentage sold through the use of basing points has increased or decreased over the years. I just do not have that.

The CHAIRMAN. So you cannot tell whether the basing point system is used more as a method of price policy now than formerly?

Mr. BICKS. I would say that collusive adoption or adoption by more than one company jointly of a basing point system is a per se violation of the antitrust laws.

The CHAIRMAN. The acoustics are very poor.

Mr. BICKS. I would say that collusive adoption of the basing-point system, that is, an agreement by two companies to sell via the basing-point system, would be a per se violation of the antitrust laws. However, an individual company's adoption on its own of the basing-point system is of ambiguous competitive consequence. I refer to action by one company alone. It may be part of one company's effort

to penetrate a further foreign market. It may, on the other hand, be part of a larger industry pattern effort to eliminate price competition.

I think that the key inquiry generally focuses on collusive adoption of the system. And judging by the lack of complaints that we have gotten as to collusive adoption of the system, I would think that probably at least collusive adoption of the system has declined. But I do not know whether individual adoption of the system is increasing or not.

The CHAIRMAN. Congressman Widnall?

Representative WIDNALL. I have nothing at this time.

The CHAIRMAN. Senator Bush?

Senator BUSH. Would you care to elaborate a little bit on this matter of banks? Do you feel there is a need for more legal restraint against the merger of banks?

Mr. BICKS. I am not sure. I do think there is a need for legal assurance that competitive factors will be considered and reviewed by a court in passing on mergers. I am not sure that restraint is exactly the way to put it.

Senator BUSH. But that competition will not be reduced?

Mr. BICKS. That is exactly right.

Senator BUSH. That is the main purpose?

Mr. BICKS. That is right, Senator. And we believe that is important because of the extent to which smaller businesses depend on banks, as distinguished from equity markets, for access to capital. When the smaller business finds some difficulty floating a stock issue, they must rely on a bank.

Senator BUSH. I do not have in mind so much the larger mergers. What I have in mind is the small bank that gets absorbed by the larger bank in a State like Connecticut, for instance, where we have a lot of small towns, 169 of them, and each one of them has one or more banks, or most of them have. Now these banks have been privately held, narrowly held you might say, but then when the people die who own them or for some reason feel that the estates have to dispose of them, there really is not any market except one of the larger banks. And the result of that is that a couple of our banks up there, in fact, several, have sort of extended out throughout the State a long way from their home operation.

This has probably increased the credit facilities of the communities into which they have moved and fortified the depositors, you might say, with better banking service and more protection, perhaps, and it has afforded the seller a market, a good market, and probably a fair price for his smaller bank.

It seems likely to me that there has been some decrease in competition, maybe, by that kind of move. On the other hand, how harmful that has been it is impossible to measure. I would say, from what I have seen of it in my own State, that it is almost undetectable. But I wondered: Do you feel that way about it?

Mr. BICKS. I know nothing about the Connecticut situation. I know nothing about the competitive consequences of the Connecticut bank mergers. I would say, though, that if as you say the competitive impact has been undetectable, if section 7 were amended it could not be used to stop those bank mergers.

Senator BUSH. I see.

Mr. BICKS. Because, as I tried to indicate before, section 7 proscribes only those mergers where comparatively significant and serious anticompetitive consequences are threatened.

As you pointed out in the beginning part of your question, however, the problem of the merger of larger New York banks is a very different one.

Senator BUSH. That is very different.

Mr. BICKS. That is very different from the problem you are describing. And that is the problem which we have been concerned with recently.

Senator BUSH. You speak of premerger notification. What does that provide for? Or how would you arrange for that?

Mr. BICKS. Premerger notification would work roughly in this way: Any significant acquisition—the bill set roughly a \$10 million standard—not involving stock in trade or realty alone would be reported in advance of consummation. In such instances companies buying out the business of another company would have to just notify the Government they were doing it.

Senator BUSH. Notify the Department of Justice?

Mr. BICKS. Yes.

Senator BUSH. Not the Commerce Department or the Federal Trade Commission?

Mr. BICKS. I think the bill provided for notification of the Attorney General and the Federal Trade Commission.

Senator BUSH. The Attorney General?

Mr. BICKS. Yes. But where again I think the confusion over this bill has been is that some of the people have felt that the bill provided for premerger approval. That is a power we do not want.

Senator BUSH. You do not contemplate the desirability of giving premerger approval?

Mr. BICKS. Oh, no.

Senator BUSH. You have always refused to do that, I understood.

Mr. BICKS. No, Senator.

Senator BUSH. Well, I can remember 30 years ago trying to get approval from the Department of Justice on the merger, and they said, "We won't tell you that."

Mr. BICKS. Well, we have set up a new program that enables businessmen who are about to merge, who are troubled about the legality, to come to the Department, and we will write them as to our intentions should the companies merge.

Senator BUSH. Is that a recent procedure?

Mr. BICKS. Yes. It, I think, really helps the man who is anxious to abide by the law and simply wants to know what the consequences will be.

Senator BUSH. Now just one more question. It seems a little simple, but in the event that you do not contemplate the desirability at all of premerger approval, what do you visualize would be the advantages of premerger notification?

Mr. BICKS. Well, it gives the Department of Justice a chance to move in court before the assets are scrambled and stockholders hurt, and companies merging know of their plans 30 or 60 days in advance. Everybody proceeds with their cards on the table.

Under the present system, Senator Bush, the businessman, as you suggest, comes to the Department and says, "Look, we are going to merge. We would like to know if it is legal." You tell him, "No, it is illegal," and his merger is spoiled. The fellow who would like to operate a little more discreetly, a little more close to the vest, goes ahead and merges, throws the two assets together, and says, "Now it is going to be more difficult for the court to do anything here. You go ahead and try." Well, first, the chances of the court being able to do anything are seriously diminished, and when courts can, some innocent stockholders may be seriously hurt.

Senator BUSH. So the notification would have to carry a time limit on it—90 days, or something of that order?

Mr. BICKS. We have gone down to less than that. In the last proposals we talked about 45 or 60. Two really significant companies planning to merge know at least 45 days before they are going to go ahead that they are thinking about it. This time period was set with an eye toward not spoiling mergers, in other words, not forcing legal mergers to fall through.

Senator BUSH. In other words, no move to merge can be made during that notification period, and the Department may then get a restraining order or issue a restraining order?

Mr. BICKS. Or proceed in court. That is right. Senator, there would be exceptions to that. If, for example, it was necessary to merge in less than 45 days, there are specific provisions for exemption or acceleration.

Representative CURTIS. I have a number of questions, but I want to get into some of these procedural questions, first.

You mentioned—and I was very glad to hear your statement—what was being done in coordinating the work in the now 50 States. Is there any uniform State antitrust law now? Or is it pretty much of a model?

Mr. BICKS. It is pretty much of a model. The attorney general of New York, now Senator Javits, when he was attorney general of New York, appointed a committee of practicing lawyers and people from the Antitrust Division and the Federal Trade Commission. We drafted a report for him setting forth some model statutes, some suggested amendments, and means for coordinating, which he in turn presented to the State attorneys general, and which led up to this conference. So that I think it is that report that the attorneys general in part were considering.

Representative CURTIS. Has the American Law Institute or the American bar taken an active interest in this?

Mr. BICKS. The American bar and the New York State bar cooperated in Senator Javits' study.

Representative CURTIS. The American Law Institute?

Mr. BICKS. No, the American Law Institute has not, so far as I know.

Representative CURTIS. Along the same lines, you mentioned the effectiveness of the private policing factor, or the private individuals that bring suits on the basis of section 1. Is that private policing aspect pretty much limited to that section, or is it some help in enforcing the other sections?

Mr. BICKS. It is of considerable help in enforcing the other sections, too.

Representative CURTIS. It is?

Mr. BICKS. Yes.

Representative CURTIS. Do damage suits apply in that area? I do not see quite how they would apply.

Mr. BICKS. In the section 2 area?

Representative CURTIS. Yes.

Mr. BICKS. Well, our big movie cases were section 2 cases. And that has been a principle which has given rise to treble damage litigation.

Representative CURTIS. I see. And private suits have gone a great deal of the way on this.

Now on this business of getting adequate information, do you have access to the information that is accumulated in the independent bureaus—the Federal Trade Commission, for example?

Mr. BICKS. Yes, we generally have pretty good access to the Federal Trade Commission. The same does not go, for example, for the Bureau of Mines. We have some problems there, and, of course, we have extensive problems with Census data.

Representative CURTIS. You do. What is that? Is it just the result of administrative problems? Or are there some legal problems involved in that?

Mr. BICKS. I think largely administrative in the case of the Bureau of Mines. In the case of Census, the problem is mixed: administrative and legal.

Representative CURTIS. I imagine you have a similar problem in regard to the Bureau of Internal Revenue; is that correct?

Mr. BICKS. No. The Congress has been very careful to provide that you cannot cover up a criminal violation of your tax return and expect not to have it turned over. Internal Revenue is very cooperative in tracking down violations of law revealed by tax returns.

Representative CURTIS. Yes. Now, in your own organization, your own staff—I noticed that you did refer to economists—you have a large group of economists, or a staff of economists, that work with the legal staff? Is that correct?

Mr. BICKS. Yes, Congressman Curtis.

Representative CURTIS. Is that on an equal basis, or how is that set up?

Mr. BICKS. Well, we have some 16 economists. They are assigned, generally, to review cases before they are filed, to advise us as to what the economic impact of the case is likely to be; and, secondly, to advise us as to the problems of economic proof that are likely to result after the case is filed. They work out of their own section on ad hoc assignments to particular litigation staffs.

Representative CURTIS. I notice that we have been getting a lot of economic data from time to time on industry concentrations. Does your staff do any of that sort of work or does it simply utilize the work that is done by others?

Mr. BICKS. We generally seek to utilize the work that is done by others. We are not a "survey for its own sake" operation.

Representative CURTIS. But you might do some original research, might you not, in conjunction with some of your cases?

Mr. BICKS. Yes, Congressman Curtis, but geared to a particular case or a particular industry.

Representative CURTIS. I think your budget is below \$5 million, is it not?

Mr. BICKS. It is slightly over \$4 million.

Representative CURTIS. And I just wondered if you would state whether you felt that that was a sufficient budget to police markets in an economy as large as ours, or is it the fact that these sort of demonstration effects of a few cases are sufficient to reduce anticompetitive behavior.

Mr. BICKS. Congressman Curtis, we have gotten a budget increase this past session of roughly 10 percent of our budget. We are now considering what we will request from the Bureau of Budget next session. I feel some deficiency in responding fully to your question because though I can gage what we might do with more money, I am in no position to appraise other demands on the budget.

Representative CURTIS. Yes. Fortunately for you, this is not the Appropriations Committee. This is the Joint Economic Committee, and what we are trying to do, as I see it, is to make some appraisal of how effective the Antitrust Division is. And this is one of the limitations, as I see it, and we are just trying to figure out, in this economy, with the size it is, whether in your judgment we are adequately meeting this problem—or is our budgetary limit one of the problems.

Mr. BICKS. Oh, it certainly is.

Representative CURTIS. Would increased penalties for a violation increase the impact of the budget that you have?

Mr. BICKS. No. Moneys that we collect via fines go into the General Public Treasury, not to the Antitrust Division.

Representative CURTIS. So that there is nothing in that. All right. Is it the fact that you have inadequate resources that prevents your Division from trying more cases—or are there other reasons?

Mr. BICKS. Well, I gather that you mean to distinguish between “bringing cases” and “trying more cases.”

Representative CURTIS. Of course, when you bring one, you never know whether you are going to have to try it. You may have an opinion on the thing. But I mean the whole process, whichever it is. Of course, in trying them, are you limited by the abilities of the courts to handle these?

Mr. BICKS. We are limited by court dockets: the press on judges to do other equally important duties. That is one limitation.

To respond directly to your question, though, budgetary limitations do mold how many and what sort of cases the Division brings. Such factors may also influence, though to a lesser degree, how many out of those cases which are brought we can afford to try and how many may be advisable to settle.

Representative CURTIS. But even if your budget were expanded, there would be a limit of what you could do, due to the limitation of the courts.

Mr. BICKS. Of course; yes, sir.

Representative CURTIS. But you are not at that point?

Mr. BICKS. No; we are not.

Representative CURTIS. Just to give you an idea, would you explain to the committee—and you have already done it to some degree—



the problems, the expenditures, the resources involved in major cases, such as Alcoa, for example, with particular reference to whether any of those problems could be eased by additional legislation or are just in the nature of the work?

Mr. BICKS. First, I would be happy to submit to this committee our best estimate as to how much each of those cases cost us to try, and, second, some particular estimate as to how much those cases cost to defend.

Representative CURTIS. I wonder if we could have that, Mr. Chairman.

The CHAIRMAN. Yes. If you would furnish that, we would appreciate it.

Mr. BICKS. They have got to be estimates because we do not keep time-study charts. But perhaps we can get some reliable estimates.

(The information referred to could not be developed from existing records by the time the hearings were printed.)

Second, one of the principal advantages of the Clayton Act section 7, I think, is the speed and comparative lack of burden, costwise, of merger proceeding. I think we can do a lot by working to try to improve the techniques of trial and fashioning of economic data to speed and ease the burden of litigation. It is that sort of work that we have embarked on with the Judicial Conferences. The Chief Justice 2 years ago appointed a committee consisting of chief judges from the various circuits—in particular, district court judges—to hear views from the private bar and the Government on various techniques to rationalize and speed the process of protracted litigation. We have worked for 2 years now quite intensively with that committee. It expects to report to all the judges in the Judicial Conference this spring. I think that committee's work should be of substantial help in speeding the process of protracted litigation.

Representative CURTIS. There are some people who feel that our problems here are so great that they cannot be handled completely by enforcement under the Sherman antitrust law or section 7 of the Clayton Act, but that the Robinson-Patman law approach is much more workable and particularly that this kind of enforcement procedure is quicker. I wonder if you would comment on that, and particularly whether you think that Robinson-Patman is consistent with the same basic theme that you have expressed. Of course, that is a little rough.

Mr. BICKS. First, Congressman Curtis, I am not at all sure that Robinson-Patman Act proceedings are disposed of more quickly than Sherman Act or Clayton Act litigation.

Secondly, as to whether the Robinson-Patman Act is consistent with the Sherman Act, I have always felt that there is a sufficient limberness in the joints, that there are sufficient opportunities for imaginative construction of that act, to permit, I think, a sensible administration of the Robinson-Patman Act in a manner which would make it consistent with the Sherman Act. I do not believe it always has been so construed.

To sum it up, I think the Robinson-Patman Act could reasonably be construed in a manner which would minimize its conflict with the Sherman Act. On the other hand, it could be construed in a contrary fashion. A large part of the responsibility for that matter rests with the Federal Trade Commission.

Representative CURTIS. Do you believe that the Congress might do something in bringing about a consistent approach in this area to promote the flexibility and yet remove the inconsistencies?

Mr. BICKS. I guess I really don't, Congressman Curtis. I think the courts, as a general rule, probably on a case-by-case basis, could handle it more effectively.

Representative CURTIS. Now, I have gotten to some problems getting into the economic aspects a bit.

Of course, there has been a lot of use of the term "administered prices." And I have never been sure what anybody meant when they used the term. But I presume that what they have been meaning was administered price situations that were not in violation of the antitrust laws, were not quite that severe, but actually do involve their setting prices. I wonder if you would comment on the term "administered prices" as you deal with it. In other words, would you say that most people in using it really mean something that is in violation of the antitrust laws?

Mr. BICKS. Congressman Curtis, I have never used the term "administered prices."

Representative CURTIS. But we are bedeviled with it here in this committee. In fact, some of our hearing announcements include it. Fortunately, we usually put the phrase in quotes. But all too often the phrase is not put in quotes—as if it were something.

The CHAIRMAN. I agree with it, and I think it is something. These are prices established not in terms of the competitive forces of the market but by agreement, open or tacit, between a number of producers or where a given producer is so powerful that his own pricing policy can control the price of the market.

Mr. BICKS. Both of those situations would violate the antitrust law.

Representative CURTIS. That is the point I wanted to ask about.

Mr. BICKS. Both situations would violate it.

Senator BUSH. But before we leave administered prices, perhaps the chairman, having given us a definition, might also give us an example. Is oil an example where one company announces the price?

The CHAIRMAN. I would say it is an example. I would say in the past certain farm machinery has been an example. Steel has been an example. Cement has been an example. A whole series of products of that type have been examples. It is where there is conscious parallelism or planned coincidence, the effect of which is to have prices set by other than competitive forces.

Senator BUSH. It is usually used, though, in respect of commodities that are more or less indistinguishable: is that not true?

I mean like cement or steel or oil?

The CHAIRMAN. I suppose those are the most adapted to it.

Senator BUSH. The chairman mentioned agricultural machinery. I wonder if that is an example.

The CHAIRMAN. It has been. I am not quite certain whether it is at the present moment.

Representative CURTIS. How about automobiles?

The CHAIRMAN. If you make the charge against the automobile industry, I will accept it.

Representative CURTIS. I am making no charges at all. I am trying to get information.

The CHAIRMAN. I am not the expert on this subject.

Representative CURTIS. I am very pleased that the chairman did respond because I thought we would get the answer we did get from the witness, that under that definition we have something that is in violation of our laws now.

The CHAIRMAN. That is hard to prove because this "conscious parallelism" or "planned coincidence" is difficult to establish.

Representative CURTIS. At least I have established the point that I was interested in. And I think possibly, if this is a case in point, we need to get more into the administration of enforcement of the anti-trust laws.

The CHAIRMAN. I have. The basing point situation on cement worked out that the prices of the two firms that offered identical prices on a dam in New Mexico, with identical figures—down to a hundredth of a cent per barrel—present a good example. The chance that that was pure accident was one out of I think 26 followed by 41 ciphers.

Senator BUSH. Was this on cement?

The CHAIRMAN. Yes; this was on cement. And while there was a theoretical chance that this was pure coincidence, it was only one chance out of a constellation, so to speak.

Representative WIDNALL. I would like to ask the witness this question: Who do I appeal to in your department to get some information on this? I just had a call before I came over here in connection with lawnmowers. A person had been selling lawnmowers for a period of time, but a cooperative complained about his dealership and now he cannot get the lawnmowers any more, while a cooperative has the lawnmowers. And he says that they have an entirely different setup where they are paying off to their membership, where they get Government benefits that are more than he can get in connection with operation, and they can borrow money easier because of this cooperative setup. He claims a monopoly exists in favor of the cooperatives as against the little individual small businessman.

Whom do I consult on that?

Mr. BICKS. If he will just write the Antitrust Division, we will be happy to look into it.

Representative WIDNALL. I find this going on in my district all the time, where the Government is supporting an agency that is getting a monopoly in the field as against an independent businessman. This certainly is a field for great congressional inquiry, I think.

Mr. BICKS. It is. We have an established program apart from our enforcement activities, although related to them, whereby we do consider the complaints of smaller businessmen, such as the man you described and if circumstances seem appropriate we take the matter up with the companies involved to see if we can get at the facts of what happened. We endeavor to act very quickly.

I would think if you had the man write us we should be able to resolve the matter one way or another within 2 weeks.

Representative CURTIS. Mr. Bicks, one question, which is rather basic, and probably you cannot answer, but I want to pose it: We had hearings 2 or 3 years ago into the economic impact of our tax structure. And one of the problems that we were getting into was the question of money going into research and development, particularly in the private sector of the economy, into basic research, and some of the wit-

nesses, as I interrogated them, suggested that we probably would not get basic research through the private sector and if we did it would only be through very large concerns.

Now, I was serious when you mentioned about IBM and the splitup there—not that I disapprove in any sense. I am very strong in my belief that we have to preserve our competitive markets and the anti-trust laws are the basic way of doing it.

But I am concerned about this aspect of research and development. Did IBM continue to put as much into their research and development after this as they did before, do you know?

Mr. BICKS. Congressman Curtis, you are touching I think one of the most serious questions in our work. What has been the impact of these decrees on companies' ability, or first their incentive? Our best information is that antitrust decrees, rather than curbing such research, are actually causing them to spurt. I would like to document that for you. I am not at all satisfied with the firmness of that decision.

I think this is a very relevant inquiry. It is the sort of question we have been concerned about in our patent decrees, because it is in this area that that argument is most often advanced.

Representative CURTIS. I wonder if you would do this, because to me it is a very basic thing. If you would prepare a considered answer for the record as to what your present judgment is in this area, I would appreciate it.

Mr. BICKS. I would be happy to. I think this committee might well profit from hearing from some of the people who have been subject to these decrees, and asking them quite frankly: Has their research expenditure diminished? If they have, has that diminution stemmed from the decree? The best of our information is that not only haven't the expenditures diminished, but they have, in fact, increased. But as I indicated, our information is too sporadic to be reliable.

(The material referred to could not be supplied in time to be incorporated in the printed hearings.)

Representative CURTIS. My offhand conclusion would be that it should spur some more research and development. But on the other hand, there is no question that a company is not going to sink a lot of money in research and development if they cannot recoup the amount of money they put in. That would be the problem as I see it.

Now, not along the same line, but in a similar area, how far can you go in your Division in following assets abroad, American capital that might go abroad? Let us take a hypothetical case, whether it is true or not—where it actually goes abroad to avoid the antitrust laws in this country and will set up a foreign organization and then come back and ship into this country. You can follow that, can you not, if it is an American subsidiary? But if it is a foreign corporation, can you still follow it to some degree?

Mr. BICKS. Congressman Curtis, let me respond to your question in two ways. First, by stating very briefly what I think the limits of our jurisdiction are, and second, by indicating equally briefly steps we have taken in conjunction with the State Department to make sure that the application of antitrust abroad jibes with our foreign policy efforts to encourage investment by American concerns abroad.

First, the statement of our jurisdiction: The antitrust laws would apply to any conspiracy by an American company with a foreign com-

pany, which is the situation you are describing, which restrains this country's foreign commerce. Second, the American antitrust laws would apply to any conspiracy between foreign companies alone that, one, not only restrains this country's commerce, but second, is intended to do so. In short—and I am referring to Judge Hand's dictum in *Alcoa*—the courts have set down different standards for antitrust jurisdiction over a conspiracy between foreign companies alone. In that case, you have a twin test of jurisdiction, purpose, and effect. On the other hand viewing a conspiracy between an American company and a foreign company, relevant instead is only a single standard—unreasonable anticompetitive effect.

The particular circumstance you are discussing is in a sense fleeing this country to avoid the impact of this country's antitrust laws.

Representative CURTIS. And then shipping back.

Mr. BICKS. Would that not fall in the category of a conspiracy between an American company and a foreign country? Because there would have to be some American roots left, presumably. Presumably you would have to have an American parent or an American distributing subsidiary here to tap this market. In that event you would have a conspiracy between an American entity and a foreign entity. And if you could show either the illegal purpose which you have posited, or any illegal effect, the antitrust laws would apply.

Representative CURTIS. Do your studies reveal, or rather does your work reveal, that there are inadequacies in this area, or do you think that you are able to cope with this problem?

Mr. BICKS. I think over the past we have found two inadequacies. The first was a failure to coordinate our enforcement abroad with this country's other policies abroad. To meet this problem, we have coordinated two countries' policies by consulting with the State Department in advance of filing suits and in advance of taking any significant steps in foreign litigation.

Second, there has been the problem of relations with foreign governments. As the press has indicated, both the Canadian attorney general and the British attorney general within the past year have visited, with representatives of the Antitrust Division, and our Attorney General. Our goal has been to work out some procedures for consultation between the governments as distinct from within our own Government to minimize the misunderstanding stemming from our antitrust action.

Those are the two areas where we found most need for improvement, and those are the steps we have taken.

Representative CURTIS. One final very broad question. If this statement is incorrect, please correct the statement itself. But most observations that I have heard treat our antitrust laws as essentially trying to cope with the horizontal trust, as opposed to a vertical one, in the mind of the consumer, you might say. Would you agree with that statement, first? Is it true? Or do you think that you in the enforcement provisions and in the way that you have been administering them are able to break down the vertical operations?

Mr. BICKS. General Motors-Du Pont is a vertical case, yes.

Representative CURTIS. I was very much interested in your comments on Bethlehem and United States Steel, where you thought that by having three firms instead of one, dominant, you still were not cor-

recting the basic problem, and you might even be contributing to something you would want to undo later, as I understand it.

Mr. BICKS. Well, that is not quite what I would suggest. Youngstown-Bethlehem of course involved both the horizontal and vertical aspects. I don't know how I can respond to your question.

Representative CURTIS. Well, maybe it is that we have such a thing as a "grandfather" clause in these things, where, if you have already through previous accretion or mergers reached the point of great size and power, you would not allow a merger to come along that would create something that is less than what exists; and yet what exists, at least up to the present, is not in violation.

Mr. BICKS. Well, first, without suggesting that I would be prepared to say that what exists constitutes no violation, second let us assume, as you put it, that the United States moved successfully to halt a merger between companies ranking second and third in an industry, which, after the merger took place, assuming it did take place, would still result in a combined company smaller in size than No. 1. I would say that this is probably the sort of problem that arises because section 7 was amended in 1950. And most of the mergers that, for example, for U.S. Steel's present position took place before 1950. However GM-Du Pont's backward-bite rationale may go some way in the direction of meeting that problem.

Representative CURTIS. So what you are saying is that you have a grandfather clause?

Mr. BICKS. It is sort of hard for me to figure the industry that would meet those three tests. So I am questioning how significant the grandfather clause is.

Representative CURTIS. I see what you mean. I notice you comment on mergers, but you can accomplish the same economic results through what I would call accretions, rather than a large merger—just growing and taking over and gradually assuming that economic position, now referring not so much to horizontal but to vertical. Campbell Soup is now going into canning, for example.

Mr. BICKS. Congressman Curtis, I think there are two different problems. First, the difference in legal impact and result over time. The problem of U.S. Steel having done something 20 or 25 years ago, before the Clayton Act's section 7 was amended, and now a smaller company being sued for doing the same transaction. The transaction does not differ substantially competitively. That is the sort of problem that stems for a change in the law and congressional action of 1950.

But your problem has a second aspect, and that is the difference in legal treatment under the antitrust laws between growth by internal expansion and growth by merger. Now, this is the assumption that underpins Clayton Act section 7. That assumption is that somehow growth by merger may more likely threaten anticompetitive consequences than internal expansion. I happen to think that assumption is probably valid. As I indicated, Congress has set different legal standards to govern growth by merger; that is, Clayton Act, section 7.

Representative CURTIS. You have answered what I wanted. Do you think that the economic result is the same and therefore might be treated the same?

Mr. BICKS. I am not sure the economic result is the same. I think growth by internal expansion is something that except in few cases our system should encourage.

The CHAIRMAN. First, to follow up the point Congressman Curtis made about the inadequacy in quantity of the staff of the Antitrust Division, a friend of mine, Judge Donnelly, as I recall, in the *Financial Institutions* case, tried in New York, found Professor Stefan, then serving as an Acting Assistant Attorney General, was the sole attorney for the Government, and against him there was some 30 or 40 attorneys for the various security houses in New York. His feeling was that there was unequal matching. The Government was unequally matched with the immense quantity of legal talent that the others could muster.

The other thing was in Judge Labuy's court in Chicago, when the *Du Pont-General Motors* case was being tried. I am not sure how many attorneys you had there. Was it two?

Mr. BICKS. Three or four.

The CHAIRMAN. And Du Pont had something like 40. Now, granted that you have able men, does not this really argue for an appreciable increase in your staff?

Mr. BICKS. What troubles me about a flat response to your question is that in some cases that disparity in numbers works to our advantage.

The CHAIRMAN. More lawyers, more trouble?

You do not think you are understaffed, then?

Mr. BICKS. Yes; I do. But I don't think that conclusion follows from the fact that Government antitrust attorneys are oftentimes outnumbered in the courtroom.

The CHAIRMAN. Well, as a former Senator once remarked, I hold in my hand a copy of a report by the Messrs. Grether and Kaysen, who made a recommendation to the Attorney General.

Mr. BICKS. They recommend a 10 percent increase, and that is what we got last year.

The CHAIRMAN. And you think that is all that it needed?

Mr. BICKS. No. I think we should seriously consider more. But frankly, one of the problems we are facing now is recruiting within that 10 percent increase. Mr. Markus is currently engaged in contracting economists at various universities to see if we can hire some good economists.

The CHAIRMAN. I know that Congress is frequently appalled in this matter because the businesses which are being regulated, which frequently do not feel strong enough to repeal the law, or which are not able to reach the enforcers of the law, nevertheless cripple the work of the enforcing agency by prevailing upon the Appropriations Committees of Congress to reduce the appropriations. This is not a fault of any one party. Of course, it is more characteristic of one party than another.

Representative CURTIS. Do not take the burden on yourself, Senator.

The CHAIRMAN. I know that you do not make the budget suggestions, but are you setting your sights too low?

Should you not ask for a much larger increase than this 10 percent? You might find support here, you know, instead of opposition, support from some sections at least, for a larger staff, which would enable you more vigorously to prosecute cases.

Mr. BICKS. In response to your question, we may well be. When we first discussed this proposed increase, the Attorney General's reaction was that we should keep alert watching how we absorb this 10 percent. Let's see what difference it makes in our operation. And at no time has

he shown any reluctance to do battle for greater appropriations, if we can indicate to him that we really need them, and what we are going to use them for. I look forward very much to our experience this year with the 10 percent increase.

The CHAIRMAN. Do you think that has been applied rather largely to the field of labor?

Mr. BICKS. Oh, no.

The CHAIRMAN. That is not true?

Mr. BICKS. Not at all.

Representative WIDNALL. Mr. Chairman, will you yield at that point?

What does a man in the Department get paid for representing the Department in a Du Pont or General Motors case? What is his yearly salary?

Mr. BICKS. The trial attorney who is in charge of the presentation of the Government's case in the *General Motors-Du Pont* relief proceeding was a grade 15 attorney whose salary I believe is \$14,000, give or take, a bit a year.

Representative WIDNALL. He would have been paid more if he had been Doorkeeper of the House of Representatives?

Mr. BICKS. It is interesting that you mention that particular case. That particular man is one of the outstanding men we have in the Antitrust Division. He is a Harvard graduate of about some 8 or 10 years ago. He is a captain or major in the Air Corps Reserve and during weekends flies Reserve time to earn more money to stay in Government—that kind of fellow we will be very lucky if we keep very long. He is a man with five children. He is a fellow who is terribly devoted to what he is doing, feels he is part of the vital organization to which he is contributing. The longer we can keep men like that the better off the Division will be.

The CHAIRMAN. If you had more men at grade 16 and 17—

Mr. BICKS. That would be extremely helpful. Because a fellow like that, with five children, when they get to college age—it may be impossible for him to stay with the Division.

Representative CURTIS. How does the economic staff run, in grades? About the same as the legal?

Mr. BICKS. Yes, roughly. I believe we have one grade 15 economist. We are engaged in the process of trying to raise two others to grade 15. I don't know if we will be successful with the Civil Service Commission. We definitely could use some more supergrades for lawyers and economists.

The ceiling salary is a terrible problem in the antitrust field. This ceiling raises sharply the range of incentives that motivates people. Because the marketability of antitrust expertise is so tremendous in other than Government work we can never hope to compete in mone-



tary terms. Nonetheless, I think we are at least obliged to provide our people with a minimum self-respecting wage and I am afraid we are not able to do that in some cases.

The CHAIRMAN. May I say that you would have a good deal of support. I think from many of us you would have a good deal of support if you would be bold in the construction of your budget for 1961.

Mr. BICKS. We are considering, frankly, asking for an increase. We are going to make our decision largely based on what we see we can do next year and what we need men particularly for.

The CHAIRMAN. A mean fiscal year 1961. I would suggest that you will require some good attorneys, well-paid attorneys.

Do I understand that dissolution cases are brought under section 2 of the Sherman Act?

Mr. BICKS. They may be brought under section 1 of the Sherman Act?

The CHAIRMAN. How many dissolution cases have you brought since 1953?

Mr. BICKS. Merger cases?

The CHAIRMAN. No; dissolution cases. I would define "dissolution" to mean any cases that seek the splitting up or divestment of assets acquired by a company. Do you define it some other way?

Mr. Curtis mentioned a company which you felt had grown to an excessive size, and therefore you felt it should be divided.

Mr. BICKS. I can just go down the major ones. Pan American, Grace, United Fruit, RCA, General Motors, of course. These are leaving out the merger cases, which is a tremendously significant area of our work, and just sticking to section 2.

The CHAIRMAN. If you have time, will you supply those?

Mr. BICKS. I certainly will. But those are the major ones that come to mind.

(Mr. Bicks subsequently submitted the following for the record:)

DEPARTMENT OF JUSTICE,  
Washington, September 29, 1959.

HON. PAUL H. DOUGLAS,  
*Chairman, Joint Economic Committee,*  
*U.S. Senate, Washington, D.C.*

DEAR SENATOR DOUGLAS: During my testimony before the Joint Economic Committee on September 22, 1959, you asked how many dissolution cases had been filed by the Antitrust Division since 1953. I was unable to answer your question at that time but promised to supply the information later.

Attached is a list of 48 cases filed by the Antitrust Division between January 1, 1953, and September 22, 1959, in which divestiture, divorcement or dissolution relief was sought.

Sincerely yours,

ROBERT A. BICKS,  
*Acting Assistant Attorney General,*  
*Antitrust Division.*

Cases filed by the Antitrust Division between Jan. 1, 1953, and Sept. 22, 1959, in which divestiture, divorcement, or dissolution relief was sought

## I. CORPORATE DEFENDANTS

CCH Blue Book No.	Title of case	Date filed	Line of commerce	Relief sought
1181	<i>United States v. Pan American World Airways Inc., et al.</i>	1954 Jan. 11	Air transportation.....	Divestiture.
1184	<i>United States v. American Lead Pencil Co. et al.</i>	Jan. 26	Lead pencil manufacture.....	Dissolution.
1189	<i>United States v. The Torrington Co.</i>	Mar. 30	Machine needles.....	Divestiture.
1200	<i>United States v. Liberty National Life Insurance Co., et al.</i>	June 29	Funeral Merchandise and Burial Insurance.	Do.
1203	<i>United States v. United Fruit Co...</i>	July 2	Production, transportation, and importation of bananas.	Divestiture, divorcement, and dissolution.
1213	<i>United States v. Eastman Kodak Co.</i>	Dec. 21	Processing color film.....	Divestiture.
1214	<i>United States v. Schenley Industries, Inc.</i>	1955 Feb. 14	Production and sale of whisky.....	Do.
1220	<i>United States v. General Shoe Corp.</i>	Mar. 29	Manufacture, distribution, and sale of shoes.	Do.
1229	<i>United States v. Hilton Hotels Corp., et al.</i>	Apr. 27	Hotel service.....	Do.
1228	<i>United States v. National Linen Service Corp.</i>	Apr. 25	Linen service.....	Do.
1234	<i>United States v. American Linen Supply Co. et al.</i>	May 12	Manufacture of cloth and paper towels.	Do.
1237	<i>United States v. Crown Zellerbach Corp. et al.</i>	May 18	Manufacture of paper towel cabinets and paper towels.	Do.
1241	<i>United States v. Aero Mayflower Transit Co.</i>	June 24	Movement of household goods.....	Dissolution.
1253	<i>United States v. Minute Maid Corp.</i>	Sept. 7	Production, distribution, and sale of frozen citrus juice concentrates.	Divestiture.
1275	<i>United States v. American Radiator &amp; Standard Sanitary Corp.</i>	1956 Mar. 30	Manufacture of bathtubs and kitchen sinks.	Do.
1299	<i>United States v. International Cigar Machinery Co., et al.</i>	July 25	Manufacture of cigarmaking machinery.	Divestiture and divorcement.
1307	<i>United States v. Continental Can Co., Inc.</i>	Oct. 30	Manufacture and sale of containers...	Divestiture.
1309	<i>United States v. Maryland and Virginia Milk Producers Assn., Inc.</i>	Nov. 21	Milk suppliers.....	Do.
1310	<i>United States v. Owens-Illinois Glass Co.</i>	Dec. 4	Glass containers.....	Do.
1311	<i>United States v. Radio Corp. of America, et al.</i>	do.....	Television stations.....	Do.
1354	<i>United States v. El Paso Natural Gas Company, et al.</i>	1957 July 22	Natural gas.....	Do.
1370	<i>United States v. Lucky Lager Brewing Co.</i>	1958 Feb. 18	Distribution of beer.....	Do.
1398	<i>United States v. National Alfalfa Dehydrating and Milling Co.</i>	June 27	Production and sale of dehydrated alfalfa.	Do.
1402	<i>United States v. True Temper Corp.</i>	June 30	Steel shafts for golf clubs.....	Do.
1406	<i>United States v. Lever Brothers Co., et al.</i>	July 8	Manufacture of detergents.....	Do.
1421	<i>United States v. Anheuser-Busch, Inc.</i>	Oct. 30	Manufacture and sale of beer.....	Do.
1443	<i>United States v. Firstamerica Corporation.</i>	1959 Mar. 30	Banking services.....	Do.
1444	<i>United States v. The Hertz Corporation.</i>	May 1	Motor vehicle rentals.....	Do.
1460	<i>United States v. Kennecott Copper Corp.</i>	June 22	Copper production.....	Do.
1477	<i>United States v. United Artists, Inc., et al.</i>	Sept. 15	Distribution of films for television...	Do.

Cases filed by the Antitrust Division between Jan. 1, 1953, and Sept. 22, 1959, in which divestiture, divorcement, or dissolution relief was sought—Continued

## II. TRADE ASSOCIATION DEFENDANTS

CCH Blue Book No.	Title of case	Date filed	Line of commerce	Relief sought
1153	<i>United States v. Detroit Sheet Metal and Roofing Contractors Assn., Inc., et al.</i>	1953 Jan. 19	Sale of built-up roofing materials....	Dissolution.
1166	<i>United States v. National Malleable and Steel Castings Co., et al. and Association of American Railroads.</i>	May 22	Manufacture of railroad car couplers, coupler parts, and yokes.	Do.
1176	<i>United States v. Wholesale Produce Buyers Assn., et al.</i>	1954 Sept. 2	Sale of fresh fruits and vegetables...	Do.
1193	<i>United States v. Cigarette Merchandisers Assn., Inc., et al.</i>	Apr. 28	Sale and distribution of cigarettes through vending machines.	Do.
1208	<i>United States v. Embroidery Cutters Assn., et al.</i>	Nov. 11	Cutting and finishing embroidery...	Do.
1216	<i>United States v. Kosher Butchers' Assn. of Los Angeles, et al.</i>	1955 Mar. 1	Sale and distribution of kosher meat and poultry.	Do.
1222	<i>United States v. Linen Supply Institute of Greater New York, Inc., et al.</i>	Apr. 6	Linen supply service.....	Do.
1224	<i>United States v. Linen Service Council of New Jersey, et al.</i>	...do...	...do.....	Do.
1239	<i>United States v. Garden State Retail Gasoline Dealers Assn., Inc., et al.</i>	May 25	Sale of gasoline.....	Do.
1246	<i>United States v. Memphis Retail Package Stores Assn., Inc., et al.</i>	June 30	Sale of alcoholic beverages.....	Do.
1248	<i>United States v. Retail Liquor Dealers Assn. of Chattanooga, et al.</i>	...do...	Sale and distribution of alcoholic beverages.	Do.
1257	<i>United States v. Fish Smokers Trade Council, Inc., et al.</i>	Sept. 28	Sale and distribution of smoked fish.	Do.
1302	<i>United States v. Maryland State Licensed Beverage Assn., Inc., et al.</i>	1956 Sept. 11	Manufacture and distribution of liquor.	Do.
1324	<i>United States v. Concrete Forms Association of Central New England, et al.</i>	1957 Mar. 1	Manufacture and distribution of concrete forms.	Do.
1346	<i>United States v. Nassau and Suffolk County Retail Hardware Association, Inc., et al.</i>	June 27	Retail hardware and housewares....	Do.
1355	<i>United States v. Tri-County Beer Distributors Association, et al.</i>	Aug. 2	Distribution of beer.....	Do.
1404	<i>United States v. Frozen Food Distributors Association of Greater New York, et al.</i>	1958 June 30	Distribution of frozen food specialties.	Do.
1428	<i>United States v. Fur Shearers Guild, Inc., et al.</i>	Dec. 16	Fur-shearing services.....	Do.

Senator BUSH. Mr. Bicks, one of the cases we are going to get into a little later in the week involves the question of whether the antitrust laws should be applied to the labor unions. And may I ask you first: What situations do arise under the present body of law that make the labor unions subject to the antitrust laws?

Mr. BICKS. There are three general areas where the antitrust laws presently apply to labor activities. The first involves situations where an organization calls itself a union but we would challenge its true existence as a union. Instead, we would maintain that the organization is in fact an organization of independent businessmen.

The second area involves the theory I was expounding before in Chicago, the *Boilermakers* case—action by a union official to the detriment of his union and to the benefits of an employer who is paying off the union official, and to the detriment of the competitors of the employer-payer.

The third situation involves a labor-management conspiracy, a conspiracy between a labor group and a management group to disadvantage another management group.

Those are three general situations.

But I think it would be most helpful to get together the precise factual situations that have been proceeded against. Because those general situations may not have too much meaning.

Senator BUSH. I think we are having some hearings on that later in the week. I do not have that with me.

That is starting next week, I am told.

Mr. BICKS. I will have that in the committee's hands by the day after tomorrow. I think we could give you, by showing the variations in the facts of the situation, a pretty good idea what fact situations are covered.

(The material referred to is as follows:)

DEPARTMENT OF JUSTICE,  
Washington, September 24, 1959.

HON. PAUL H. DOUGLAS,  
Chairman, Joint Economic Committee,  
U.S. Senate, Washington, D.C.

DEAR SENATOR DOUGLAS: In the course of my testimony before the Joint Economic Committee on September 22, 1959, Senator Bush asked for an explanation of the extent to which the antitrust laws were applicable to labor unions. In responding to Senator Bush's question, I briefly outlined the types of union activities which come within the jurisdiction of the antitrust laws. In addition, I offered to furnish your committee with a more comprehensive description of the factual situations which illustrate the scope of Antitrust's jurisdiction over labor union activities.

There are four general types of labor-union activities which are subject to antitrust action. These include the following: (a) Union agreements with a nonlabor entity which restrain trade; (b) the organization of a labor union composed of independent businessmen as well as employees; (c) the corruption of union officials by employers for the purpose of restraining trade; and (d) the ownership and operation by unions of business enterprises engaged in interstate commerce.

To illustrate the factual situations relevant to each of these types of labor-union activities within the reach of the antitrust laws, the factual situations in 20 antitrust cases brought against unions or union officials since January 1953 are described in the attached appendix I.

Sincerely yours,

ROBERT A. BICKS,  
Acting Assistant Attorney General,  
Antitrust Division.

## APPENDIX I

## CLASSIFICATION OF 20 ANTITRUST CASES FILED BETWEEN 1953 AND 1959 BY TYPES OF ILLEGAL LABOR UNION ACTIVITY

## A. UNION AGREEMENTS WITH A NONLABOR ENTITY WHICH RESTRAIN TRADE

- 1 and 2. *United States v. Walton Hauling & Warehouse Corp., et al.* (Cr. 141-349, S.D.N.Y.; Civ. 86-286, S.D.N.Y.)

A group of companies engaged in the business of hauling theatrical scenery and equipment allegedly agreed among themselves on the prices they would charge theaters, television, and motion picture productions for hauling scenery and equipment. They allegedly agreed not to take customers from each other and to prevent independent truckmen from hauling scenery and equipment. A Teamsters local was charged with agreeing with the haulers to picket and to use other means to keep the customers of the haulers in line with the agreement.

A criminal case was filed on June 23, 1953, and a civil action begun on July 15, 1953. In the criminal case, the union pleaded *nolo contendere* (no contest) on July 15, 1955, and was fined \$2,500. The union secretary-treasurer and business agent was dismissed by the Government. The other defendants had previously pleaded *nolo contendere* on April 27, 1955, and fined a total of \$10,000. The case was closed.

In the civil case, two judgments consented to by the defendants were entered on April 27, 1955, and July 15, 1955. The second judgment was against the union and its secretary-treasurer and business agent. The first included all the other defendants. The civil case was thereby closed.

3. *United States v. Chattanooga Chapter, National Electrical Contractors Association, Inc., et al.* (Cr. 10-208, E.D. Tenn.)

An Electrical Workers local, its business agent, and several electrical contractors in the Chattanooga area who were members of an association, it was alleged, agreed to predetermine which electrical contractor would submit to general contractors the low bid for electrical installation jobs. The other contractors then submitted higher bids or did not bid at all. The union allegedly agreed to deny union labor, or to supply only inferior or incompetent labor on any job awarded to a contractor other than the one predetermined pursuant to the agreement. The union also allegedly agreed to picket any construction job on which the union had not supplied the electrical workers.

A criminal case was filed on July 2, 1953. On July 15, 1953, nine defendants pleaded *nolo contendere* and were fined \$16,500. The union and its business agent went to trial and were found guilty on February 5, 1954. The union was fined \$2,500 and its business agent \$1,000. The district court's judgment was affirmed by the court of appeals on February 24, 1955, and on April 25, 1955, the Supreme Court declined further review.

- 4 and 5. *United States v. Cigarette Merchandisers Association, Inc., et al.* (Cr. 144-105, S.D.N.Y.; Civ. 92-388, S.D.N.Y.)

As association of independent businessmen who owned coin-operated vending machines through which they sold cigarettes to the public in the New York Metropolitan area allegedly agreed to assign among themselves various locations, i.e., restaurants, bars, etc., in which each could place his machines. A Teamsters affiliated union, it was alleged, joined the agreement and policed it by refusing to service machines of owners, whether members of the association or not, who placed machines in a location assigned to someone else. The union also boycotted and placed pickets in front of the restaurants, etc., in which machines were placed by machine owners to whom the location was not assigned.

Civil and criminal cases were brought April 28, 1954, against the association, several of its members, and the union. In the civil case a judgment for the Government was entered on January 9, 1957, to which defendants had consented and which enjoined continuance of the agreement. In the criminal case all defendants pleaded *nolo contendere* and were fined a total of \$105,500. Two individuals respectively received 3 and 6 months suspended sentences of imprisonment and were placed on probation. One of these was the secretary-treasurer of the union defendant.

6. *United States v. Milk Wagon Drivers' Union Local 753, International Brotherhood of Teamsters, Chauffeurs, Stablemen and Helpers of America, et al.* (Supp. to Civ. 2088)

This action was filed July 30, 1954, and charged a union and two of its officials with civil and criminal contempt of court by violating a previous antitrust judgment enjoining them from coercing any milk distributor not to serve a customer served by another distributor or not to take a customer from another distributor. It was alleged that the union threatened to and did cause strikes in dairies which solicited other distributors' customers.

The case was closed when the court dismissed the proceeding.

7. *United States v. Operative Plasterers and Cement Masons International Union of America, et al.* (Civ. 56C1096, N.D. Ill.)

Two Plasterers' unions, it was alleged, entered into an agreement with a company which manufactured and distributed machines which sprayed plaster on surfaces, at a great saving of time and labor over manual plastering methods. In this agreement the company agreed to lease only, and not to sell or to permit subleasing of, the machines. It also allegedly agreed that in areas under the jurisdiction of the two unions it would lease only to contractors which hired members of the two unions.

A civil action was filed on July 29, 1958. In January 1959, three judgments were entered with the consent of the defendants which prevent the restraint on selling and subleasing machines; and which make the machines available to nonunion contractors.

8. *United States v. Hamilton Glass Company, et al.* (Civ. 15C432, N.D. Ill.)

This case charged that a union teamed up with certain business concerns, glazing contractors, in an effort to prevent use in new building construction of doors and windows and other articles in which the glass had been set in a factory rather than at the site of the construction. The union members were glaziers who were employed by the glazing contractors who were engaged in furnishing and installing flat glass. As a part of the agreement, it was alleged, the union declared or threatened strikes when preglazed doors or windows or other products were used and compelled builders and others to pay its members for glazing work not required when preglazed products were used or to have the products reglazed on the job site.

The union agreed to entry of a judgment against it on September 8, 1958.

9. *United States v. Greater Blouse, Skirt & Neckwear Association, Inc., et al.* (Cr. 158-181, S.D. N.Y.)

Two associations of blouse contractors (who contract to sew ladies blouses for blouse jobbers who supply the material to be sewed and who resell the finished blouses to retailers) allegedly agreed with an association of blouse jobbers on the prices jobbers would pay contractors for the latter's sewing operations. They also agreed, it was charged, that members of the jobbers' association would use, exclusively, the services of members of the two contractors' associations and that the jobbers' work would be allocated among members of the two contractors' associations. An International Ladies Garment Workers Union local entered into this agreement and aided in policing its terms and in forcing nonmember jobbers to comply with the terms of the agreement.

An indictment was returned on March 11, 1959, against the three associations, the union local and individuals connected with each. The case is being prepared for trial.

- 10 and 11. *United States v. Gasoline Retailers Association, Inc., et al.* (Cr. 3010, N.D. Ind., Civ. 2626, N.D. Ind.)

A Teamsters local and two of its officials and a trade association of gasoline station operators and two of its officials allegedly agreed that station operators would refrain from giving premiums in connection with retail gasoline sales and would refrain from advertising the price for the retail sale of gasoline. Dealers who gave premiums or advertised price were picketed or threatened with picketing, had gasoline deliveries cut off or were threatened with a cutoff of deliveries and property damage. Many retail gasoline station operators and their employees were members of the union local.

Companion criminal and civil cases were filed on June 22, 1959, and June 30, 1959, respectively. Both cases are being prepared for trial.

**B. THE ORGANIZATION OF A LABOR UNION COMPOSED OF INDEPENDENT BUSINESSMEN AS WELL AS EMPLOYEES****12. *United States v. Louisiana Fruit & Vegetable Producers Union, Local 312 et al.* (Cr. 24906, E.D. La.)**

Growers of perishable produce, who were independent entrepreneurs engaged in farming for their own account and profit and not workers or laborers receiving a salary or wage, were members of the defendant labor union. As such, they allegedly agreed on the prices they would charge for their produce, picketed processors who refused to pay the price, and coerced handlers of their produce to agree to certain fees. Even though these independent businessmen called themselves a labor union they were considered by the Government to be as responsible to the antitrust laws as any independent businessmen.

The case was closed when defendants pleaded guilty and were fined on April 28, 1954. The individual defendants were given suspended jail sentences of 6 and 9 months.

**13 and 14. *United States v. Fish Smokers Trade Council, Inc., et al.* (Cr. 148-208, S.D. N.Y., Civ. 103-358, S.D. N.Y.)**

Independent smoked fish jobbers in New York, that is, persons engaged in the business of purchasing smoked fish from smokehouses for resale to retailers, were, it was alleged, persuaded or compelled to join the defendant union and to agree to refrain from competing for each others customers. The union allegedly threatened to or did strike smokehouses which sold to nonunion jobbers or to jobbers who had sold to another jobber's customers and fined jobbers who sold to other jobbers' customers and picked customers of nonunion jobbers. Although the independent businessmen had been taken into the union, the agreement with them by the union was challenged in the same way as an agreement with any other group of independent businessmen.

Civil and criminal cases were brought on September 28, 1955. The criminal case has been closed. The smokehouse defendants pleaded nolo contendere and were fined. After two trials of the union and three of its officials resulted in the juries being unable to agree, the Government dismissed the case.

The civil case is still pending. The smokehouse defendants agreed to the terms of a judgment which was entered on March 27, 1956. Trial of the union and its officials will be heard on the record of the second criminal trial.

**15. *United States v. United Scenic Artists Local 829 of the Brotherhood of Painters, Decorators and Paperhangers of America* (Civ. 118-92, S.D. N.Y.)**

Defendant union is in part composed of independent businessmen who contract to design scenery or costumes for theatrical productions. In part, the union is composed of bona fide employees who construct and paint scenery designed by these contracting designer members and employees who manufacture costumes designed by the designer members. The case, filed March 5, 1957, charges an agreement among the union members, that is, among bona fide employees and independent businessmen, that the employee members will not work on costumes or scenery not designed by the designer members. It also charges that the independent designer members agreed on a minimum fee to be charged for their work and agreed not to design scenery (or costumes) for any production for which the costumes (or scenery) were not also to be designed by union designer members. The case simply raises the question whether what is involved is not actually an agreement among independent businessmen and a labor union rather than legitimate labor union activities.

The case is pending and being prepared for trial.

**16. *United States v. Meyer Singer et al.* (Cr. 27691, S.D. Calif.)****17. *United States v. Los Angeles Meat & Provision Drivers Union, Local 626, International Brotherhood of Teamsters, etc., et al.* (Civ. 515-59-WB S.D. Calif.)**

A group of self-employed peddlers who are engaged in buying waste grease from restaurants, hotels, and other establishments and in selling such waste to processors, became members of a Teamsters' local. They allegedly agreed among themselves to fix the price they paid for waste grease and the price at which it was to be sold to processors. It was also alleged that they allocated among themselves the establishments from which they would buy and the processors to whom they would sell. Processors were allegedly prevented from buying from nonunion peddlers and required to make payment into a "health and wel-

fare" fund for peddlers. Strikes and picketing and threats of strikes and picketing were used to compel processors to adhere to the system and suspension and expulsion from the union were sanctions used to force compliance by peddlers.

Substantially identical companion criminal and civil cases were filed May 27, 1959, against the Teamsters' local, its business agent, and certain peddler members of the union. The cases are being prepared for trial.

C. THE CORRUPTION OF UNION OFFICIALS BY EMPLOYERS FOR THE PURPOSE OF RESTRAINING TRADE

18. *United States v. Chicago Boiler Manufacturers Association et al.* (Cr. 57CR412, N.D. Ill.)

The association and its members who are engaged in the business of repairing and installing steel boilers allegedly agreed to fix their charges for boiler repair and installation work and to prevent nonmembers from engaging in this business. As a part of their plan, it was alleged, they agreed with, and made sizable and secret cash payments to, two business managers of a local union. These business managers in return were alleged to have used their official positions to harass nonmember boiler contractors and to refuse to enter into collective bargaining agreements with them.

An indictment was returned on June 25, 1957. On May 1, 1959, the defendants pleaded nolo contendere and were fined a total of \$12,700.

19. *United States v. Irving Bitz et al.* (Cr. C 159-162, S.D. N.Y.)

A wholesale magazine distributor, three individuals closely associated with it, and two individuals associated with two other wholesale magazine distributors, allegedly agreed with six union officials to prevent distribution of magazine and newspapers by other wholesalers unless they paid various sums of money in order to obtain labor contracts to avoid strikes.

An indictment was returned June 23, 1959. One defendant has pleaded guilty and the case is being prepared for trial against the other defendants.

D. THE OWNERSHIP AND OPERATION BY UNIONS OF BUSINESS ENTERPRISES ENGAGED IN INTERSTATE COMMERCE

20. *United States v. Seafarers Sea Chest Corporation et al.* (Civ. 14674, E.D. N.Y.)

An A.F. of L. affiliated seaman's union, the Seafarers International Union of North America, Atlantic and Gulf district, organized and created a wholly owned corporation which it controlled and managed. This corporation was engaged in the business of selling to ships the supplies, such as clothing and tobacco, which seamen may purchase at sea. The union allegedly refused to furnish men to sail on vessels which bought such supplies from anyone other than the union's corporation. Thus the case charged that the union used its control over the supply of labor to force vessel owners to do business with the union-owned corporation and to refuse to buy supplies from the union-owned corporation's business rivals.

A civil case was filed on August 20, 1954. The union raised the question of its exemption from the antitrust laws and the court ruled that its business activities were subject to the same laws that govern other business activities. The case was closed on March 20, 1956, by entry of a judgment for the Government to which the union had agreed.

Senator BUSH. Have you given any thought to the question as to whether the law should be expanded or a new body of law should be sought which would have a restraining effect upon the monopolistic powers of unions.

Mr. BICKS. We have given considerable thought to it, Senator Bush, and our general conclusions are of two sorts. First, that over the years not enough has been done to utilize the potential of the existing law as it applies to labor unions. We have tried to do something about that.

Second, the more we study particular practices which are not subject to the antitrust laws, the more we realize that the wisdom or lack



of wisdom of those practices had been considered at length by Congress in the context of Taft-Hartley or the recent Landrum-Griffin Act. Whatever Congress decides it wants to make legal or illegal in the labor-management field outside of the scope of present antitrust coverage, it might do well to specify in a labor-management rather than in an antitrust context.

There are really three reasons for that conclusion. First, in the labor-management field, there may be a unique demand for speed in the determination of whether an unfair labor practice has taken place. After all, people are out on strike, people are not getting their paychecks, and plants are shut down. In the antitrust field, we can file a suit in the southern district of New York, and if we are lucky get a trial a year or two from now.

What is going to happen in the meantime? This is one of the advantages of the administrative process, in theory, at least.

The second reason is that from differences in the labor-management context there has emerged a need for specificity, a need for precision in judgments as to legality or illegality. This need for certainty is more likely to be met via the detailed proscription of conduct approach of Taft-Hartley or Landrum-Griffin than the general broad constitutional approach of the Sherman Act.

In sum, whatever Congress decides it wants to outlaw or not should probably be done in a labor-management context rather than in an antitrust context. On the other hand, do not sell short what antitrust can do at present in the labor field.

Representative CURTIS. Mr. Chairman, one of the members of the staff has made a comment on a statement that I made, and I want to read it:

It is evident that, other things equal, growth via internal sources is much more defensible than growth via merger. Internal growth establishes a presumption—though it doesn't necessarily prove it—that the basic reason for it is a high degree of efficiency on the part of the firm.

Which would bear on what we were discussing. And I think that is probably so. The comment goes on:

But the case of U.S. Steel is not such a case. Here the product of vast mergers in the past had or may have such a commanding position in its markets, such a power to finance its expansion internally and in the capital markets, that the efficiency presumption cannot be applied here.

I wonder. That makes sense to me.

Mr. BICKS. It makes very good sense to me too.

The CHAIRMAN. Thank you very much.

Mr. BICKS. Thank you, Mr. Chairman.

(Whereupon, at 4:45 p.m., the committee recessed to reconvene at 10 a.m., Wednesday, September 23, 1959.)



## EMPLOYMENT, GROWTH, AND PRICE LEVELS

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WEDNESDAY, SEPTEMBER 23, 1959

CONGRESS OF THE UNITED STATES,  
JOINT ECONOMIC COMMITTEE,  
*Washington, D.C.*

The committee met, pursuant to recess, at 10 a.m., Hon. Paul H. Douglas (chairman) presiding.

Present: Senators Douglas, Sparkman, and Bush; Representatives Curtis and Widnall.

The CHAIRMAN. Gentlemen, we appreciate your coming here from very real distances and interrupting your academic lives to testify.

I think you know the general nature of our inquiry. I personally regard this group of hearings which we are now holding, on monopolistic and quasi-monopolistic practices, as among the most important of our sessions. And we know that you gentlemen have given a good deal of attention to this subject. I am sure that your testimony is going to be of value.

We are going to proceed in alphabetical fashion, first with Professor Grether of the University of California and then with Professor Markham and Professor Miller.

I am going to ask you, Professor Grether, to lead off. The general ground rule which we have established is that members of the panel will testify in sequence, with maybe incidental interruptions and questions from members of the committee, but we will try to withhold the main burden of our questioning until all of you have had a chance. Then if there are any points on which you disagree among yourselves, I hope you will feel free to ask each other questions. We will proceed very informally.

Mr. Grether.

### STATEMENT OF PROF. E. T. GREETHER, UNIVERSITY OF CALIFORNIA

Mr. GREETHER. Mr. Chairman and members of the committee, it is an honor and pleasure to be invited to present this brief statement concerning antitrust policy in the United States.

I shall abridge my statement somewhat.

The CHAIRMAN. I think we have time enough so that you can proceed. And then you can elaborate upon it, if you wish, as you go along.

Mr. GREETHER. I have a statement that will require about 12 minutes to read.

The CHAIRMAN. That is all right.

Mr. GREYHER. I would judge that the primary interest of the committee is the relative effectiveness of antitrust in relation to the achievement of the three interlocked desirable national goals of (1) adequate rate of economic growth, (2) substantially full employment, together with (3) substantial stability of prices. We must be careful in this perspective to view antitrust as both end and means. Through the earnestness and character of antitrust enforcement we reflect our faith or lack of it in our ability to (1) maintain effective competition in our economy and (2) rely upon the free market as the primary means of coordination. Through the antitrust activities we enunciate some of the inherent and basic values of our society.

Antitrust enforcement quite appropriately has been for the most part a matter of law and lawyers and of courts and judges. But the analysis of competition has been a central aspect of economics for many decades. Hence, legal analysis and economic analysis inevitably impinge on or complement each other. But to date economists and economic analysis have not been equal partners in antitrust enforcement. At the very best, economics has been a poor junior partner in both public and private actions.

Economic analysis essential for an effective program. It is utterly impossible to analyze the role of antitrust in the context of the issues before this committee in legal terms. The issues are basically economic. The conclusion is, I believe, entirely evident; effective antitrust enforcement in terms of the functioning of the economy as a whole must have a foundation in economic analysis. Presently such a foundation or, if you wish, framework, is lacking in enforcement. That is a rather strong statement. I do not mean it quite like it sounds. I mean that there has been no systematic framework over the historical record. Action is derived very largely out of complaints filed in Washington or in field offices. There is no guarantee at all that enforcement generated out of complaints will accumulate into a comprehensive and reasonable program or will integrate with overall economic policy.

Antitrust enforcement needs a framework of analysis that will allow it to develop policies and strategies appropriate to the general aims and needs of the economy as a whole. In order to accomplish this, economists and economic analysis must be effective in the top planning councils. Economists are at their best in the macro analysis of the functioning of the economy as a whole. They are becoming increasingly effective also in the realistic analysis of the business enterprise in the setting of the industry and of the economy. An antitrust case involves a given enterprise or group of enterprises in an industry. Economists in recent years have developed an effective, realistic way of analyzing decision and policymaking by a business firm in its external, environmental setting. In this type of analysis the broad or specific associations between these strategic structural or environmental factors and the conduct or business decisionmaking by the enterprise are highlighted. In such analysis, business decisionmaking, tactics, and strategy are seen in proper perspective.

Now this type of environmental, structural analysis essential in both private and public actions, is most illuminating on the Government side. It is helpful in selecting cases, in asking the right

questions in seeking evidence, and in the determination of reasonable remedies. It is particularly useful in deciding whether action can be successful if directed only at business conduct, or whether structural adjustments are necessary in order to enhance the effectiveness of competition. Furthermore, it is possible, step by step, to move from the given firm and industry to the broader framework of relationships in the economy as a whole.

It is important to keep the total economy under systematic review and then to focus action on the areas of highest strategic importance. In the absence of overall general programming, it is likely that undue attention will be paid to (1) relatively simple types of illegal behavior and (2) some industries and segments of the economy, particularly in the consumer-goods sectors. The historical record of antitrust enforcement over the years since the Sherman Act corresponds to no obvious policy of enforcement—may I say I am talking in terms of the overall record, and not in terms of the past 2 years—there appears to have been an overemphasis on the relatively simple types of per se violations. Relatively, too, certain industries, such as the food and the building material industries, seem to have had more attention than others in more strategic positions. It would seem feasible to develop an overall plan of action consonant both with anticompetitive behavior and the likelihood of making strategic impacts upon the economy.

*The critical issue of the concentrated industries*

In such a program, of course, a crucial issue will be the character and of vigor of action in the concentrated industries. No simple ready-made solutions or answers are available in these difficult areas. All of the relevant economic evidence needs to be examined in the perspective of the broad structural-environmental framework suggested above. In some cases, the issue of possible structural adjustments to enhance competition will arise. It is in connection with this issue that the antitrust approach receives its acid test in the context of the present statutes and precedents. In these so-called big cases also, economic analysis of a very high order is required. Further, much of the terrain is still relatively uncharted so far as a reasonable combination of legal and economic analysis is concerned. It is not too much to say that the relative success or failure of antitrust in the future will be determined in this arena. Undoubtedly, the uncertainties and weaknesses in enforcement in fields in which economic power is high have provided the rationalization for exempting such a sizable portion of the economy to some degree from antitrust. Balanced enforcement of antitrust over the economy as a whole requires that we find appropriate types of action for the concentrated industries and markets in relation to those with little or no concentration. Unfortunately, the case-by-case developments of legal precedents and of economic rules is very time consuming. Big cases tend to drag out almost interminably, and the outcome often is highly unpredictable.

*Antitrust regulation should not be appraised in terms of shortrun results*

Antitrust policy has been our unique American way of reminding ourselves forcefully and of informing the world as a whole that we rely primarily upon private enterprise under free market con-

ditions to produce and allocate our goods and services. Increasingly other countries are beginning to imitate us in this respect. In the present context antitrust enforcement has worldwide significance far beyond the implications of the issues before this committee.

It would be a grievous mistake, therefore, to appraise antitrust merely in terms of the somewhat erratic record of accomplishment since 1890. We have not had a consistent and vigorous policy of enforcement since the passage of the Sherman Act. Furthermore, even under the best of conditions of enforcement it would be a mistake to evaluate antitrust merely in the short term. The basic purpose of antitrust is to maintain and enhance effective competition in our society and hopefully in this manner to improve the overall functioning of our economy. But the stress should be on the maintenance and enhancement of competition in free markets and not upon the immediate, direct economic and social effects. For example, antitrust should not be expected to carry the major burden of responsibility for doing something about the near term inflation or deflation of prices. More effective competition under say, demand inflation, may actually quicken and accentuate price increases and vice versa in a downward movement. Basic overall monetary and fiscal measures are much more direct and immediate in their impact upon general price movements than antitrust actions. Antitrust must be viewed in terms of longer run considerations and impacts.

Antitrust has been a strategically important force in American life and business. The outright prohibition of cartelization has been extraordinarily significant in maintaining a competitive environment in which business firms are subject only to market forces and politically responsible government, and not to private governments. The so-called *per se* prohibitions of collusive arrangements represent a uniquely American approach. But the proof of the pudding in this instance is not merely in the eating. Business firms may prefer to cooperate with competitors rather than compete in a full sense. Further, it is not always possible in the short run to demonstrate that the market results under effective competition are "better," in all senses, than those under a cartel. Even so, we decided long ago to prohibit all cartel-like arrangements rather than to try to distinguish between good and bad cartels, because we prefer this form of society.

Antitrust enforcement has evolved over the past 70 years into an intricate pattern of statutes, court reviews and decisions, administrative rulings and procedures and body of doctrines. Most members of the business community now do not know what it is all about and must rely upon legal counsel for guidance. Time and again the experts in the field also are at a loss because of the uncertainty and whimsy of the precedents and regulative procedures.

The fundamental issue is how antitrust enforcement can be implemented to make it much more effective as a general force throughout our economy. The answer rests to some degree in political exigencies and other nonpredictable influences. Most important of all is whether we truly desire and intend to rely primarily upon private decision making in free markets in the operation of our economy. If this is our firm intent, then we should take a careful, considered view of the record to date in relation to our desires and wishes

for the future, and set about our task much more seriously and systematically.

*Recommendation for establishment of a special economic study commission*

May I suggest, therefore—and this sounds rather academic, I realize—that a special, small independent national committee or commission be established to study the economic analysis of antitrust enforcement in relation to the historical record of enforcement, and legal precedents and analyses. The majority of the members of such a study commission should be economists conversant with the complex field of antitrust regulation. I do not have in mind another TNBC investigation. The commission should be asked to address itself sharply to the specific, important, general economic issues of antitrust enforcement in relation to other types of regulation. It should, among other responsibilities, recommend (1) reasonable national policy under the present statutes and historical experience and precedents, and (2) appropriate revisions of present laws, if required. Very important on the agenda, of course, would be consideration of the unsolved regulative issues in the industries and markets with heavy concentrations of economic power.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you very much, Mr. Grether.

Professor Markham?

**STATEMENT OF PROF. JESSE W. MARKHAM, PROFESSOR OF  
ECONOMICS, PRINCETON UNIVERSITY**

Mr. MARKHAM. I also, like Dean Grether, appreciate the opportunity of appearing before your committee, Senator Douglas.

I shall address my statement primarily to certain broad aspects of antitrust policy and their relation to employment, growth, and price levels, and only incidentally to the legal refinements of antitrust law administration. This relation, omitting certain qualifications and refinements in logical presentation, can be stated briefly. And since it has been stated so often, I would like with the permission of the committee to just skip the next page or two, since my statement is a little longer than Dean Grether's.

The CHAIRMAN. I would be very glad to have you do that, with the understanding that it will be printed. But I would like to express my personal pleasure at the contents of the next page, because it so happens that they agree almost precisely with what I tried to develop yesterday.

Senator BUSH. Mr. Chairman, let us let him read it.

Mr. MARKHAM. It is generally agreed that prices tend to be higher and less flexible, and output lower, under monopoly than under competition. Higher prices, assuming all other conditions to be the same, tend to reduce the volume of goods consumed; the smaller volume of goods consumed and produced calls for smaller amounts of investment. Hence monopoly, by suppressing the level of consumption and investment—the two components of the national income—suppresses the levels of the national income and employment below those which would prevail under competition.

The CHAIRMAN. Now, if we can have an obbligato to your symphony, I would say, in terms of the old revival meetings: "Amen."

Mr. MARKHAM. Thank you, sir.

Moreover, because monopoly prices are less sensitive to shifts in consumer demand than competitive prices, monopoly at times aggravates frictional unemployment; and because monopolists are under less compulsion quickly to introduce innovations, monopoly introduces a lag in the flow of autonomous investment, which at times slows down the rate of growth. These are the traditional indictments of monopoly and, in the context of the hearings before this committee, comprise the principal economic arguments for a vigorous antitrust policy.

I do not know whether I should proceed to the next paragraph or not.

The CHAIRMAN. Go right ahead. We are not afraid of contrary arguments.

Mr. MARKHAM. There are, of course, contrary arguments. The most important of these, advanced by the late Professor Schumpeter, is that monopoly profits are an essential part of the whole innovation process. That is, uncommitted profits which do not have to be paid out to stockholders serve at once as the means and the incentive for trying the as yet untried. While this argument cannot be lightly dismissed, I do not believe, for reasons set forth elsewhere (see "Changing Structure of the American Economy: Its Implications for Performance of Industrial Markets," *Journal of Farm Economics* (May 1959), pp. 389-400), that it calls into serious question the fundamentals of U.S. antitrust policy; it does not refute traditional arguments favoring vigorous antitrust law administration.

If monopoly enhances prices, reduces economic growth, and at times aggravates the unemployment problem, it would seem to follow that a strengthening of antitrust policy is one means of strengthening the economy. I—and I expect many other economists—would agree with this general proposition. This, however, poses rather than resolves the problem. The important question is not whether our antitrust policy should be strengthened but how it should be strengthened. I should like to make a few modest proposals in this direction, but before doing this at least two observations on the current status of antitrust policy are necessary.

First, it is clear that in the area of the economy where the antitrust laws are applied, antitrust policy has in recent decades been greatly strengthened. In the decade of the 1920's virtually none of the approximately 7,000 industrial mergers which occurred were prosecuted under the antitrust laws, the Clayton Act was relatively ineffective against the most flagrant forms of price discrimination, and the Supreme Court decided that the United States Steel combination, which brought together 60 percent of the Nation's steel capacity, was not in violation of the Sherman Act. Certain key Sherman Act decisions and additional legislation have greatly altered this situation. The Cement Institute and American Tobacco decisions—along with others—outlawed the excesses of "conscious parallelism": the Aluminum decision went a long way toward overturning the doctrine that "mere size is no offense": and amendments to the Clayton Act (Robinson-Patman and Celler-Kefauver) have laid the basis for



effective control of price discrimination and mergers. Meanwhile, laws against mislabeling, misrepresentation, and misleading advertising have been significantly strengthened. Clearly, much monopoly power and many monopolistic practices which once passed muster no longer do so.

Second, while antitrust has become much more effective in the area of the economy to which it is applied, it is fairly clear that this area has become relatively smaller than it once was. In part this is an inevitable result of the growth in public expenditures. In 1900 Government expenditures accounted for only 6 percent of the national income; last year they accounted for about 25 percent. Much of this one-fourth to one-fifth of the total output of goods and services is not subject to the market forces of supply and demand but arises out of Government-business negotiations within a framework of complex technical specifications.

I would like to qualify this statement just a little as I go along. I am aware, of course, that much of the Government buying is done by competitive bidding, and I do not want to argue that there is no competition in that market, where the Government is the principal buyer.

The CHAIRMAN. The investigations into defense contracts indicate that not more than 14 percent of defense contracts in terms of dollar volume are let under competitive bidding.

Mr. MARKHAM. Yes.

The CHAIRMAN. Eighty-six percent by negotiated contracts.

Mr. MARKHAM. Yes. And I would just argue that the antitrust laws therefore do not really effectively govern this two-party type of negotiation within the context of very technical specifications.

Representative CURTIS. I would just like to make this comment on that one point, that this is one reason we have used this, what I regard as a rather clumsy procedure of having the Small Business Administration set aside a certain portion of defense contracts for small business. But there is a consciousness of this thing.

The CHAIRMAN. There is a consciousness on the legislative end, on Capitol Hill, but not as much of a consciousness in the Pentagon.

Representative CURTIS. Yes; we are up against that.

The CHAIRMAN. I hasten to say that Congressman Curtis, though we differ on many points, is in happy agreement on this point.

Representative CURTIS. We have together got a subcommittee going into this, have we not?

The CHAIRMAN. That is right.

Mr. MARKHAM. But all the reduction in the area of the economy governed by the antitrust laws cannot be explained by the growth of Government. Congress, while strengthening antitrust policy with one hand has been busily whittling down antitrust's sphere of influence with the other. The Webb-Pomerene Act exempts export trade associations; section 20 of the Clayton Act, as reinterpreted in the *Hutcheson* decision in the light of the *Norris-LaGuardia* Act, exempts labor unions; the *Bulwinkle* Act exempts railroads; the *Miller-Tydings* amendment to the *Sherman* Act and the *McGuire* amendment to the *Federal Trade Commission* Act exempts vertical price fixing in over half the States; recent bills introduced in Congress would put the Government in the business of enforcing resale price maintenance contracts—

The CHAIRMAN. Excuse me for interrupting.

The chances of passage of those bills are somewhat less than they seemed to be a year ago.

Mr. MARKHAM. I am delighted to know of that. I was among the long, long list of economists that petitioned the committee not to let this one pass, led as you know by Eugene Rostow, head of the Yale Law School.

And through congressional action the prices of basic farm commodities and crude oil are determined by formulas rather than the forces of supply and demand.

Third, the added responsibilities of the Antitrust Division and the Federal Trade Commission have not been provided for in the way of realistic increases in staff. For example, Clayton Act revisions and the multitude of labeling acts have thrown tremendous new burdens of responsibility on the Federal Trade Commission. Amended section 7 also increases the responsibilities of the Antitrust Division. The budgets of these two agencies have scarcely kept pace with post-war inflation, and hence reflect no increases to provide for more effective administration.

I do not wish to belabor this point, and perhaps I am particularly sensitive to it by virtue of having once been Chief Economist of the Federal Trade Commission. However, I would like to give one rather vivid illustration of how the failure to provide the necessary funds to carry out a new responsibility can reduce the effectiveness of antitrust policy. In January 1954, the Federal Trade Commission was assigned the job of making a comprehensive study of rising coffee prices. It was a "crash" project which had to be finished in 6 months. It necessitated assigning a large percentage of the professional staff of the Economics Bureau and a large number of the top investigators of the legal staff to the project. During the 6-month period, other responsibilities of the Economics Bureau—especially those involving section 7 cases—were necessarily neglected. This, of course, was a "one-shot" project, but such projects occur frequently, and when they do they are superimposed on the long-run problem of increasing responsibilities without adequate and corresponding budget increases for the two antitrust agencies.

These three points lead to three modest proposals to this committee.

1. Antitrust policy is more effective now than it has been in its 70-year history. There are no obvious gaps in the present laws which need closing. The way toward increasing the effectiveness of antitrust policy, therefore, does not appear to be additional legislation, especially since the two antitrust agencies already have more laws than their inadequate staffs permit them to administer fully.

2. Over the years, far too many sectors of the economy have been placed beyond the reach of those antitrust laws we now have. These exemptions need to be cataloged and carefully assessed. Specifically, there seems to be no reason why export associations and fair trade should be exempted. Thorough inquiry would no doubt reveal other exemptions which rest on equally frail justifications.

3. The budgets of the Antitrust Division and the Federal Trade Commission should be brought in line with the responsibilities these agencies are expected to discharge. My own feeling is that both budgets could at least be doubled, but the final figures should be estab-

lished after careful and thoughtful inquiry. It is clear to me that under mid-20th century conditions the complex laws that make up our basic economic policy cannot be effectively administered on \$6 million to \$7 million per year—a sum that scarcely covers a good advertising campaign for a single brand of cigarettes. Until Congress can remedy this situation, it only worsens the situation by adding new functions in the form of new legislation.

The CHAIRMAN. Thank you very much.

Mr. Miller?

**STATEMENT OF PROF. JOHN PERRY MILLER, PROFESSOR OF  
ECONOMICS, YALE UNIVERSITY**

MR. MILLER. Mr. Chairman and members of the committee, it was a pleasure to be invited to testify this morning and to be here with you and my colleagues.

Antitrust policies have played an important role in promoting high standards of living and economic growth in the American economy. The high and increasing productivity of the American economy is the result of several factors including our natural resources, our population, and the increasing body of knowledge which this population has developed, borrowed, and applied with ingenuity and energy. The importance of our resources—in material and personnel—is obvious. But less obvious are the conditions conducive to the use of those resources constructively. High on the list of factors explaining our economic productivity we must place the social, political, and economic conditions conducive to aggressive and constructive entrepreneurial effort. Our social and educational systems enable those with potential entrepreneurial and other talents to arrive at strategic positions of responsibility. Our stable political system and our system of justice are conducive to the development of modern industry. But entrepreneurial talent may be employed in several directions—to the constructive satisfaction of needs and wants of the Nation or to the exploitation of private positions of power. The antitrust laws play an important role in channeling our aggressive entrepreneurial talents in constructive directions.

The functions of the antitrust laws have never been well articulated. To some, their function is the curbing of the abuse of economic power. To others, the important purpose is to limit the existence of economic power and to promote competition. And still others emphasize the social and political advantages of protecting the weak against the strong and the small against the large, even at the expense of efficiency, which is the prerequisite of economic growth. Each of these objectives is reflected in part in antitrust policy as enforced. Yet these objectives are not necessarily consistent. In some cases we may have to make choices.

There are two important aspects of antitrust policy as currently enforced which do much to encourage growth. The first is the insistence that entry to markets shall not be impeded by artificial restraints. The Sherman and Clayton Acts have both played an important part in this aspect of antitrust. The second is the insistence that each firm must make its own decisions independently, that is, that there shall be no conspiracies or cartel arrangements. This latter

policy was early established under section 1 of the Sherman Act and has been reaffirmed under section 5 of the Federal Trade Commission Act.

By insisting that there shall be no artificial restraints on entry into any market, either by a single firm or group of firms acting in concert, the Sherman Act has served to reduce the risks faced by new firms or by existing firms penetrating new markets. By preventing boycotts or the rigid classification of acceptable customers or sources of supply, antitrust policy has encouraged the development of new products, new processes, and new methods of distribution. By insisting that firms must make their decisions independently, antitrust policy does not insist that firms behave like "perfect competitors" in the economic sense. But it does prevent firms from seeking continuity and security by price fixing arrangements, production control, market allocation, et cetera. Thwarted in its search for economic security in these directions, a firm must insure its continuity by other means such as the development of new or improved products, lower costs, lower prices, or sales effort. The antitrust laws, then, serve to keep the channels of trade open and channel entrepreneurial talents into competitive efforts which are on the whole of a constructive sort rather than into conspiracies designed to reduce business risks by elimination of competition.

In the welter of public discussion over concentration in the American economy, the importance of these two aspects of antitrust is often lost from sight. A study of the effects of cartel policies in Great Britain and various European countries should serve to remind us of the importance to our economy of these interpretations of antitrust which were established early and have never been seriously challenged.

Our antitrust policy, however, has also been characterized by some elements which I believe to be anticompetitive—policies whose effects are likely, on balance, to impede rather than encourage economic growth. I refer to some aspects of the Robinson-Patman Act and our experiments from time to time with fair trade. The effects of these policies have been to reduce the opportunities and pressures to price competition and in some cases to encourage nonprice competition. The purpose, I believe, was to help the weak against the strong, the inefficient in their struggle against the efficient, particularly in the distributive trades. I doubt that in fact these policies have done much to protect the weak and inefficient. But they have reduced the flexibility of business behavior and the extent of price competition in important sectors of the economy. While I do not consider it feasible to insure short-run price competition in many sectors of the economy, and while I believe nonprice competition often plays a constructive role, I question the wisdom of legislation which discourages the one and encourages the other.

In this modern postwar economy, recessions are of less severity and their duration is shorter than in the 1930's. Moreover, unemployment insurance and other devices serve to reduce human suffering incident to economic change. Can we not now afford to cast aside these protective devices in favor of hard-hitting competition which will promote economic growth?

Public and legislative concern with economic concentration seems to me often to reflect a concern with the forms rather than the substance of competition.

Professor Grether has emphasized in his testimony the problems in the field of high economic concentration, and I think this is a very important and as yet unsolved area of antitrust. But I feel that public and legislative concern with economic concentration often seems to reflect a concern with the forms rather than with the substance of competition.

I think we all agree that there is some point at which a reduction in the number of firms has the potential of creating a serious threat to competition, economic efficiency, and growth. But interpretations placed by some on the Celler Antimerger Act seem to suggest that an increase in concentration, where concentration is already significant, is in itself an indication of a tendency toward monopoly and therefore illegal. Such an interpretation of the Celler Act, I believe, runs the risk of preserving the forms of competition at the expense of its substance. We know little about the economic effects of mergers. But I believe that research will show that in some industries the merger process provides a method by which successful entrepreneurship with access to capital is made available quickly and cheaply to other sectors of the economy. This process is important to economic growth.

I have emphasized the positive and negative aspects of antitrust policies as they may affect economic growth. I wish to make a brief comment on their importance to the problem of economic stability. Antitrust policy is not one of the compensatory policies which by being turned on or off can influence the level of economic activity at different points of the cycle. Antitrust policy works slowly by changing the behavior and structure of industries and firms. However, by providing flexibility and resiliency in the economic system, by keeping markets free and open, by providing an environment in which entrepreneurs can respond readily to economic change, antitrust policies help maintain an effective market mechanism through which monetary policies and other compensatory policies may work with some chance of success.

Despite these comments, which are on the whole optimistic, we must recognize that there are still some problem areas in antitrust.

Antitrust is most effective when we can clearly identify a situation which is illegal per se. But difficulty arises because in many cases the effects of particular practices vary with the surrounding circumstances. This has limited very much our power to codify antitrust, as some have asked in the past, in a way that will make it clearer to the businessman on the one hand and the enforcement agencies on the other. There must be, consequently, a good deal of discretion left in the administrative agencies, discretion in the selection of cases and in the prosecution of these cases. But this discretion, it seems to me, must be used with restraint.

I agree with Professor Grether as to the importance of more careful study by the enforcement agencies of the economics of the industry or the firm prior to engaging in litigation. I think this would improve the effectiveness of our enforcement, and would lead to better clarification of the law in many ways.

A reconsideration of patent policy as it impinges on antitrust is also an important area which needs to be explored. Many of the potentially dangerous situations in our concentrated industries have their origins in legal patent grants. But it would appear that in many cases the patent system tends to strengthen and perpetuate monopoly positions beyond what is necessary or, indeed, contemplated by the Patent Act. The policies of the Defense Department with respect to patents, which I have not reviewed recently but have had occasion to review earlier, I think in many ways have a similar effect.

In conclusion, I wish to say that we cannot hope for a perfect economy. There are necessarily elements of monopoly in our society, monopoly in the economic sense, some of these based originally on patents, on brand preferences, or sometimes the result simply of the economies of scale in a market of limited size. But I think that we can, by vigilance and continued enforcement, keep the channels of trade open, make our monopoly positions of limited duration and insecure, and keep the pressures and incentives upon businessmen, so that their behavior will be on the whole constructive.

Thank you.

The CHAIRMAN. Thank you very much.

We had hoped to have with us this morning Professor Schwartz of the University of Pennsylvania, who has done a lot of extremely good work in this field, but he is unable to be present and has expressed his regrets that unavoidable difficulties have prevented him from appearing.

Congressman Curtis, would you like to question?

Representative CURTIS. Thank you Mr. Chairman.

My difficulty in asking questions stems from the fact that there seems to be too much agreement in this field, where I feel that there really is a great deal of basis for disagreement. There is too much agreement, at least as far as I am concerned, in the three papers: As to the objectives, I feel very strongly in accord. And I feel myself that the cornerstone of the private enterprise system lies in really adequate, properly enforced antitrust legislation. So in a sense I may be acting as the devil's advocate in some of the questions I ask.

First, I would like to ask some general questions on the administration end of this business. And I think that really what we need are a few political science experts in this area. And incidentally, Mr. Chairman, I notice that this committee has been doing a very good job, I believe, in bringing to play on these national problems the science of economics, and people who are experts in that field, but there does not seem to be much effort to bring in our political science experts.

The CHAIRMAN. There are the politicians, Congressman.

Representative CURTIS. Yes, but they are not scientists in that sense. If I were to define what the science of politics is, I would not say that is necessarily includes the field of the political scientists.

What I am interested in is this: There are three ways in which we enforce antitrust laws now. The Federal Government is only one. The State governments, of course, do a certain amount of enforcement. And then, also, we have the private suits.

I believe it was Professor Markham who devoted some attention in his paper to the enforcement end of this thing. And you concentrated, and naturally so, at the Federal level.

I am wondering what you think of the entire picture, including the use of the laws which encourage the private suits, through treble damages and other methods—whether what is being done at the State level is adequate; or whether something might be done there to improve this situation, including, too, of course, your recommendations as to how much needs to be done at the Federal level in increasing budgets.

Mr. MARKHAM. Well, I would not pose as an expert on what is happening at the State level in the now 50 States that we have. I do think that there is a significant percentage of the economic activity of the country that lies beyond the reach of the Federal antitrust laws, because it is essentially intrastate in nature.

Even with the extension of the definition of interstate, which has occurred over the years, it is perfectly obvious to me that at the local level there is a good deal of avoidance of competition, which the Federal antitrust laws do not reach, and which, so far as I know, State agencies concerned with this problem do very little about.

Well, you can name all kinds of examples: Milk distribution happens to be one; dry cleaning rates another. I would challenge anyone to find a differential rate in my own hometown on any of these things, because of local associations.

My own impression, and this does not come from comprehensive knowledge of this field, is that the State antitrust laws by and large, except for a few occasional cases one hears about, are relatively defunct; that if you look at the statute books and, indeed, revised constitutions of quite a number of the States, there is legal expression to vigorous antimonopoly activity within that State boundary, over economic activity over which the State has jurisdiction. I, unless the press is remarkably negligent in reporting such cases, rarely hear of a State antitrust case these days. There are some. The notorious one I believe was in the State of Texas. But there was a great hiatus there. They had a very famous antitrust case as far as I remember in about 1914 and 1915, and then they had one in 1957. That is a long gap. And this is one of our more vigorous States.

It is my impression, sir, to answer your question, that a lot can be done. It of course would have to be done by State governments themselves or through some reinterpretation of the antitrust laws, or a reinterpretation of what comprises interstate commerce.

Could I just cite one example of where this has come up fairly recently?

When I was at the Federal Trade Commission, as I am sure many of the members of this committee will remember, there was launched a rather comprehensive inquiry into the insurance industry. I believe—although I left the Federal Trade Commission, I attempted to follow the outcome of that—it was as I recall finally turned back to the State on the grounds that the States had jurisdiction in fire and accident insurance and all of the special insurance fields. But by turning it back to the State, it automatically avoided, it seemed to me, any real brush with antitrust, because I do not think the States involved really viewed this as an area where State antitrust was very applicable.

Representative CURTIS. The comment I was going to make: You point out, of course, that the States' basic concern will be intrastate.

Nonetheless, you would agree that if we had a proper enforcement within the States, you probably would be also affecting interstate activity. Certainly no large cartel could get going if we had adequate enforcement at the State level.

We do get into the area of politics now for sure, when we talk about how these things work. Here we all seem to agree on these basic principles, as these three papers indicate, and as the chairman indicated, by not even wanting one part read—or, rather, the author not wanting a part read, because it was so agreed upon. And yet, even though there seems to be such agreement, we find that whenever our people can get around following it out in practice they seem to do so. And that is going to lead me to other questions later, because my time has run out on this—going into the substantive features of this, as to why people really give such vocal support to these principles, when it comes down to action this turns out to be just lip service.

Mr. GREYER. I should like to reemphasize what Mr. Markham has just said about the relative absence of antitrust interest among the States. It is my impression that perhaps only about three States pay much attention to this area. In my own State I have tried an experiment throughout my 30 or 35 teaching years. I have asked students in my class to name the antitrust laws in the State of California. As yet I am looking for the student who has ever heard of or knows the name of our antitrust law. It is called the Cartwright Act, passed in 1907, amended in 1909. But it is relatively unknown.

I think in the State recently there has been a little more activity. But I think on the whole the States are disinterested.

Representative CURTIS. The reason I raise this question is that this is to a large degree an economic inquiry here. It always seemed to me, during the short time I have served in the Congress, 9 years, that whenever there is a problem, economic or whatever, the immediate reaction is, "Well, the Federal Government is the only one that can solve it." And certainly there is no question but that the Federal Government can do a great deal. But I think if we analyze the thing we can, as I have tried to do here, say: In the administration of antitrust, there are three ways: One, private suits, which we have not even gotten into. And to me it seems that more possibly can be done in that way, because that tends to be a self-policing type of operation, which could be very good. And maybe it is good. I do not know.

The States—I could not agree more—seem to be completely inadequate in this regard. But I would like to view the matter of enforcement from the standpoint of the whole problem, where the economic result comes from all three approaches, not just through the one at the Federal level. And possibly more can be done by going to work at the State level than can ever be done at the Federal level.

And, even in regard to the Federal level, I have always made this comment: What about all these laws we have passed to benefit small business? By the very fact that they are passed at the Federal level, they are almost bound not to benefit small business, because small business does not have the overhead required to have the accountants and lawyers to read the laws or even know what the laws are. Anything put on the books is going largely to benefit only those that have the personnel to interpret the laws.



So I have always felt that from the standpoint of the small-business sector of the economy we would do a lot better to decentralize than to try to help them by doing something at the Federal level.

I will yield at this time and come back subsequently.

The CHAIRMAN. Senator Bush?

Senator BUSH. Mr. Markham, in illustrating the question of prices, you were talking about the drycleaning rates in your community. What do you mean to say? That all charge the same price? Is that what you were indicating?

Mr. MARKHAM. Well, I do not seriously want to indict the few dry-cleaners in my little hometown.

Senator BUSH. No.

Mr. MARKHAM. But I used it as an example, really, of what we considered to be a real problem.

Senator BUSH. It is—I think it is a very good, homely example, and I am not raising the question critically.

Mr. MARKHAM. Yes. What I mean is that I have engaged in the sport every now and then of asking the man who delivers the milk or the man who delivers the drycleaning, or that sort of thing, "Why is the price what it is? Why doesn't it ever change?" I mean, it is "baiting" a little. "Why don't you undersell your rival and get more business?"—or something to this effect.

Well, invariably, in my own case, you do get the answer, "We have nothing to do with prices. They are set by the association."

What this means is that there are growing up locally these associations, which tend to deemphasize anything that even remotely resembles price competition. I suppose you can understand it. You meet these people every day on the street. You do not want to be looked upon as someone who is trying to get business away from your rival. Whatever the reasons are, I am thoroughly convinced that local associations formed do rid our economy of some of the fruits of local competition.

Senator BUSH. I wonder, though, whether that is entirely bad. In other words, if you had fierce competition among the drycleaning establishments in your community, would it not result in one big, groping giant gradually taking over the whole situation and eliminating a lot of these smaller operators, who could not possibly afford the severe price competition that he might provide? Would not the strong swallow up the weak in this type of a service operation? I do not know. I am just wondering whether we may not be better off, all things considered, to recognize that an operation like that costs so much money, no matter who does it. They use the same type of trucks. They use the same type of standard equipment. They buy from the same people that make this equipment at the same prices, and they pay about the same help. Then it is not surprising, therefore, that they come out with a price of a dollar and a half to press your suit, is it?

Mr. MARKHAM. Well, no. It is not surprising. But there are the ingredients of agreement that you have left out. I would expect there to be remarkable similarity, let us say, under the conditions you have stated.

But it seems to me we are all too disposed to argue that either you have an agreement that eliminates all competition, or the other alter-

native is a very vicious kind of competition in which you end up with one firm. I do not think that these are necessarily the two outcomes in the market, that you get one or the other.

I do not in fact believe that economies of scale are so great, in much of this local trade we are talking about, that you would end up with one such establishment. And moreover, there are laws against certain unfair methods of competition, which would prevent his doing this if he did it by certain ways. And therefore I have no objection whatsoever to some of the strong driving out some of the weak, because in economic terms what we are really saying is that those who can deliver it more cheaply drive out those who cannot. And I think there has to be room in any market for some of the inefficiency just simply to be driven out.

You cannot, if you are interested in growth, in change, you just simply cannot, erect laws or let pass private local agreement which tend to preserve everybody in a nice, comfortable, harmonious way of life.

I do not think that the choices, Mr. Senator, are the two you laid down. But I think there is something in between, a vicious kind of competition where one firm tactically, through the use of resources, attempts to drive everyone out, on the one side, and, on the other, having a comfortable, harmonious agreement where no one would dare change a price, because he has agreed not to do so.

Senator BUSH. I do not know why we pick on the drycleaners, but you mentioned it. I have nothing against them. And I am being the Devil's advocate a little bit here just to develop this subject, perhaps. But I wonder, in an industry like that, within a community like yours or ours, here, whether there really exists behind-the-scenes agreements, you see, or whether the thing just naturally follows. They check up on each other to see what they are charging. And I wonder whether they just do not gradually get to a level. Then one cuts the price and maybe the others do, too. Or one raises prices because costs have gone up.

But I wonder whether there are hard and fast agreements such as you suggest, and that they exist, in industries like that. I am under the impression, perhaps, that that is not true, but I do not know. Do you think that there is, all the time?

Mr. MARKHAM. No, not all the time. In a sense, I would certainly side with you. I would say if this is the natural equilibrium of competitive price established in the market, in the absence of agreement, if that is what it is, there is nothing the antitrust laws should do about it. You can hardly improve a perfect situation. And that, I would argue, is a perfect equilibrium solution. If it does result from agreements, which in some cases I am thoroughly convinced that it does, then I would argue that this is bad. But I would not put them both in the same kettle of fish and say you do the same thing with both of them. It is up to enlightened inquiry to pick the one from the other and go to work on that that we regard as socially bad, and to leave that alone that is functioning perfectly well. There is nothing we want to do about that. That, it seems to me, would be a rather perfect solution.

Senator BUSH. You have almost the opposite extreme in the chain-store, the food store, the A. & P., and such big operations as that, where they have really pushed out the small corner store. They are

constantly pushing them out of business because of the changes in public taste and because of the traffic conditions, the need for parking, and so forth and so on. They have developed these tremendous trade centers and big stores with enormous parking spaces, and in that way have made it very difficult for the small businessmen in our communities to survive. In fact, they have made it impossible in many, many cases. That has been the result of what appears to be unrestrained competition.

And I think in many respects you can argue that the public is benefited by that, because they have gotten modern conveniences for shopping and for buying and for handling food that perhaps they never would have gotten if it had not been for that severe competition between the big chains, which has proven to be a pretty good thing. Do you not think so?

Mr. MARKHAM. I would be in favor of it if it is a result of competition; yes, sir.

Representative CURTIS. Would the gentleman yield?

The reason I ask you to yield is because the examples worry me. I think you are leaving out a great many economic factors. I think the automobile had a great deal more to do with the decline of the small corner grocery store.

Senator BUSH. I mentioned that—parking spaces.

Representative CURTIS. The use of the automobile itself is fundamental; the fact that people can drive. It is for the same reason that the small local movie theater has been going by the board.

Getting back to your drycleaners, do you think there ever is going to be such a thing as an equilibrium, as you describe it? As I visualize the thing, you have a bunch of little drycleaners and people who are selling new cleaning fluid or a new piece of equipment—one drycleaner will buy because he has faith in it and the other will not. There is where your competition comes in, from all aspects of the thing. You never really reach an equilibrium in anything, as far as I can see, in economics. But I would like to ask the panel if they do think that there is such a thing as this equilibrium that is the base on which Senator Bush has posed his question.

Do you think there is such a thing? Can you think of an example anywhere, in any field of endeavor, where a market really reaches such an equilibrium?

Mr. MARKHAM. An equilibrium that stays put for a long time? I seriously doubt it. If it is, it is an industry that is remarkably devoid of any kind of technological change or invasion. But I do not want to monopolize the time of the panel. I think some of the others ought to address themselves to this.

Mr. GRETHIER. I am always impressed by the enormous vitality of our system and the adjustments that are made. Take the case mentioned, Senator, about the A. & P. and the chainstores. Looking around my community right now, I see new supermarkets coming in from local, private capital, and I see a co-op going in which is bigger than any chainstore supermarket just a few blocks there from where I live. This type of adjustment, I think, is taking place all over the United States, and I think it is a very healthy symptom, that State by State, region by region, local capital is demonstrating that it can compete with large national concerns.

Senator BUSH. I think that is good. I do not see so much of it in our neighborhood. I see more the other thing, the advance of chainstores, the big chainstores, the A. & P., and so forth. And I think if you put it to public vote, they would feel that they benefit very materially by it. They benefit through convenience and price advantages and so forth.

Mr. GREYER. May I make a comment on the service-trades problem? Some of the States have special acts in that area giving them special privileges. This in a sense reflects the problem you have raised about the States. There is always a tendency in the States to be sympathetic to the small fellow and to try to give him special rights and privileges for doing things in a group sense that are contrary to antitrust policy nationally. This is a very common situation throughout the States, as to these small operators, like in the service trades and whatnot.

Senator BUSH. Let me change the subject.

You pointed out that the big cases tend to drag out almost interminably, you say, and the outcome is often highly unpredictable. I have certainly noticed that. We have all noticed that. And sometimes they have seemed to drag out for 2 or 3 years. Why should they drag out so long? What is your observation on that?

Mr. GREYER. I think the reason is that these are very complicated cases when you get major firms, in major industries. But it is an enormous problem to collect the evidence, to array it, to present it to the courts, to review it, and to reach conclusions. Then the process of appeal also goes on rather indefinitely.

I see no solution, by the way, for that problem. It is bound to take time to handle a big case. And that is why there is a tendency to stay away from the big cases, because they are expensive and time consuming. But they are very important, by the same token.

Senator BUSH. You do not see any solution for it, then. They are bound to be long-drawn-out affairs?

Mr. GREYER. I think typically they are bound to take considerable time. But the strategic impact may be very important.

Senator BUSH. Gentlemen, I think I have exceeded my time.

Representative WIDNALL. Professor Markham, I was interested in your remarks about the crash project you had, and the fact that you had a 6-month period during which practically all the other responsibilities in the economic sphere were necessarily neglected.

Yesterday, the testimony from the Justice Department stated that, in connection with the General Motors monopoly action, about 20 percent of their staff were being assigned to that activity at the present time. Would it not be better, when you have a major study of that kind to make, to hire people for the crash program and keep your regular staff intact, in the normal business of the office?

Mr. MARKHAM. Well, I would certainly argue that for such crash programs it would be advisable to hire additional help, so that you did not have to disrupt the whole normal workload. We actually tried to do this. But I am sure you are familiar with the problems of hiring, say, a large number of people to carry out a project that starts in January, and you are given a deadline, say, of June 30 in order to complete it.

In any case, in the initial phases, it had to be done entirely by the present staff. You have to go, of course, through Civil Service, and I think advisedly you do. This is the way one handles things in the Government, but it is somewhat time consuming. And you have to look around for certain people who have certain expertise in future markets, as this involves, the effect of concentrated speculation in the hands of a few people. And the real factors, such as bad information in the trade. It would have been almost impossible to do this within the time limit that was given us, with temporary help.

My argument is essentially of a different character. And that is that you can rely, I think, if you project the history really since the beginning of OPA—you can expect the Federal Trade Commission staff to be asked to do something, to make some special study, by the executive department or by Congress, with some degree of regularity. They are requested periodically to put out a report on mergers, not a specific merger, but to give the public, and particularly the Congress, some idea of what is happening in the area of mergers; to put out certain industry studies that might be preliminary to launching some kind of antitrust activity, such as the more recent study in the antibiotics trade.

Now, these things that come along with such regularity—I only argue that there should be some provision made for this to be done without disrupting normal antitrust activity, administration of those laws for which the antitrust agencies are responsible.

I know it is all together too easy to say that these problems can be solved by just tossing more people into these agencies. But I do believe that here there is really some justification for this committee to examine very, very seriously what you are holding these agencies up to do, what you expect them to do, and to ask seriously: Have their budgets been realistically aligned with these functions since antitrust has become much more intensive?

Now, there is no question about the fact that it has. Under the Clayton Act of 1914, between then and 1950 the Federal Trade Commission won no more than four or five merger cases in that long span of history. It got so, toward the end of that period, that it did not even launch any. Yet Congress expected it to. As Senator Douglas knows, who was instrumental in this amendment to the Clayton Act and followed it very closely, there was certainly some very strong feeling that this law was not being effective against something that we thought interfered with competition.

But when that statute was amended, there was not any really significant increase, at least on rational grounds, no weighing of the problem: How many more people is it going to take to do the necessary economic inquiry? Because mergers above all other things, I think, require a rather sophisticated level of economic inquiry in order to bring an effective case.

Now, I would just urge on this committee that it at least raise the question. Look at the behavior of the budgets, and look at the additional responsibilities tossed at them. And before we make any really sweeping pronouncements on whether antitrust is effective or not, ask really what we are trying to make it effective with.

Now, this is a long way of answering your question. My own feeling is, to sum up, that the example I gave will come so frequently that

you could very easily increase the staff on a permanent basis to help take care of it, and perhaps through some legislation make provisions—and I believe we do have some provision for this—for hiring people on a very short-term interim basis to go with the agencies.

Representative WIDNALL. You believe that some provision should be made for that in the budget?

Mr. MARKHAM. I certainly do. If they are going to be hit with emergency tasks, then surely there should be some room in the budget to provide for this, rather than making the more traditional anti-trust functions suffer because of it.

Representative WIDNALL. I think you have pointed up something that really needs emphasis, the fact that Congress cannot duck the responsibility that it places in the hands of an agency like the Department of Justice or the Federal Trade Commission. Congress has to make possible the enforcement, too.

The CHAIRMAN. This is a general question I would like to address to all three of you. I think the Assistant Attorney General yesterday used an argument H. Parker Willis once used in connection with cement prices, in which Mr. Willis argued that the test of the competitive price was uniformity between firms in a given market and, where the prices charged by individual firms had an exact coincidence, this was a proof of perfect competition rather than the reverse.

I would like to ask this question, as to whether this is a correct analysis. Is it not true that, in the process of arriving at "competitive equilibrium," there would be a good deal of irregular movement and of straggling, so to speak; that, even if the ultimate result were to be uniformity of price, in the process of getting there some firms would lead off with either price increase or price decreases; that these would be followed by others; and that there would be a considerable period of time before substantial uniformity was achieved, even with the improvements in communication which occur. In short, what I am saying is that the behavior of firms under these conditions would be very much like the behavior of individuals crossing the street, even with traffic lights. Some hardy souls will step off, and there will not be complete uniformity. But where all firms in an industry change their prices simultaneously, that is a proof of "planned coincidence," which is the term that I use, or the legal phrase is, I believe, "conscious parallelism"; and this indicates price agreements, just as a military detachment, when it moves, will not straggle but will move forward completely in step or will do an about-face together. I wonder if this statement of mine meets with the general approval of the panel.

Mr. Grether?

Mr. GRETHER. You are entering an area that is rather difficult, I would say, Senator Douglas. May I say in the first place that I see no single generalization that can be applied to all markets and to all industries, as to the respect in which the price-fixing forces may operate and the way in which firms may be affected. Whether one will lead off and another will follow, whether the timing of the leadership or the followership might be competitive, is a question to which in my point of view there is no single generalization. There is another factor here, which is that published prices often are not the real prices. And this gets to be quite a problem sometimes.

In other words, the firms have so-called published list prices. And then there may be variations from these that are not published taking place through individual negotiations. Then you run across the more complicated problems of services, special arrangements, the extras, and the deals that may be made in terms of individual negotiations and transactions.

In other words, you have a different situation in an industry where you tend to have negotiation highly individualized, and one, say, where there is a fairly well-organized market.

I think the kind of situation that you discuss or had in mind is one where the market is fairly well organized, where the forces can be expected to move rather sharply and clearly to a definite focus point.

The CHAIRMAN. Steel and cement have in the past had prices fixed characteristically in this fashion.

Mr. GREYER. Now as I see it there, if the products are homogeneous, the industry members cannot depart from a single price very long. They have to come to the single price point. But this does not take care of the problem of special services and so on that may be involved, or what may take place in some of the individual negotiations with the customers.

The CHAIRMAN. You see, what you say multiplies the difficulties.

Mr. GREYER. Right.

The CHAIRMAN. In the old days, the days when the steel men gathered around the table and reached an agreement, you could tell that there was collusion by the agreement which was reached, which in some cases would be reduced to writing and in other cases would not be reduced to writing, but about which testimony could be taken, and in the price agreements among the cartels there would be tangible pieces of paper or telephone calls which the Department of Justice could put its hands on. But as we all know, the sophisticated evasions of antitrust have taken the form of putting nothing on paper, putting nothing in conversation, but with certain bellwethers who are sort of picked out as the key groups in the industry, generally United States Steel in steel, but once in a while they will pick out a little fellow to lead off. And then when the bellwether moves, everyone moves at the same time.

The question I want to raise is: Is this a proof of competition, or does it indicate conscious parallelism or planned coincidence?

Mr. GREYER. May I suggest that Professor Markham wrote a very interesting paper on the bellwether one time.

The CHAIRMAN. I have been falling behind in my reading, but I wondered a good deal about this.

Mr. MARKHAM. You can afford the luxury of not reading this one, Senator.

I have expressed myself on this before. I think that the persistent uniformity of prices among sellers, particularly when they change relatively infrequently, establishes a prima facie case of some kind of agreement, tacit or otherwise.

However, I would add that simply because uniform prices among sellers is a possible outgrowth of competition or a reflection of competition, in each case these things have to be examined rather carefully.

The CHAIRMAN. Now what would you make as your criterion? The frequency with which this happens? You then introduce a time factor or a third dimension. Perhaps your appraisal would suggest this is true when time after time prices change simultaneously between firms in a given market? That you would regard this as conclusive, whereas one instance would not be?

Mr. MARKHAM. Well, yes. I would say you would have to examine the facts and find out what caused them to change and how they changed.

Let me give two examples that would at least clarify my point of view and in part would restate the article that has been referred to.

There are situations where firms in an industry sort of look toward this bellwether firm to do the public price announcing. I do not think that this is necessarily a circumvention of competition. It depends, as I say, on just what prompted the price change. Quite frequently, when there is such a bellwether firm, what has happened before it changes its price, is that there has been an expression of independent pricing in the first place, and the smaller firms or maybe the medium-sized firms have already begun to reduce price, and indeed many of the larger ones may be selling off list to meet this new competition. But if you look only at published prices, it would indeed look as though everyone had sat around to wait for, say firm A to change its price before they changed theirs.

Now under those conditions I would argue that the bellwether firm is acting pretty much as an assessor of the competitive forces at work, and the published prices are really becoming only an expression of what competition is doing anyway.

There is a much different kind of price leadership or of uniform price behavior, in which firms, big or little, absolutely refuse to exercise independent pricing until a firm sort of in part self-appointed, in part tacitly appointed, by the rest of the industry—they refuse to do anything about pricing until this firm has changed its price.

Now under those circumstances, that kind of price leadership, which I do not believe is frequently found, but where it is found might cover very large industries—I really do not know. But where you find this, it is to me a form of price agreement. It is a tacit agreement not to act independently with respect to prices.

Senator BUSH. You could hardly call it an agreement, though.

Mr. MARKHAM. I used the term "tacit agreement," Senator Bush.

Senator BUSH. It is a custom rather than an agreement.

The CHAIRMAN. The courts have used the term that I used yesterday, of conscious parallelism. And I think that is a good term. I have used the term "planned coincidence."

Mr. MARKHAM. But I think that those two cases really defined the issue. The first one that I used—I would say there is relatively little that can be done about it, and indeed I would argue in the present complex of antitrust law administration that I doubt that very much should be done, because there are bigger things to work on, anyway.

I would argue that the latter illustration I gave has in fact cropped up in some of our own antitrust cases, and the Government has won some of them. The *Cement Institute* case, the *American Tobacco* case, are two examples, where this kind of conscious parallelism



after effective inquiry was judged to be an agreement to fix prices.

The CHAIRMAN. Mr. Miller?

Mr. MILLER. I think there is a good deal of agreement among us on this issue. Take the steel case, about which you spoke. If you go back over the history of pricing, you find first the Gary Dinner era, in which there were attempts at agreements which did not work in some cases. In the 1930's there was good evidence developed by congressional committees that the prices were not abided by, by many of the firms, at moments of time.

As a matter of fact, I think there was a study by the Department of Labor, indicating that even in 1941, when the war effort was well on the way, the actual prices billed were 10 to 12 percent below the published prices, which everybody had been issuing uniformly in the way which you indicate.

I think some interesting things have been happening more recently. In line with a comment I made in my prepared statement, the steel industry today, I think, would be reluctant to make concealed deals with particular firms, negotiating special arrangements on a competitive basis, as they did in those days. This is partly because the market is not as soft, but partly because they have institutionalized the procedure by which a lot of paper has to go around within the firm before they make a price cut because they do not want to be caught under a Robinson-Patman price discrimination proceeding.

This was, then, an industry where the competitive process at an earlier stage started by secret price concessions which crept through the industry. And this practice of changing effective prices has been removed in part by legislation.

The CHAIRMAN. So that there is a greater coincidence between the actual prices and therefore less competition?

Mr. MILLER. And therefore there is less price competition from time to time, in the short run.

The CHAIRMAN. Is this true of cement, which is sort of an auxiliary of steel?

Mr. MILLER. I have not looked at the *Cement* case with the care with which I have looked at steel. But I think it is important to recognize that if you have a relatively few firms in the industry, a standard product and for various institutional reasons you cannot vary the other terms of trade, then it is inevitable they are going to meet each other soon, or they are going to lose an important sector of the market.

Mr. Markham has referred to this as a tacit agreement. I think that one can say that it is not inconsistent with the view that each firm may be acting independently although in full knowledge of the consequences.

The CHAIRMAN. The next question I would like to ask, following this question up, is: To what degree will the courts be guided by the principle of conscious parallelism, or to what degree do they insist on tangible evidence of agreement?

Mr. GREYER. I am not a lawyer, but I have read some cases. My impression is that one must usually prove agreement in one of these cases. It is very difficult to make a case in the absence of agreement.

Now you get into the difficult question Mr. Markham mentioned, between overt agreement and tacit agreement. And there has been an

effort over the years to try to make the tacit agreement equivalent to an overt. And this, in my judgment, is still open to question.

The CHAIRMAN. You say that is an effort by the Government. But is there not an effort by business to make the tacit agreement a substitute for overt agreement?

Mr. GREYHER. I think this is bound to happen to some extent, yes. But as far as the courts are concerned, I think this is very much an open issue.

I am sorry Mr. Schwartz is not here, as the man who teaches this area in the law school.

Mr. MARKHAM. So am I. I am not a lawyer, either. But I do not know of a single case, although I mentioned the *Cement Institute* and the *Tobacco* cases as illustrative of previous cases, where evidence of an overt agreement was not found and nevertheless they were judged guilty. There has always been tangible evidence of some kind of communication even in those two cases.

Of course, in the *Cement Institute* case, there was the matter of uniform freight allowance books circulated among the sellers, the very startling figure of a price at Tucumcari, N. Mex., that went to the fourth decimal point, which I believe a mathematician figured out would be likely to occur once in 10 million times.

The CHAIRMAN. Oh, much more than that. I think they had 260 zeroes.

Mr. MARKHAM. Yes, something like that. In the *Cigarette* case, also, there were supporting pieces of evidence that the firms were somehow in correspondence with each other. My own feeling is that it is an open question still in the courts, but that it would be extraordinarily difficult for an antitrust agency to win a case purely on the grounds of uniform prices among sellers.

The CHAIRMAN. Do you not think that a study of the theory of probabilities would be very good for incipient judges, refresher courses in the theory of probabilities?

Mr. MARKHAM. Yes.

Mr. MILLER. I would agree with Mr. Markham on the interpretation of the present status of the law. The *Tobacco* case, which was looked upon by many to be the opening wedge to make conscious parallelism illegal, was a case where the conspiracy was found by a jury. The court in its opinion felt that conscious parallelism might be taken into account in finding a conspiracy. It did not define conscious parallelism as a conspiracy. And whether a court itself or the Federal Trade Commission would have found conspiracy even in the *Tobacco* case I think is an open question.

Representative CURTIS. I was just thinking of that *Tobacco* case. You do not have to look just to one dimension of price. There are other areas in which you might find conspiracy if you examined them. Now I happen to be familiar with one aspect of the tobacco situation. If anybody wanted to make something of it, they should have examined into the lobbying that went on before the Ways and Means Committee at the time there was a proposal in to change the excise tax on a package of cigarettes from the unit tax to an ad valorem, because the people producing economy-sized packages wanted, of course, to have it ad valorem, as it would put them in a better competitive position. Incidentally, I think they were dead right.

But at the hearings, quite interestingly, not one of the big companies testified, but we sure had all the tobacco grower groups, and all those that dealt with them, testifying. There is no question in my mind but that this happened as the result of an agreement and arrangement.

But to get back now to this fundamental proposition, the thing that concerns me is the very basic question of why our people give lip service to our antitrust laws, to the principles behind them, and the goals we are seeking to achieve, and yet when it comes to the enforcement of these same laws, or to bettering them or to handling them as well as we possibly can, at the State level, which is close to the people, we do not seem to get anywhere. And, also, the discussion that has been going on here certainly leads me to believe that one thing that has been stated is very true, that we need a great deal more competent economic analysis in this antitrust work, if we are to know what we are doing.

One area that I think we need to define, and not only to define what we are after, but also how we are going to find it once we have agreed that that is what we want to do. That is: What kind of competition do we want to eliminate, or forbid? And, also, in examining competition, we need to study it more carefully. I find that competition is not always a hot war, even where there is real competition. An industry may go through periods of what we might call cold war, actual periods where there does not seem to be competition. And yet let one little ingredient be thrown into that, like a new process or a new kind of material, and the thing opens up right away.

Therefore, I think it is a very dangerous thing to label as noncompetitive pricing what may really be only a cold war situation, though it might meet your standards, Senator Douglas. When you are talking about this parallelism, one must be careful to see that you are not really dealing with a case where you have really got a basic competitive situation which is not exhibited at that time because it has reached a sort of a plateau. It is more meaningful to ask whether or not there is an ability to fight, if challenged, and whether firms have the ability to challenge existing patterns of behavior if for some economic reason they think they are in a position to do it.

I think it is more the ability to do these things that we are talking about, rather than the question of whether at a given time there is this hot war of competition. I wonder if anyone would care to comment on just that aspect?

Mr. GREYER. I will make a comment or two, but I am sure everyone else will wish to comment.

I think the conditions of entry are very basic here. In other words, the matter of ability to challenge is very basic.

In other words, if competition does happen to reach a plateau that might suggest this equilibrium concept that was before us earlier, if this plateau is one that gives indications of permanence because of control over entry of some sort, then there is a basic structural consideration involved here where something ought to be done in order to see to it that capital and ability may freely flow into this area.

Representative CURRIS. Could I stop you there just to ask: Do you believe that competition does go through these phases? In almost any field the plateaus are reached from time to time?

Mr. GRETHER. It is very dangerous to generalize, but I do it in teaching often. I speak of a sort of a spiral here. Sometimes after competition reaches a certain level it seems to stabilize for a period. But my observation is—and I happen to have been teaching in this particular area for 35 years now—that those levels do not usually last very long. Somebody sees a chance to start things over again. The spiral starts off again, say in aggressive price cutting. And then it seems to become more restrained as firms get older. Well established firms often seem to restrain their punches.

Representative CURTIS. I certainly appreciate that point, because it jibes with my own experience. So you think that by concentrating on this problem of entry we are hitting at something significant?

Mr. GRETHER. I would say this is one of the prime factors.

The CHAIRMAN. What I would like to inquire is whether in industries where large initial capital is required for entrance, entrance is as free as some people assume, not merely because of the difficulty in assembling capital, but to what degree does investment banking like to promote competition within industries where matters are more or less well established as regards members of the investment banking firms sitting on the boards of directing companies.

To what degree do they want to provide channels for new capital to raise up competitors for their allies?

Representative CURTIS. Might we ask that in reference to a specific case that was brought up yesterday, where Campbell Soup went into the can business?

The CHAIRMAN. I am not so interested in Campbell Soup, but I would like to keep the question general in nature rather than get off in a soupy subject.

Representative CURTIS. There is a reason why I tried to make it particular: I am afraid you are not making it really a meaningful question. You are assuming certain things that I do not think necessarily are so. You are assuming interlocking directorates that would prevent this. Now, maybe they do not exist, and maybe they do.

The CHAIRMAN. I think that would be a very interesting subject, to bring the charts up to date. But a casual observation of boards of directors leads me to believe that there is a good deal of interlocking between the investment banking firms and the big industrial firms.

Now, I know there was a case on this before Judge Medina, which was decided adversely to the Government, but I also have examined some of the transcripts in that case and have read analyses of the case, and while I have very high respect for Judge Medina as a person, I may say, I felt that the verdict did not quite coincide with the evidence.

Representative CURTIS. I will be happy, if the witness, which he probably will, anyway, will answer your question in two parts. First I would like to know whether or not he agrees with your premises, and, second, I would like his comments on the question.

Mr. GRETHER. I will make a very brief comment and pass this along.

The CHAIRMAN. This is a very important issue here.

Mr. GRETHER. May I suggest that in raising this question, Senator Douglas, you are in what I would call the politics of business to a certain extent.

The CHAIRMAN. There are certain men who have a distrust of the term "politics." I do not regard it as an opprobrious term. Politics simply means policy. It is a question on the policy of business.

Mr. GRETHER. But it involves an area of interpersonal relationships that it is very difficult to know very much about as to just what its impact is. My impression would be twofold, that in most instances this type of influence could not be permanent. It might be effective in the short period. If it is permanent, this is an area where somebody perhaps should see to it that Government capital or some other capital siphons in from time to time, in order to provide opportunity for additional entry into the industry.

Mr. MARKHAM. I have no comment other than that Dean Grether has already given. On this reaching of plateaus and in the historical development of an industry I agree that these plateaus do occur. I myself would be somewhat alarmed if they became permanent, and I do not believe that they frequently do.

I do have something to say on this matter of banking and the availability of capital, because it touches one of the things that I mentioned in my prepared statement and also touches a tender cord on something which I feel rather sensitive.

That is, first of all, we have almost placed banking beyond the reach of the antitrust laws themselves. I think I am correct on this, that neither antitrust agency now would take action against investment bankers, commercial bankers, or otherwise, without the Federal Reserve Board first taking the initiative. I think that this is legally correct.

The CHAIRMAN. I think that is correct.

Mr. MARKHAM. Now, banking I suppose one would expect to be a very highly institutionalized kind of industry in any case. But it seems to me that there has been a remarkable lack of innovation in the banking industry itself to serve the needs of the new entrant.

That is, I do not want to indict all bankers. But it seems to me that in order for a firm to borrow money, it first must prove it does not need it. It has to prove that it is so financially sound, on the basis of its past profits and its credit rating in the past, that it can then secure a large loan.

And my argument, therefore, is that there is not much in the financial world that takes care of the really new entrant, who is searching for a rather large amount of capital. It is even more difficult, of course, to peddle the stock, because we have all grown to accept stock ratings, which inevitably refer to the past. So a firm which needs \$5 million to get into an industry, and the wealth of the entrepreneur himself is extraordinarily limited—and after all, \$5 million, we must keep in mind, is now regarded as small business. How does he get it?

Representative CURTIS. Now, wait. What I would interpose here is that that is not the way economic growth comes about. What usually happens is that a business starts in a very small area, where you do not need any \$5 million. You need a few thousands of dollars. You build up a record of good progress there, and then it is the growth that you seek to finance.

But you have got a base on which you can go either to bankers or additional stockholders. But the number of companies that go brand new into a \$5 million field I think are relatively small compared to the others.

Mr. MARKHAM. I think they are, but I think that number could be increased if you had a capital market that furnished these needs, that

is, that you can increase the interest rate, because the risk is greater, but at least it technically helps overcome the obstacle of almost forbidding one to enter.

I was going to say that really what you have said, Congressman Curtis, is illustrative of the kind of thing I am trying to say. And that is that one must have a past record.

Now, what this means is that an entrepreneur who has already demonstrated previously his ability to operate profitably is accorded preference at the bank.

Representative CURTIS. That is good economics.

Mr. MARKHAM. That is good economics. I would agree with that.

The CHAIRMAN. You have really touched off an argument, now.

Mr. MARKHAM. But I would like to make the point that there should be some financial institution, and I believe there would be if the banking industry itself could be stirred up just a little bit more to be alerted to these needs of new businessmen.

After all, there are people who might like to get into some sector of the steel industry, and this you cannot do on several thousand dollars.

Representative CURTIS. You are expressing the philosophy that brought about the enactment of the Small Business Investment Company Act just a year or so ago, which, incidentally, I was very much in favor of, primarily to test out its effects. But I have always felt that this was based on a misconception of what really produces good, healthy, economic growth. I honestly believe that it is proper that bankers or equity investors—and it is good economics—should appraise what a fellow has done in the past. I do believe that you can get your \$5 million firms, but they are not going to come freshly born. They are going to come from the group of people who have already established something. It is an expansion process rather than an initial birth that seems most relevant.

And I do think that banks will lend money for growth to expanding businesses. Better still, though, I think there should be new equity investment. Unfortunately, our tax laws are, in my judgment, just throttling new equity investments. But I do not agree with your analysis of economic growth. That is our trouble.

The CHAIRMAN. I would like to say that I do agree with it, and I would like to tell a story which I think illustrates the point.

It is said that Charles Schwab and John W. Gates and their friends were traveling on the 20th Century one night from Chicago to New York, and they got into their favorite pastime of playing poker. And they were playing, and a man came by the stateroom and, being somewhat of the pushing type, came in, and he got interested in the game and put down a thousand dollars and said, "Look, I want to get into this game."

They paid no attention to him for a time. But he kept on saying, "I have got a thousand dollars. Why can't I get into the game?"

And finally Gates said, "Give the man a white chip." [Laughter.]

The question I want to raise is: Is not the necessary scale of investment in modern machinery and plant and so forth such that in order to get started you really need a very large amount of capital?

Mr. MARKHAM. Yes. If I may interrupt just a minute, I want to clear up an impression I know I have left, and I did not mean to. I

would certainly have no argument with the banking staff or a banking policy that would view a tried firm, a tried group of entrepreneurs who have demonstrated success, some priority as they walk in the door. This is not the point, really, that I was trying to make. What I was arguing is that an alert competitive banking community should certainly also have a staff that is capable of engaging in the business of assessing the prospects of an entirely new entrant. And to be able to pass some enlightened judgment on the potentialities, say, of a firm entering this industry on the basis of the reputation of the men who are trying to get in.

That is, I would hate to think we have reached a point in the growth of the American society where men with excellent entrepreneurial ability but with no private wealth of their own, are barred from making automobile parts, certain fabricated steel products, this kind of thing, where capital requirements are high.

We have grown, because we were willing, or at least there were people willing, to try what has not heretofore been tried. And I would only argue that the banking community should serve this need. If they do not, I would agree with Professor Grether that perhaps some kind of public banking facilities should be provided.

I do not think that those facilities should subsidize new entrants greatly. This, again, is bad economics. But rather than have all capital accumulations for some new venture, based on the past historical record, I do think that there must be some room for judging the prospects of a new entrepreneur on the basis of his ability, the conviction of the case he can lay down. It may not come through banks. It may be in some provision in the marketing of security issues. I do not know where it would come. But I do think it is a question that merits really important inquiry, because new entrants really are what stirs up much of this that we have been talking about, plateaus that are reached, tacit agreements, a very peaceful way of life. I think new entry is one of the most disturbing features to a very settled situation, and I am all in favor of anything that can be done that is on sound economic grounds than can do this.

Representative CURTIS. I think we are back, now, in agreement on the fundamentals, where I was hoping we were in agreement, and we are now talking of balances and how they are to be brought about. I can see that there are some areas of disagreement here, but at least I can agree with your last statement and argue about where the balance should be.

I probably do not have as critical a viewpoint as you do on how well our bankers have behaved. I think they have done a lot better than they have been given credit for. And I find it is frequently an error for banks to provide business with money, bank money, which should be new equity money.

I do not think the banks ever should get into the field of advancing what in my judgment ought to be equity financing. And, if anything, there has, I think, been a tendency for banks to overdo that.

On the other hand, I would like to make this comment. When the banks or any other financial group neglect a basic area, as I think they did in homebuilding, we usually develop an entirely new industry as a result of it. I think the Federal Government played a very

good part in creating a savings and loan approach to home financing. The banks neglected it, but happily it still came about.

So we have got a dynamic economy here, and I think we are arguing over relative balances now rather than fundamentals.

Mr. GREYER. May I make a comment just to correct the record? I was not referring to public banking. I was referring to any means that might be used to inject capital into the hands of new entrants.

For instance, just now my State is full of hundreds of new firms. But back of this is defense money to some extent, you see. They have sprouted a reaction to Government expenditures in this sector.

Representative CURTIS. The Government advanced financing, too.

Senator Bush wanted me to yield.

Senator BUSH. Well, you have just touched, in the very end of your comment, on the point that I have been trying to get into, which is that there are two different things involved in what Mr. Markham is talking about. One is credit, and the other is investment. The commercial bank is the holder of demand deposits, and I do not think it is proper or conceded anywhere to be proper for them to be making investments in new enterprises, but rather to use their money for investment only in assets that are relatively liquid assets, because the deposits are for the most part demand deposits, with the exception of their savings deposits, which represent a very small part. And they are not organized, and I do not believe really they should be expected to organize, to get into the investment banking business.

We had, in 1934, the banking business separated. Investment banking was separated from deposit banking. That was the big controversy at the time. But I do not think anybody now feels it did not work out to the advantage of the banking fraternity and the whole business community. But in the days when they were intertwined, they did strange things with demand deposits that they never should have done. And the result was a banking crisis partly brought on by that very fact.

I would like to make the point that much is said about the unavailability of investment money for the new enterprise and so forth. At the same time, I think a really careful survey of this—and I am not sure that we ought not to make it in the Banking and Currency Committee sometime—will show that enormous amounts of money are available every year and going into new enterprises all over the country, from California to New York, and that the investment banking fraternity is on the lookout constantly for opportunities to get into worthy enterprises, and so are the so-called investment trust companies. New big pools of capital are available for this kind of investment. They are not inhibited by demand deposits or any short-term considerations. They are willing to look ahead for 5 years, 10 years, hoping in the end for capital appreciation.

So I wanted to make the point that these are two different fields, and they should be kept as two different fields, and we should not get back into the theory of pre-1934.

Representative CURTIS. I do have one question I wanted to ask.

Senator BUSH. The chairman wanted to get into this at one point.

The CHAIRMAN. I was merely going to say I am glad you have narrowed the scope of discussion to investment banking. Certainly it was no intention of mine to urge that commercial banking, which is



responsible for meeting short-term claims, should go into long-term investments. I was referring throughout to investment banking, and I think Mr. Markham was.

Now, as to whether the investment banking system is sufficiently responsive to the desirability of introducing more competition into the economic system, that I think is another question. And I cannot agree with this eulogy that you delivered about the readiness of investment banking to finance a greater degree of competition in industries where oligopoly is pretty well established.

But I agree with you that this would be an interesting subject for investigation. Now I will stop.

Representative CURRIS. I wanted to get back to my original point, a consideration that has brought about a lot of this discussion, and that is the analysis of what kind of competition we are defining as good for economic growth and price stability and maximum employment. And I think there was agreement that we do have to define our terms. What has been disturbing me, I repeat is the fact that we give lipservice to the antitrust idea, but frequently in administering and carrying it out, we do not have the backing of the people that we should have.

I think that this problem is brought out clearly in one particular area. There is a great deal of attention paid by certain people—and this will bring Senator Sparkman into the debate here—about the number of failures of small businesses. As far as I am concerned, I have never gotten excited about the fact that there were a lot of failures of small business, because I think it is a healthy economic process, indeed. And when I was on the Small Business Committee, I used to start out my talks before small-business groups by telling them not to ever give up their basic right, which was the right to fail, because if they ever gave that up, their dream of becoming bigger, because they were more efficient and do a better job, goes by the board also; because if we put a floor under the inefficient competitor, there they all are. But I do think one thing we should be concerned about is the percentage of failures in regard to new starts—we should be much concerned if that were to alter greatly. And another area to which I have seen not enough attention paid is the rate of mergers and acquisitions.

I think there is a normal, healthy, economic rate of mergers and acquisitions that is a part of a good economic process. But an increase in that rate—and it is a rate that we are concerned about—would indicate something wrong. I personally think we now have a very dangerous, an abnormal rate, largely as the result of our tax laws.

But I wonder if our panel would comment on this one question, as to whether they feel that the number of business failures is the concern, or, as I suggested, that it is the percentage that is the thing that is of concern.

Mr. MILLER. I would be inclined to look more at the percentages, but I would be inclined to look at something else. Namely, why have failure increased? And I think the answer would vary from one sector of the economy to the other. If you are talking about grocery trades, it would be one thing. If you are talking about manufacturing or construction industries, it would be another.

Representative CURTIS. Could I ask this one question?

Do you not agree that if we are going to have a healthy economic society, we are going to have business failures and many of them?

Mr. MILLER. Well, we most certainly are. We are going to have failures of individual firms, small and large—rather heavy in the small because there are many of them—and in the large we do not have failures of the firm so often, because they are diversified. We have failures in individual sections, individual markets, and individual products, that do not show up in the statistics of business failures, because the larger firms are a combination of markets and products and divisions.

But basically my whole assumption here is that failure in individual products, individual markets, individual areas, is a part of the system. And this means that we have to have some flexibility, some willingness to let projects, markets, products, move out, take our capital losses, and move on.

Along with this, of course, we have to provide mechanisms so that the human sufferings are not too severe in particular areas, by helping people to make the adjustment. But the failures are a part of the system.

Mr. MARKHAM. I can only add a little to what Professor Miller has just said. I could get somewhat alarmed over a sharply rising percentage of small-business failures. But I think I would be even more alarmed if the failures tended to disappear, because this would indicate to me that only absolutely sure ventures were being tried. And I do not think that we will sustain our past rate of growth if only sure ventures are tried.

That is, I think Professor Miller's analogy to the big business firm is quite appropriate, that you very frequently see a product line within a large company. You also meet with failure, and if this were a single firm it would be a firm failure, because if it has other product lines to keep it alive as a corporation, it stays alive.

In the case of the typical small business firm, there must be some failures. This indicates that before the failure there was some optimism, some of which bore fruit, some did not. But this is how we get to testing the market, to separating good business ventures from bad business ventures. And we want the bad ones to fail. There is no earthly reason as far as I can tell for artificially keeping them alive.

You mentioned, also, mergers. And here I think a very careful balance has to be struck.

In Professor Miller's statement he said that merger was a means whereby very talented and competent entrepreneurship could get into another line of enterprise.

Mr. MILLER. Sometimes.

Mr. MARKHAM. Yes; sometimes. But I would argue also that one has to bear in mind that merger is also a means of circumventing the addition of capacity to another industry; that is, that while it may have been a vehicle—and I have argued this myself, in the past—as a means of bringing good entrepreneurship into a line of business, the mere fact that it is done by merger also reduces the amount of investment, because there is an alternative to buying out a firm, often not a failing firm, because the merger law after all exempts this situation.

As to a firm in a failing condition, I believe Congress has stated quite

clearly on the floor that section 7 was not to apply to this situation, when a firm buys a firm that already has failed. So that has nothing to do with the antitrust laws.

So frequently they are buying then a firm which is able to meet its cost and presumably to stay alive. If it did not buy this firm, it could also get into the industry by erecting a brandnew plant, increasing investment, and, as we all know, by the exercise of the multiplier in national income analysis, could give a boost to our total national income.

So I think that while as to mergers themselves, some of them are healthful and some of them are inevitable, we just cannot avoid the fact that merger is also a way of ducking the problem of increased capacity and increasing output in an industry and taking the corresponding price reductions that presumably must come along with added output.

It is this last kind of investment, the new investment, that I think we get so much of our growth from.

So I would still say that mergers must be watched very carefully, but at the same time say that mergers are indeed a normal business transaction in capital assets; that we would be very foolish to be alarmed over every single acquisition of a plant by a firm already in business, because it shows a certain viability of the used asset market, really, which is many times what it is.

But the reason I think that we should watch mergers very, very carefully is because the merging process is a way of ducking out from under the addition of new capital to a line of business.

Mr. GREYHER. The comments of my colleagues have been so excellent and to the point that I need not comment at length.

Just one further comment. I think one way to look at this problem is to look at the alternative. How would one cut down on business failures? In some foreign countries it is done very simply by a combination of private and public licensing. You keep the number down, you see, to the point where it is easier to make a living in the industry or trade. And this, by the way, can be argued as good economy. It saves capital and guarantees livelihoods. But it takes out the dynamic spark from the economy.

Senator BUSH. I want to ask Mr. Miller: In his statement he speaks about the Robinson-Patman Act and the so-called fair-trade law experiments.

You, I take it, feel that those are not helpful?

Mr. MILLER. I am not talking about all aspects of Robinson-Patman.

Senator BUSH. Would you expand your thought on that a little bit, please, for the benefit of the record here?

Mr. MILLER. Surely. The fair trade laws are I think fairly clear, and in this respect I am simply joining the parade which was referred to by Mr. Markham earlier, of those who feel that by and large these laws do not help the small businessman they are intended to, and that they do cut down the price competition in the system and divert efforts in other directions.

So far as the Robinson-Patman Act is concerned, this is an act which covers many aspects of discriminatory practices. And clearly many forms of discrimination and types of discrimination are not only illegal but appropriately prevented.

I do think that the interpretations placed on the act concerning the power of individual firms to make price concessions to individual people has reduced the flexibility of pricing policies. In this connection, I remind you of the comment I made earlier on the steel industry, where today I think we are less likely to have temporary price concessions and consequently creeping price declines in the industry, than we were in a similar kind of market, say, in the 1920's or 1930's. This is because of the fear that making a price concession on a particular piece of business is going to run afoul of the Robinson-Patman Act. So nobody makes these temporary cuts.

Senator BUSH. I think that is very helpful. How do you feel about this fair trade law?

Mr. MILLER. I would be inclined to leave our retailers to determine their own resale prices. I do not think in the end we can protect their overall survival by fair trade alone. There are too many ways by which they can erode their profits by other competitive weapons, so that in the long run I doubt that they are going to be any better off. And from my own point of view, I think that price competition would be more effective when we have it.

Senator BUSH. Thank you, sir.

That is all I have.

Senator SPARKMAN. Mr. Widnall?

Representative WIDNALL. Mr. Markham, in your statement, you made a recommendation that exemptions be cataloged and carefully assessed. The thought occurred to me: Is there not some duplication now of economic planning in the agencies today, say between the Fair Trade Commission, Commerce, and the Justice Department? Do you not get a duplication of effort sometimes in the analysis?

Mr. MARKHAM. Oh, I think unquestionably there is some duplication. I am not so sure that all of it is bad, but there certainly is some duplication of effort between the Department of Commerce and I suppose, still, the Federal Trade Commission, particularly in some of its industry data-collecting programs.

Representative WIDNALL. If you would make such an analysis as you suggest, do you think that should be done through the Justice Department?

Mr. MARKHAM. This duplication of Government function, or the overlap?

Representative WIDNALL. If you are cataloging or assessing exceptions from your existing laws.

Mr. MARKHAM. Yes.

Representative WIDNALL. You think that Justice is the proper place for that?

Mr. MARKHAM. You mean: Is Justice the proper investigating agency?

Representative WIDNALL. Yes.

Mr. MARKHAM. Well, I would have to be consistent, here, I am afraid, Mr. Widnall. I have argued that we should not put any more functions on the Justice Department without increasing its budget, and I certainly would not assign it the function of looking into duplicating activities in Government, or for that matter of conflicting policies. I think that this committee here is a very appropriate arena in which to air this particular problem.

I think you might have in mind: Well, does the Department of Commerce at times take steps or announce policies that are somewhat contrary to the actions carried on by our two antitrust agencies? It is conceivable, I think, that this is true. In fact, I would be very surprised if one could not uncover one or two such cases, but I do not know about them.

Representative WIDNALL. Is there not coordination of the effort of the various economic analysts that work with such agencies?

Mr. MARKHAM. There is a real effort to coordinate any formal program carried on by any Federal agency, of course, through the Statistical Standards Division of the Bureau of the Budget.

One of the things that one must do, for example—this is something I had some experience in—is that if you are going to try to find out how many firms there are in the coffee processing business or in the coffee importing business, and find out what share of the market they have, one would have to first demonstrate pretty carefully before the Statistical Standards Division that this information is not already available at the Department of Commerce in one of its bureaus, and on a nonconfidential basis; that is, where the confidentiality rule under which it was procured would not be violated by turning it over to the Federal Trade Commission.

I would argue that a good deal more coordination could be made. But I think that this committee is an appropriate area to at least go into this kind of a question.

What I had mainly in mind, however, on page 6, was that I think that we often expect the antitrust laws to relate to the whole economy, when in fact Congress has made a reasonable percentage of economic activity somewhat immune from the thrust of the antitrust laws. I myself am not satisfied—and, indeed, I can make no reliable prediction as to what the effect of vigorous antitrust in one area might lead to, if this goes to the point where a very large percentage of the economy is left outside of the reach of the antitrust.

That is, I am not so sure that one gets a healthier rate of growth by exercising vigorous antitrust in one sector of the economy, primarily manufacturing, but letting pretty much the rest of the economy go untouched.

Now, we are not at that stage. I would not want to make a presentation that I think we are near there. But I do say the movement is toward this. And I think it is something to be vitally concerned with. And that is to have the laws serve in a nondiscriminatory fashion; now pretty largely they are exercised I think against the manufacturing sector of the economy.

In a political sense we can understand this, in part. Here is perhaps where most of the concentration is. They are numerically relatively weak. They do not constantly bombard their Congressmen, I do not suppose, quite as much as some of the smaller retail associations, agricultural groups, labor union groups, might bombard their Congressmen, to procure some exemptions.

Representative WIDNALL. If Congress limits the funds that go to the enforcement agency, as they definitely have, I think, in the past, where do you think the money could most effectively be spent? In the section 2 cases, or in the section 7 cases?

Mr. MARKHAM. Well, I would hate to have to pick and choose between those two, because what you are really saying is: Should it go to the matter of dissolution, or should it go to the preventive law of amalgamation of power, economic power, in the first place?

I suppose there still is some truth in the point that an ounce of prevention is worth a pound of cure, and I would argue that we should have a rather vigorous anti-merger program. It should be sensible. It should follow very careful analysis, legal and economic analysis. But it necessarily should be characterized as vigorous.

But, then, I would argue that so should section 2. So I would argue in favor of providing adequate staff to administer both statutes.

Representative WIDNALL. I would agree heartily with that. But Congress does not provide it. I was just wondering where you thought the greatest impact would be found and the greatest impact would be felt. Of course, in section 2, you have the time element.

Mr. MARKHAM. Yes. You do not get an awful lot, I am afraid, in the way of statistical victories all at once by increasing, say, the budget of the Antitrust Division more effectively to administer section 2 of the Sherman Act, because these are rather long, tedious cases.

I do think, though, that here is a case where an increase in staff, providing they are increases of competent people, might really cut down this long tortuous process that Dean Grether has referred to. I do not think that it is any secret that some Government cases have been ill prepared, because they have had to be prepared with very limited resources. Nevertheless, they simply had to be prepared. There was no way of avoiding this problem, and they did not have the staff to prepare a really good case. And therefore there has been some backing up and some slowing down in the trial process of such cases.

I would like to hear Dean Grether comment on this.

Representative WIDNALL. I would like to hear Professor Miller's comment. What do you feel about the relative value of section 2 and section 7 cases?

Mr. MILLER. Well, I think you can in the long run make more progress on the section 7 cases at the present time, partly because, if enforced appropriately and wisely, you will have certain repercussions. Mergers will not be undertaken unless there is a very good reason for doing them. So that right at the level of business decisions, vigorous enforcement here will avoid proposed mergers.

If I had to make the choice, I would put my money, I think, on the section 7 cases today.

I would make one point, if I may, about these long section 2 cases. They are difficult cases, expensive and time consuming, but one of the reasons is that all of them that get into the courts are in what I would call the gray area of antitrust policy. If there were a clear-cut consensus on the part of the corporate lawyer and the Government lawyers alike that a particular situation was illegal, the case would not be in the court. And it is because we are trying to make policy, really, in part, that they become so cumbersome. This is the area in which we have less consensus.

Representative WIDNALL. Professor Grether, do you have substantially the same feelings?

Mr. GRETHER. Yes. I would like to make substantially the same comment. Your question raises something that supports the kind of

analysis I gave here, namely, that in section 7 cases one needs more and better economy analysis. And therefore in my judgment the enforcement agencies do need more and better economists to work on these cases.

Representative CURTIS. Just on the point—and I think Professor Miller was emphasizing it—I would like to get the panel's comment. Is it something like this: That if we had section 7 before and had it enforced over a period of years, probably we would not have very many section 2 cases? And therefore, in going ahead, we have to vigorously enforce section 7. Otherwise we are going to have more section 2 cases in the future. So there is the reason for emphasis there. But at the same time, in my own judgment, there are enough present situations involving the grandfathers for section 2 that you certainly cannot neglect it. But if we handle the present section 2 backlog, I think section 2 cases would eventually dry up if we, over a period of years, enforced section 7.

Is there a disagreement on that? Or do you think my analysis is fair?

Mr. GRETHIER. I would say you are somewhat optimistic, if I may say so, on this. But I may add that what you learn in the section 7 cases helps sharpen analysis in the section 2 cases, too. It is the same framework and type of analysis.

Representative CURTIS. In other words, you think we still could have section 2 cases arising from other sources than growth by merger?

A comment was made yesterday by a member of the staff, which I thought was right appropriate, saying that growth which would not be coming from this merger kind of thing is constantly being subjected to the competitive forces and therefore is more apt to be a healthy economic growth than that which is derived from this merger process.

Would the panel agree with that observation?

Mr. GRETHIER. I would.

Senator SPARKMAN. I would like to add just this.

I am sorry I was not in for all the discussion. But I note that both Mr. Markham and Mr. Miller have testified. I do not believe I have seen the other paper. And here on the panel the remark has been made as to Congress having passed laws exempting certain elements or segments of our economy from the antitrust laws.

I am not sure whether you mean Congress has gone too far in that. Do you think it has? Or do you think these were necessary exemptions?

Mr. MARKHAM. Well, I personally think, Senator Sparkman, that Congress has gone too far. But my point is not that, particularly. I think that Congress really needs to reexamine and catalog the full range of exemptions. There are some that are explicitly exempted that I would argue should not be.

I was very alarmed by the movements in the House to get a full scale federally enforced Federal fair trade law last year. And there have been other such efforts that have failed. There was an attempt once to legalize basing point pricing, which by Presidential veto did not become law. I am sure you might remember this.

Now, these things do go on. And I am very much afraid that Congress, when it is preoccupied with antitrust, does one thing. But

then there are other Congressmen preoccupied with other things, and are setting up exemptions. I have not yet seen a rational exploration of: why do these exemptions now exist, some of which really rose up in a much different kind of economy than we now have. Many of them can date their birth back to the 1930's. At least one exemption I refer to goes back to the 1920's; the Web-Pomerene exemption, which I am quite aware does not have very much force as of this moment.

But the question is: Why are firms permitted to get together, to unify their pricing policies abroad, and then be expected to operate at complete arm's length and compete with each other at home? I would argue that this is a very difficult thing for firms to do.

An therefore I think that Congress and, I feel, the joint committee here, could very profitably devote some time to examining the rational basis for all of these exemptions. And, as I say, I urge this because in my own personal view it has gone too far.

But also the timing with which it has been done and the tendency for these exemptions to stick around long after the initial reason, if there was one, has disappeared, require that they be looked into.

SENATOR SPARKMAN. Does that represent the consensus of the panel?

MR. GRETHER. This represents my view. But may I suggest that we should realize that this is a tough area, that these exemptions are not full exemptions, normally; they are partial exemptions. There is a great twilight zone here that is an unknown land, almost. I wish we knew more about it. I think it would be a wonderful service if one could get the picture of what goes on here, but it is a very difficult area in which to establish the facts.

MR. MILLER. I would agree with this general consensus of opinion of my colleagues.

I could give just one example of the interplay of policies which go against one another. The petroleum industry, it seems to me, is an extremely good example of an industry which we are periodically worried about for antitrust purposes. Yet we have State control of output, which is not unknown to the Department of the Interior, and we have executive action preventing the supply of foreign imports from getting in and breaking this price structure.

There is a question whether they can succeed in the long run, but most certainly we are running at cross purposes here. If we have a production control program in this industry or an import program, as we have, we have set the level of prices. And the only thing that can happen from then on is some variations in retail prices between retailers.

I think this is a kind of area which needs exploration. There are not specific exemptions in this case from antitrust but just national policies that are going against one another.

REPRESENTATIVE CURTIS. Mr. Chairman, I have had a little discussion with one of our staffmen as to what Professor Grether is pointing out here, and I would like to find out about his interpretation of the matter.

In your statement, in talking about section 2 cases, you state that the big cases tend to drag out almost interminably and the outcome often is highly unpredictable. Then, you say:



Very important on the agenda, of course, would be consideration of the unsolved regulative issues in the industries and markets with heavy concentrations of economic power.

One of the staffmen thought that you were presenting a very pessimistic approach and thinking that there was nothing much to be done via section 2 enforcement. I have interpreted what you were saying, though, as that you felt that the essential solution to this is further economic analysis and knowledge, and with that we could break through.

Now, I wonder if you would comment.

Mr. GREYER. I would not like to predict the outcome, but I think it highly important that high level analysis be given to this area.

Take the issue in law before us today of conscious parallelism. There is an economic counterpart here that ought to be analyzed very carefully and one, I think, that can be analyzed. This is the sort of thing we have in mind.

Representative CURTIS. I see. May I ask you: Are you pessimistic, though, about being able to cope with the problems we see in these section 2 cases?

Mr. GREYER. Here one can give only his own person views. My feeling is that effective antitrust enforcement with adequate resources, with heavy emphasis on both section 2 and section 7, while keeping the so-called per se prohibitions alive, will pay off.

Representative CURTIS. And therefore we can cope with the problem?

Mr. GREYER. Yes.

Representative CURTIS. I really should not introduce this, but I really am concerned about the analysis of competition. And one little phenomenon I have observed, and I know it is so: Take a new business center which we are now creating in these big housing areas. I happen to be familiar with one. In the decision as to what businesses would go in there, there was the problem of a drugstore. The drugstore coming in insisted that there be another drugstore included in that business area. And I pursued that question to the extent that I do know that this behavior is rather common. At first I said to myself, "Well, that is competition for that drugstore." But that was not the competition they were most concerned about. They were most concerned about their competition with other business centers, and therefore they were willing to put up with increased competition within the center in order to get a bigger block of business in competition with the other business centers; which leads me to think that this business of analyzing what is competition, and the kind we want, is by no means a simple thing.

I could comment on this at various levels of competitive behavior for I feel analysis would be valuable at all levels. As I say, this is a big subject, but I wonder if you would comment on whether or not those are in your judgment some of the areas on which we need further economic analysis.

Mr. GREYER. I would say, "Yes." For instance, taking the case you mentioned: About 2 years ago I was talking to a small supermarket owner doing rather well. I said, "Why do you do so well?" He said, "I am the only supermarket in this area." He is very lucky, a monopolist, so to speak. Within the space of a few miles, he is the only one there. He does rather well.

Representative CURTIS. Well, that is the opposite case. I wonder if anyone else would like to comment?

Mr. MILLER. I would agree with Dean Grether and you on this, that competition takes devious forms and methods, and sometimes what looks to be good competition turns out to be the reverse of it. This takes careful analysis.

Mr. MARKHAM. I would agree with what you had to say, and with what Professors Grether and Miller have had to say. I think we do concentrate on price competition and argue that this is good. I myself am somewhat partial to this form of competition because I can understand it so well. That is, it is something that the average buyer very quickly recognizes, price competition. But I am quite sure that there are other forms of competition that need nurturing, too—improving the product, improving services; especially this latter, in the day of the mechanized household, where the home has become highly mechanized.

The matter of competition at the service level is extremely important. So I think there has been a sort of lag in our thinking on this.

We all understand, I think, competition, in the first instance, more or less to mean price competition, but then as an afterthought we recognize that there are other forms, as well. And these may not be completely independent of each other.

That is, in areas where you find in a statistical sense some absence of price competition, it is quite possible that inquiry would find out that these are the areas characterized by more vigorous types of other competition. We do not know, but it is certainly something we need to know.

Representative CURTIS. Thank you very much.

Senator SPARKMAN. Thank you very much, gentlemen. The committee will stand in recess until 2:30 this afternoon at this same place.

(Whereupon, at 12:45 p.m., the committee recessed, to reconvene at 2:30 p.m. the same day.)

#### AFTERNOON SESSION

The CHAIRMAN. The hearing will come to order.

Gentlemen, we appreciate your coming. We will proceed in alphabetical order with one exception. Mr. Minsky has an abbreviated version of his paper which has been typed but is not here, so we will start with Mr. Anderson and then skip Mr. Minsky and go to Mr. Okum and Mr. Schultze.

Mr. Anderson, will you lead off.

#### STATEMENT OF THEODORE A. ANDERSON, UNIVERSITY OF CALIFORNIA, BERKELEY

Mr. ANDERSON. Thank you. It is a pleasure to be back before this committee. I had the honor of being here 4 years ago, and at that time I tried to look into 1956 and 1957 and the probable trends in business conditions up to that period and what it might mean for appropriate tax policy in 1956 and 1957.

## PRICE INFLATION IN THE MAJOR MANUFACTURING INDUSTRIES, 1955-59

## I. PURPOSE AND SCOPE OF REPORT

This report analyzes the causes of the inflation that has occurred since 1955 and recommendations are offered as to how the U.S. economy can attain healthy growth with price stability. Particular attention is paid to the price increases in each of the major manufacturing industries of the U.S. economy. For example, steel, automotive, and machinery prices all increased by more than 17 percent between 1955 and 1959, while in each of the food, chemical, and nonferrous metal industries price increases were less than 5 percent. For all manufacturing industries prices rose by almost 11 percent. Obviously the forces of inflation have varied significantly among industries and therefore it is necessary to study major industries separately to obtain a sound understanding of the process of inflation.

The period covered by this study was the first quarter of 1955 through the first quarter of 1959. This period was chosen because it was the first time in at least the past 50 years that the U.S. economy has experienced significant inflation that was not associated with a war involving the United States. In other words the recent inflation was our first peacetime inflation.

The most recent period for which corporate profits data were available was the first quarter of 1959, so this was used as the cutoff date. The beginning period; namely, the first quarter of 1955, was selected because this marked the start of a major upward wage-price spiral. Also, because there is some seasonal variation in prices and profits, it was preferable to use the same quarter for the beginning of the study as the end.

The 12 industries analyzed in this study were selected because they represent the largest manufacturing industries for which reasonably complete and accurate data were available on all such factors as prices, wages, profits, output, and productivity. The one such industry which was excluded was textiles, and here prices have declined slightly since 1955.

The analysis has been limited to manufacturing industries to restrict the scope of the study to manageable proportions. Also, the primary cause of overall price inflation can be found in the economic forces in the manufacturing sector of the economy. Trends in wages and profits have been analyzed in this study while rent and interest costs were excluded because they represent so small a percentage of total costs as to be relatively insignificant possible causes of inflation.

## II. AN ANALYSIS OF INFLATION IN 12 SELECTED MAJOR MANUFACTURING INDUSTRIES

Table I below summarizes the changes in prices, wages, productivity, profits, and output for the selected 12 major manufacturing industries.

TABLE I.—Percentage changes in prices, wages, profits, productivity for 12 manufacturing industries from the 1st quarter 1955 to 1st quarter 1959

[Percent]

Industry	Prices	Wages	Net profits as percent of net worth		Output	Productivity <sup>1</sup>
			1st quarter 1955	1st quarter 1959		
Iron and steel.....	+26.5	+34.8	11.2	11.7	+11.6	+11.3
Nonelectrical machinery.....	23.2	20.6	8.7	7.1	9.6	8.9
Electrical machinery.....	20.7	19.5	12.0	10.7	5.4	0
Motor vehicles.....	17.7	17.7	23.6	19.1	-25.1	-1.7
Fabricated metal products.....	13.8	19.5	8.4	5.9	7.1	8.2
Paper and allied products.....	13.0	21.2	10.3	8.5	17.7	14.7
All manufacturing.....	+10.6	+20.2	11.4	10.0	+12.0	+9.3
Tobacco.....	8.7	23.0	7.3	12.0	18.1	30.2
Petroleum and products.....	6.7	24.8	12.6	10.1	9.8	17.8
Rubber.....	5.6	20.0	12.0	10.0	7.6	9.7
Food and kindred products.....	4.8	20.8	7.3	7.8	10.2	14.0
Chemicals.....	2.7	22.2	13.3	13.0	24.8	20.0
Nonferrous metals.....	1.9	26.4	14.5	8.2	.6	22.9

<sup>1</sup> Refers to total employees.

Table II and chart I group the industries by the excess of the wage gains over productivity rises and show that this factor correlated closely with price increases.

TABLE II.—Comparison of the excess in wage increases over productivity gains with price increases for the major manufacturing industries

Industry	Excess of wage increases over productivity gains	Price increases
Steel, autos, machinery, and fabricated metals.....	Relatively large.....	Relatively large.
Paper, rubber, food, and petroleum.....	Average.....	Average.
Nonferrous metals and chemicals.....	Small.....	Small.

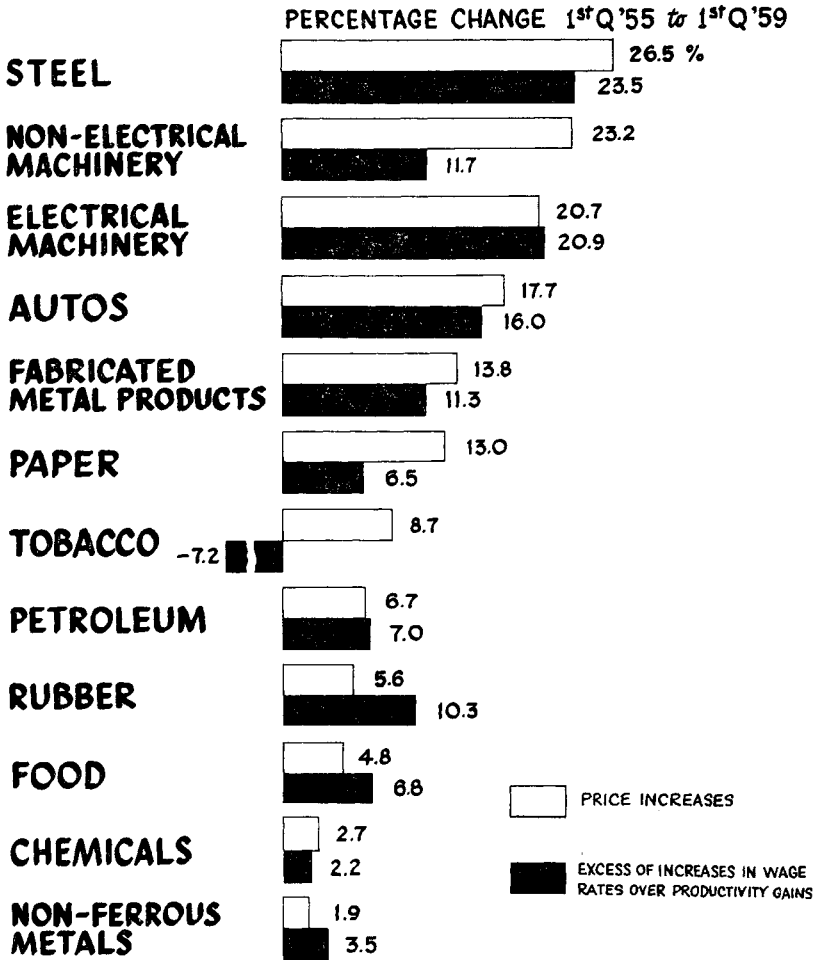
NOTE.—Tobacco was the only industry in which productivity gains exceeded wage increases and prices rose.

When wage rates increase faster than productivity, costs tend to rise. In industries where this condition existed inflation was to be expected in view of the natural tendency of the business firms to raise prices as costs go up, even if demand is adversely affected by the price increases. When wages rise faster than productivity demand pressures tend to exceed the available supply and an inflationary influence is created. Thus price stability is strongly dependent upon cost stability.

(Chart I is as follows:)

CHART I

**INDUSTRY PRICE INCREASES WERE PROPORTIONATE TO THE EXCESS OF WAGE RATE INCREASES OVER PRODUCTIVITY GAINS**



Mr. ANDERSON. As is shown in table III, there was an inverse correlation between increases in output and prices.

TABLE III.—*Trends in output and prices, 1955-59*

Industry	Growth rate	Price increases
Chemicals.....	The largest.....	Small.
Paper and tobacco.....	Average.....	Average.
Nonferrous metals.....	Small.....	Small.
Petroleum, rubber, and food.....	do.....	Relatively large.
Steel, autos, machinery, and fabricated metals.....	do.....	The largest.

The industries which enjoyed the greatest increase in demand raised prices the least, while the industries which experienced less than average gains in output raised prices the most. It does not appear, therefore, that Government policies followed in 1956 and 1957 aimed at restricting the growth of the U.S. economy to a subnormal rate will be any more successful in the future in preventing inflation than they were in that period. Actually such policies appear to promote inflation, paradoxical as this idea may seem to be. The following discussion will attempt to explain why it was to be expected that industries experiencing the largest increases in demand would raise prices the least and vice versa.

### III. PRICE STABILITY IS DEPENDENT IN PART UPON MAINTAINING A STRONG GROWTH RATE OF THE ECONOMY

About 90 percent of the inflation since the Korean war came in the 1956-58 period when there was little growth of the U.S. economy. Furthermore, it has been shown that the price inflation was the inevitable result of rising costs. Analysis is needed, however, of the trends in wages and productivity in this period to help explain the unusual differential that developed between these two factors.

#### *Causes of the relatively small gains in productivity*

One major cause of the relatively slow rise in productivity during the 1956-58 period was the fact that real output failed to show its normal growth rate. From the first quarter of 1956 through the third quarter of 1957 gross national product, in 1958 dollars, rose by only 2 percent whereas the normal growth for such a period would have been 6 to 7 percent. Chart II shows both the slow growth of the economy in 1956 and 1957, and that the inflation occurred primarily in these years.

Analysts of productivity gains in the Nation's economy have learned that when output rises slowly or declines, the gains in productivity are much smaller than when real output is expanding by 3 to 5 percent annually. Chart II shows this to be generally true for individual industries as well as for the economy as a whole.

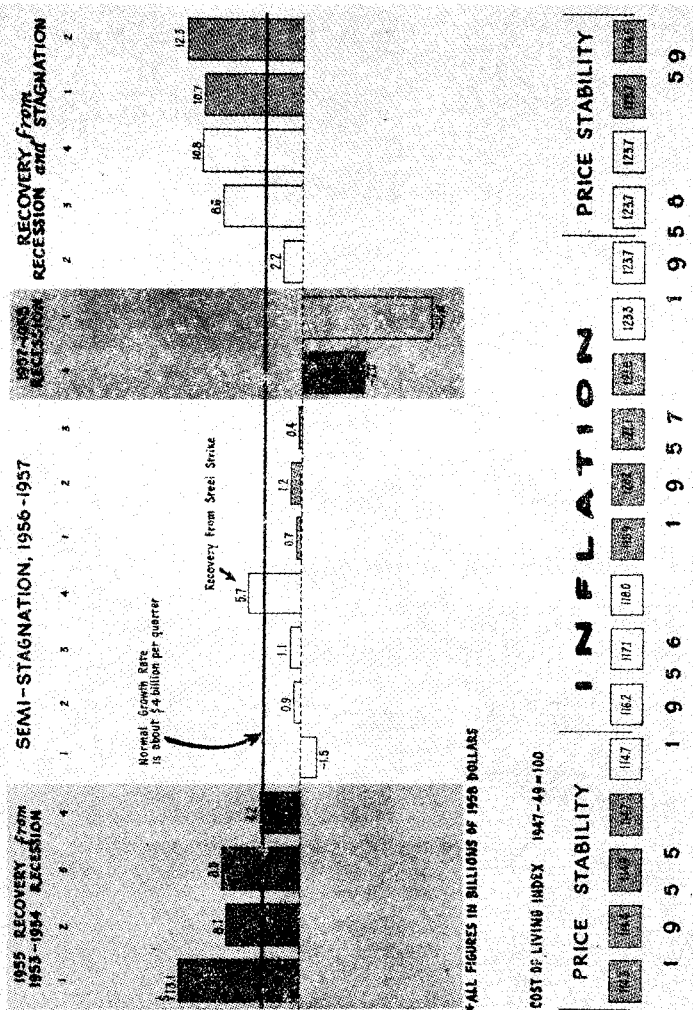
Rising output stimulates productivity gains in part because for many business firms costs are fixed and when output rises such costs often do not go up proportionately. With output rising faster than total costs, unit costs tend to decline. Under these conditions wage increases can be financed out of the rise in efficiency and prices are not under as much pressure to rise as they would be if wages rose and

efficiency did not. To aid in obtaining the productivity gains with which to finance rising wages, it is very desirable to have an expanding economy. It is not surprising, therefore, that almost all the price stability that has obtained since the Korean war came when the economy was expending at a 3-percent annual rate or better and 90 percent of the post-Korean inflation came when the economy was either growing or in a recession.

(Charts II and III are as follows:)

CHART II

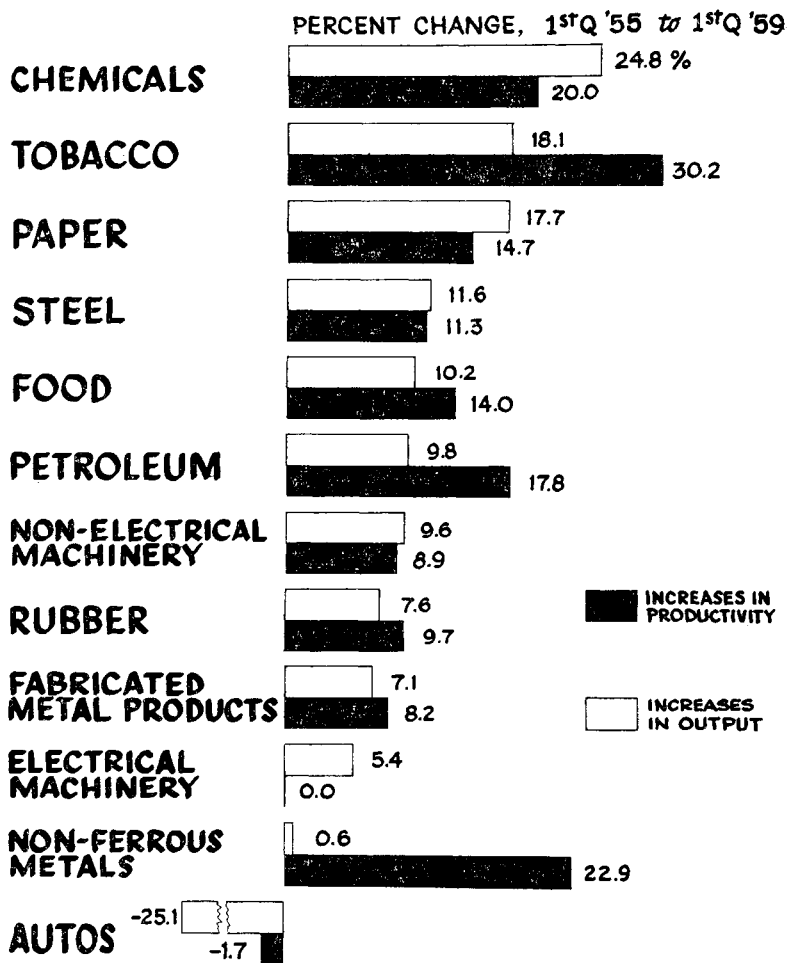
**QUARTER TO QUARTER CHANGES IN REAL GROSS NATIONAL PRODUCT  
1955 TO SECOND QUARTER 1959\***



\*ALL FIGURES IN BILLIONS OF 1926 DOLLARS

CHART III

## INDUSTRIES WITH LARGE GAINS IN OUTPUT USUALLY SHOWED THE LARGEST GAINS IN PRODUCTIVITY



### *Reasons for slow economic growth during the 1956-58 period*

Mr. ANDERSON. There were two major reasons for the slow growth of the U.S. economy after 1955. Certain economic imbalances developed in 1955 which required correction and secondly Government monetary and fiscal policies were formulated to restrict the economy's growth rate. With these two situations combining, real output over the 21-month period beginning with the first quarter of 1956 amounted to only \$8.5 billion whereas normal growth in this period would have yielded an output rise of \$25-\$30 billion.



Imbalances in 1955 developed in car output, housing starts, and inventory investment. Auto production jumped from 5.3 million units in 1954 to 7.9 million in 1955, a rate which was by no means sustainable. Housing starts in 1955 amounted to 1.3 million whereas the market can absorb only about 1.1 to 1.2 million new homes per year. Inventory investment amounted to \$5.8 billion in 1955 or more than twice the normal rate. In 1956, therefore, major decreases in auto output, residential construction, and inventory investment came about which of course slowed the Nation's economic growth rate.

In 1955 the Federal Reserve Board became alarmed by the rate of economic expansion and followed restrictive monetary policies. Banks' free reserves (excess reserves minus borrowings from the Federal Reserve Banks) normally total several hundred millions of dollars but in latter 1955 fell to minus \$200 million because of the policies pursued by the Federal Reserve Board. Interest rates rose steadily throughout 1955 and by the year's end rates on commercial paper were higher than at any time since the early 1930's. The Federal Reserve Board allowed credit to tighten steadily throughout 1956 and 1957 so that interest rates continued their climb from 1955 through 1956 and up to October 1957, some time after the economic recession had gotten underway. By the fall of 1957 interest rates on commercial paper had reached their highest point since 1929.

The table below shows why business firms may raise prices when costs rise even though demand may decline as a result of the price rise. The table illustrates why prices rose so much during the 1956-58 period of relatively weak demand.

	Price-cost relationships in base period	Assuming prices are not raised while costs rise by 3 percent	Assuming prices are raised as cost rises but sales decline in proportion to the rise in price
Unit price.....	\$100	\$100	\$103
Unit costs.....	\$90	\$93	\$93
Unit profits.....	\$10	\$7	\$10
Number of units sold.....	100	100	97
Total profits.....	\$1,000	\$700	\$970

The above table shows that by raising prices as costs rise profits were \$970 despite the drop in sales. If prices were not raised profits would be lower even though unit sales would tend to be higher. Since profit margins are usually small and price increases on an industry basis do not usually bring about large decreases in demand in the short run, it is generally to the shortrun profit advantage of industry to pass on cost increase to customers in the form of higher prices. Also, when the higher costs are the result of higher wages there ordinarily is an increase in monetary income which helps sustain the price increases.

Wage increases that exceed productivity gains are fundamentally unsound because consumption generally cannot rise faster than production for any sustained period of time. An increase in productivity per worker makes possible more production per worker. An increase in wages makes possible more consumption per worker. If wages rise

faster than productivity then an attempt is being made to raise consumption faster than production and this of course is a physical impossibility.

The decreases after 1955 in auto output, housing, and inventory investment, plus the restrictive monetary policies, brought the following declines in the rate of plant utilization by manufacturing industries:

	<i>Rate of plant utilization by all manufacturers</i> <sup>1</sup>	<i>Percent</i>
September 1955	-----	92
September 1956	-----	86
September 1957	-----	82

<sup>1</sup> The preferred rate is about 90 percent.

From the fall of 1955 to the fall of 1957 plant capacity was expanded by about 13 percent but output rose by less than 2 percent. Thus the volume of economic resources that were idle increased steadily during 1956 and 1957.

During the economic difficulties of 1956 and 1957 tax rates were kept high and the U.S. Treasury ran a surplus of \$1.6 billion in both fiscal years 1956 and 1957. Even after the recession got underway in September 1957 there was no significant tax reduction as there had been during the 1953-54 recession.

With the various aforementioned factors combining to slow the growth rate of the economy after 1955 it is to be expected that productivity would also grow by a subnormal amount in this period. Productivity actually rose by the smallest amounts in 1956 and 1957 of any postwar year and was only about one-third as large as the average year during the 1948-57 period.

*Labor may sometimes fear and resist productivity gains*

A second major cause of the poor gains in productivity during the 1956-58 period was the growing fear on the part of labor of permanent technological unemployment. Manufacturing employment began to decline in late 1955 and this downward trend continued in 1956 until the recovery from the steel strike that summer temporarily stimulated employment. In November 1956, manufacturing employment again started a decline which lasted for 18 months. During the 1956-58 period there was an unusually rapid increase in plant and equipment per manufacturing worker, rising from \$9,000 per worker in the fourth quarter of 1955 to over \$12,000 in the fourth quarter of 1958.

With this remarkable upsurge in mechanization plus declining employment opportunities, more labor resistance naturally developed to the introduction to labor-saving equipment. Many instances were reported of workers seeking to maintain their jobs by slowing down. Consequently, the gains in productivity were very small compared to the great increases in capital per worker. The steel industry, for example, increased its investment by over \$2 billion; yet approximately the same man-hours were required to turn out 107 million tons in 1957 as were used to produce 110 million tons in 1955. Apparently management did not make a great enough effort, or else failed to convince workers threatened with technological unemployment, that through retraining and shifting to other company jobs opportunities for employment would continue despite technological advances. The failure of productivity to rise significantly while investment rose substantially proved costly of course to management.

IV. PRICE STABILITY ALSO DEPENDENT ON LIMITING THE INCREASE IN  
LABOR COMPENSATION TO PRODUCTIVITY GAINS

While productivity gains were relatively small in the 1956-58 period, average wage and salary rates increased by 5 percent annually, a rate well above the long-term growth rate of productivity. Thus, even if productivity gains had attained a more normal rate, wages still would have been rising faster, and hence some price inflation would have occurred. The table below shows the gap between the desirable trends in wage rates and productivity, on one hand, and the actual trends on the other.

TABLE IV

	<i>Percent</i>
Approximate average growth rate of productivity and preferred growth rate in wage and salaries-----	3
Actual annual growth rate in wages and salaries, 1956-58-----	5
Actual annual growth rate of productivity, 1956-58-----	1

## SUMMARY

To avoid significant inflationary pressures, it seems clear that a healthy economic growth rate needs to be generally maintained to help productivity rise by about 3 percent per year. Thus the governmental policies of the 1956-57 period should not be repeated, but rather the opposite policies should be followed. When the economy grows at an annual rate that is well below 4 percent for a number of months, monetary policies should not become increasingly restrictive as they did in 1957; rather conditions should be eased. Also, serious consideration should be given to tax reduction and, in early 1957, tax rates probably should have been reduced. The evidence in early 1957 of a coming recession was almost overwhelming, yet the monetary and fiscal policies followed were essentially deflationary. The result of tax reduction and credit ease at that time would have been to stimulate more economic growth, better gains in productivity, and less cost inflation.

In addition to aiding productivity advances by providing a favorable economic environment, labor and management need to plan together for reabsorption of workers released through technological advances. Otherwise, technological advances will be greatly resisted and management will fail to attain its desired productivity gains. Labor-management cooperation would include retraining of employees and planning for expansion of total output to permit a continuation of job opportunities for workers displaced by machinery. If the Government policies at this time are aimed at restricting economic growth to a subnormal rate because of misconceptions about the causes of inflation, then, of course, it will be hard to find jobs for technologically displaced workers and productivity advances will be resisted and in part at least prevented. There is little point in increasing productivity per worker if the growth rate of the overall economy is to be sharply restricted by Government action.

The second major defense against inflation is to secure recognition by labor and management that wage increases which exceed productivity gains are bad for both labor and management. When labor obtains inflationary wage increases, then prices tend to rise and

employment opportunities tend to weaken. Rising wages and prices encourage a more rapid substitution of capital for labor, induce consumer resistance, stimulate the shift by buyers to foreign markets, and encourage the development of substitute products. Furthermore, real wages do not rise faster than productivity and when prices rise labor pension programs, social security, insurance, savings, and so forth, are all worth less. Labor actually suffered heavily in the 1956-58 period through both inflation and loss of employment. Therefore, it should be possible to enlist the support of labor behind the concept that overall wages should not rise by more than productivity, or about 3 percent per year.

Management has agreed that wage increases should not exceed productivity gains, but often has been unwilling to accept expensive strikes to enforce this principle. Some firms are too weak financially to effectively enforce this policy in collective bargaining in which cases it is to be hoped that labor will see wherein its best interests lie and not use its full financial power in an inflationary fashion.

Mr. Chairman, in summary, I would like to say briefly how I got involved in this problem, because this bears on some of my conclusions. I became very interested in the behavior of the index of industrial production in 1956, when it failed to rise from the fall of 1955 to the fall of 1956. In that period, monetary policy was made increasingly restrictive and this seemed to be paradoxical in view of the behavior of the index. To study the Federal Reserve policy I could observe that prices were rising, and this seemed strange to me, too. After I got more deeply involved, it became much more complex than I had anticipated at the beginning of the study. As I continued to study this problem in 1957, it was pretty much the same thing—that is, the index continued to be very, very flat. Monetary policy became even more restrictive by mid-1957 and prices continued to rise. Then we moved into the recession period and, of course, the index of industrial production moved down sharply. Yet, in the first 8 months of the recession, the cost of living rose every single month. This continued to perplex me. It was obvious that this rise in prices was not due to excessive increases in the money supply or excessively easy monetary conditions or excessive growth in demand, and probably we would have to begin considerable analysis of trends in the cost structure. The individual firm in setting its prices looks at its costs and makes very strong efforts to recover them. Rising costs, therefore, can usually be expected to be followed by a rise in prices. This led me into an analysis of the cost pattern from 1955 up to the present time, which involved looking at the behavior of productivity, the behavior of wage and salary rates, the behavior of other such costs as research, engineering, depreciation, and so forth. My study presents the results of this analysis.

I concluded that I would have to study each major industry separately because the circumstances varied considerably from industry to industry. I found that I learned a great deal more about inflation when I looked at each industry separately. Then, after making a separate analysis of each industry, I found that some of them could be grouped as falling into certain classes.

I would like to ask you to turn to page 3 of my statement in which I have a table which summarizes something on the cost situation of various industries. I measured productivity gains in each industry

by looking at total output for the industry gains total man-hours worked.

The CHAIRMAN. Was this man-hours of wage employees or total of wage and salary?

Mr. ANDERSON. Total salaries. Man-hours for production and nonproduction workers. While I use the term "wage," actually it includes wages and salaries and total labor compensation, whether it is fringe or direct, because this is the cost to management and they consider this when they set their price.

I noted that there were four industries in which wages went up substantially more than productivity. At this stage we don't know whether it was because productivity gains were particularly small or the wage increases were particularly large. We will get to that. At any rate, there was a relatively large gap in four industries—steel, autos, machinery, and fabricated metals. The subsequent chart will show the size of the gap. The price increases in those industries were the largest of all our major manufacturers. Paper, rubber, food, and petroleum had a gap between the total labor compensation and productivity that was about average for the economy as a whole. Their price increases were about the same as the average price increase.

For two industries there were small wage increases and productivity gains, and there was relatively little price change.

The CHAIRMAN. Suppose you were to take increases of hourly wage workers only.

Mr. ANDERSON. I would get the same results. I was interested in this comparison so I studied the rate of increase in wage rates with the rate of increase in salary rates, and they were almost identical.

The CHAIRMAN. Yes, but what about the relative increase in the number of salary workers?

Mr. ANDERSON. There was a decline in the number of production workers and a substantial rise in the number of nonproduction workers. So we changed the labor mix. But for the two groups their rate of increase in compensation was about the same. I recall that when I was at the Ford Motor Co., when the auto workers got a wage increase and more fringe benefits and paid vacations, I automatically, and all of the white collar workers automatically got the same thing percentagewise as the production workers. We all got the same benefits.

The CHAIRMAN. If I may interject, why wouldn't an increase in the the number of salary workers as compared to wage workers alter the average wage of the two combined?

Mr. ANDERSON. It would.

The CHAIRMAN. What about starting from different levels?

Mr. ANDERSON. It may be that changing the mix on an absolute basis would be inflationary. In other words, if we increase our proportion of scientists rapidly and their average compensation is around \$35,000 a year, this can be expensive. The chart following page 4, the white bars show the increase in prices, and all industries are ranked by size of price increase. So steel is at the top because prices went up the most in steel. Nonferrous metals is at the bottom because prices went up the smallest.

The CHAIRMAN. You have the wrong code.

Mr. ANDERSON. That is correct. I am very sorry. These industries are ranked in order of price increase. It also came out that with the exception of nonferrous metals—that was not too bad, either—it came out fairly close that the size of the price increase was somewhat proportionate to the gap for that industry between gains in productivity and total increase in labor compensation. The only industry in which productivity went up more than wages was tobacco. This industry surprisingly enough raised prices by about 8 percent. You can see here prices for tobacco went up 8.7 percent even though productivity went up more than wages. This is a little surprising. When we look at the profit margins we find they have approximately doubled and you would expect a substantial increase in profit margins when prices go up while productivity also goes up more than wages. This was the one surprise in the 12 industries. The rest seem to behave as you might expect.

Now, I feel that the law of supply and demand has been partially repealed and reversed, because the industries that had the greatest increase in demand raised prices the least. The industries which show the smallest increase in demand raised prices the most. Chemicals had the most rapid growth rate in the 1955-1959 period. Their price increases were small. Paper and tobacco were average. Nonferrous metals behave as you would expect. The remaining seven industries were the reverse: very small increases in output and substantial price increases. I needed to get an explanation of why we had this consistent relationship between large growth and demand and small increases in prices. If we attribute a lot of importance to costs as a factor in prices, then this table makes sense. Because the chemical industry, for example, enjoyed a substantial growth rate. This aided it in increasing its productivity substantially. This enabled the industry to absorb the wage increases and prices increased by a relatively small margin. This suggests that if we want price stability, we need a strong growth rate in the economy to make possible gains in productivity with which to absorb wage increases. This is the reverse of the thinking in 1956 and 1957 because at that time the feeling was that we needed to restrain the growth rate of the economy in order to prevent inflation. This policy actually, I am afraid, promoted inflation because when we slowed the growth rate of the economy we slowed the growth rate of the productivity gains. When we slowed the growth rate in productivity gains this increased the gap between wages and productivity and contributed to higher unit costs and hence it contributed to inflation. So I think we need to be careful when we attempt to combat inflation by restraining demand to a 1 or 2 percent annual growth rate.

The CHAIRMAN. Is there any representative of the Federal Reserve Board here?

Senator BUSH. There are a couple of defenders here.

The CHAIRMAN. I think it would be fine if this sentence was recalled to their attention, for transmission through appropriate channels.

Mr. ANDERSON. I would like to refer briefly to this table. To show the rationale behind why a business firm will raise prices when costs go up even though it means a decrease in demand for the firm, looking at the middle column of the table, we see that your unit costs are 93

versus 90, an increase of 3. If prices were left alone, the profit margin would be cut from 10 to 7, and total profits would decline from a thousand to 700. So any firm that leaves its prices alone while costs go up may experience a substantial percentage decline in profits. On the other hand, if they raised their prices by \$3 per unit, when their unit costs went up by \$3 this would have an adverse effect on sales very often. If we assume price elasticity of 1, which I think it is approximately for the economy as a whole, then there would be a slight decrease in demand in proportion to the rise in price, but their profit position is still better. I served as consultant to some 30 business firms and my usual advice to them is when your costs go up raise your prices and you may lose some of your market but your overall position will be better, and you need these profits to maintain a competitive position to invest in new plant and equipment, research, development, and you can't afford to give up these profits. So while this is unfortunate, you must basically try to hold your costs by improving productivity; if you fail then you must do the next best thing and try to maintain your profit position and minimize the decline. So this is why business firms during a period of rising costs continue to raise prices even though the demand was going down and demand softened. So a mere softening of demand will not prevent this is why business firms during a period of rising costs continue to raise prices even though the demand was going down and demand softened. So a mere softening of demand will not prevent price inflation when you have rising costs. This, it seems to me, explains why we had inflation during the recession because we still had rising costs during the recession period. This was a more important factor than demand. So if you compare the importance to prices of demand and cost, my conclusion is that usually costs are more influential than demand influencing your price behavior.

Now I would like to turn to this chart in which each bar represents the quarterly increase in gross national product in terms of constant dollars. For example, the first bar on the left of 13.1 billion means that gross national product in the first quarter of 1955 rose by \$13.1 billion. I feel that a normal or average increase per quarter is about \$4 billion, which is represented by the heavy black line. We can see that in 1955 for the most part the quarterly increases in gross national product were above average. We also had price stability in that period. The economy was growing rapidly because of recovery, and we had price stability during rapid growth. Then we went into the 1956-57 period in which the quarter to quarter increases in gross national product were less than what we might expect out of our normal long-term growth rate with the exception of the fourth quarter, 1956, when we were recovering from the steel strike. In those periods when the economy was growing slowly we got approximately 90 percent of all the inflation that we have had since the end of the Korean war. About 90 percent of all of our post-Korean inflation came during a period of slow growth. Slow growth means low gains in productivity. This tends to mean rising costs. And this tends to mean rising prices.

Senator BUSH. Those 2 years together constitute the period of inflation you are speaking about?

Mr. ANDERSON. That is correct.

Senator BUSH. 1956 and 1957.

Mr. ANDERSON. That is correct. Once we began to recover from the recession and the increases in gross national product were average or above average, prices flattened out and we had price stability during a period of strong growth. So the real point I want to make is that we have had undue fear of rapid growth. We have attached inflationary significance to a strong growth rate of economy that should not be. Conversely, we have assumed that a slow growth rate of 1 to 2 percent a year will give us a strong safeguard against inflation and the evidence that I have been able to observe indicates the reverse. Slow growth actually promotes inflation. You can go to either extreme. If we tried to get a 5- to 10-percent growth rate, this probably would promote inflation. Somewhere around a 4-percent growth rate over time would seem to be our best defense.

In the last chart I would like to present, we correlate the large increases in output with the large gains in productivity. The industries which enjoyed the biggest increase in output were the ones that enjoyed the biggest increase in productivity.

Senator BUSH. How do you define productivity there?

Mr. ANDERSON. This is total output per man-hour. Total output of the industry divided by the man-hours worked in the industry. The industries which had the greatest increase in output by and large show the greatest increase in productivity. During the recession of 1957-58 productivity actually declined. Output per man-hour declined during the recession by about 2 percent. During the recovery period, productivity increased by about 6 percent. This gain indicates the favorable effect of rising output on productivity. Looking at the current situation, if the Federal Reserve policies become so restrictive as to limit the growth rate of the economy to about 2 percent, it will be very difficult to get the necessary gains in productivity to absorb the wage increases. Hence, a highly restrictive monetary policy would promote inflation.

My emphasis in this report was primarily on the relationships of growth and price stability because I felt that in many of the discussions this had been neglected or underemphasized. I have talked mostly about the gains in productivity and gains in growth, but it is also true that even had we gotten our normal gains in productivity in the 1956-57 period, total labor compensation was rising at a faster rate than could be absorbed, namely, about 5 percent. So we have the educational job of convincing both labor and management that if they agree to a contract that raises wages faster than productivity both will suffer. Labor will suffer because it tends to mean less employment and less labor income. If they get a substantial increase in wages that results in a rise in prices this accelerates mechanization, the employment of laborsaving devices, the shift to foreign sources, the shift to substitutes, and resistance by consumers. All of this adds up to less employment, less income for labor, and the purchasing power of their social security, their pensions, their insurance, their savings, declines. So labor is an important loser when it gets a wage increase that substantially exceeds productivity. Management, of course, is an important loser, too, and so is the economy as a whole.



In my opinion many times a labor organization has the power to get a wage increase that exceeds productivity. They have the economic power to do this. If they use this power very often it will be to their own disadvantage. So I think it is a matter of enlightened self-interest for labor to not use all of the strength at its disposal. At the same time, it is management's responsibility to also work for the same goal and also work to get the maximum increase in productivity. This brings up a real problem because labor will have a natural fear of a large rise in productivity because it may mean less employment. The number of manufacturing workers declined after 1955. With employment opportunities going down they are naturally going to resist productivity increases unless there is careful planning on management's part for retaining or relocation which may be beyond the firm's financial capacity. This may be too great a responsibility. But insofar as management can reduce the resistance to productivity gains a contribution will be made to price stability.

Representative CURTIS. Was not the main unemployment increase in the nonskilled or the semiskilled areas?

Mr. ANDERSON. Yes, sir.

Representative CURTIS. Why would that argument apply, then?

Mr. ANDERSON. Mechanization replaces the unskilled worker primarily.

Representative CURTIS. You don't have the problem of retraining.

Mr. ANDERSON. If he is unskilled and he is replaced by machinery then he just needs training, period.

Representative CURTIS. That is correct.

Mr. ANDERSON. Yes.

Representative CURTIS. That is one of the things I have thought in studying this unemployment. As technology advances, it has not usually meant the displacement of skilled people; it has not produced much displacement in that one area.

Mr. ANDERSON. That is correct. I have the same impression. I think I have run over my time and I would rather end my presentation at this point.

The CHAIRMAN. Professor Okun.

#### STATEMENT OF ARTHUR M. OKUN, ASSISTANT PROFESSOR OF ECONOMICS, YALE UNIVERSITY

Mr. OKUN. The wage-push thesis has gained widespread advocacy as the explanation for rising prices during the weak boom of 1955-57. The thesis contends that unions have the power and the desire to raise wage rates in certain key industries even in the absence of excess demand for labor. These key bargains, it is contended, form a pattern for wage determination in other industries and hence fix the pace of wage increase throughout the economy. The rate of wage rise tends to exceed the average growth in labor productivity for all sectors and thus raises wage costs per unit of output. The rise of unit labor costs, in turn, gets reflected in higher prices for goods and final services.

In one important theoretical respect, I am uncomfortable with the wage-push argument. It is easy to accept the possibility of autonomous wage increases in concentrated unionized industries, but the cost-push advocates have not explained how these increases can be

transmitted with undiminished vigor to other sectors. Wage increases are not, in principle, contagious. With sufficient effort, I could assemble a set of assumptions that would be consistent with the hypothesized diffusion of wage rises, but the resulting analytical structure would be most shaky. In fact, conventional economic analysis suggests that large autonomous wage rises in steel and autos, for example, should, if anything, retard employment in these sectors, increase the supply of labor available to other industries, and thus have a depressive effect on wages elsewhere.

Whatever its theoretical shortcomings, the assumption of pattern wage bargains gets support from the data of 1955-57. Average hourly earnings in various industries did move together very closely. For example, increases of 14 percent are shown for both durable and nondurable manufacturing from 1954 to mid-1957, despite the greater buoyancy of demand in the hard-goods sector. Of course, the parallel movements do not indicate which area set the pattern. Even more important empirical support for the wage-push thesis comes from the behavior of factor shares in 1955-57. While price increases accelerated in 1956, corporate profits fell as a fraction of income originating in corporations and as a fraction of national income. Employee compensation meanwhile gained as a share of income. In contrast with the two previous postwar inflations and in contrast with standard economic analysis of the inflationary process, the squeeze on profits is an unusual feature of the period. The sag in profits is consistent with the thesis that wages pushed prices up.

There is an alternative explanation of rising prices in the absence of overall excess demand; this may be labeled the bottleneck thesis. The general price level is likely to move upward as a result of excess demand in some sectors of the economy even when there is an equal volume of excess supply in other industries. Factors of production are specific: men have particular skills and machines have particular uses. In the short run, the presence of excess capacity and idle men in the production of textiles cannot alleviate excess demand for machine tools. Without reference to the existence of monopoly, imperfect substitution of factors between industries explains why the economy normally has vacant jobs and idle men simultaneously. The presence of vacancies and unemployment in equal numbers can push up the price level because the stimulating effect of excess demand on price outweighs the depressive effect of an equal excess supply. Such an asymmetry would not occur in a perfectly competitive auction market and hence it is possible to attribute the phenomenon to "administered prices." But this is not a fruitful way of viewing the matter. Even in highly atomistic competition, most goods and services must be sold by price tags. In a world of price tags, it is clear that prices and wages will not respond instantaneously and continuously to market variation and that, in particular, they may respond more readily to upward than to downward pressures.

The bottleneck explanation accounts for the particularly rapid price increases in construction and producers' durable equipment during the investment boom of 1955-57. It also explains the intermediate expansion of consumer durables prices, which rose somewhat more than

consumer nondurable goods but far less than producers' durables. It is further consistent with the strong price increases in the expanding and buoyant area of services. Taken by itself, the wage-push thesis cannot account for these differential price movements. On the other hand, neither the profit squeeze nor the parallel paths of wage rates are readily explained by the bottleneck thesis. Furthermore, continued, though decelerated, price rises during the 1957-58 recession are consistent with cost-push, but can be reconciled with the bottleneck explanation only if important lags in pricing are assumed.

I personally am not prepared to allocate responsibility for the price rises of recent years between wage-push and bottlenecks. I should like instead to conclude by comparing the policy implications of the two theoretical positions. For overall monetary and fiscal controls, the dilemma is the same whatever the explanation. Tighter money and tighter budgeting can hold down prices whether the route is by curtailing demand in tight markets or by reducing the bargaining power of organized labor. The cost in either event is a lower level of output and employment. The bottleneck argument suggests the desirability of specific selective policies with particular stimuli and sedatives directed to slack and tight markets, respectively. The significant implication of the wage-push thesis is that the economy is subject to movements of wage costs which have no social function in allocating resources and which are responsible for the upward drift of the price level.

Emphasis should be placed on the implications of these propositions for public policy, rather than on the suggestion that big unions and big business deserve a low grade for deportment. It is surprising—though fortunate, in my opinion—that very few of the wage-push theorists follow their views to the logical conclusion of advocating public control over wage agreements. Perhaps the majority recognize that the conflict between price stability and maximum output would exist even if the institutional structure of labor markets could be reformed. The significant and valid message of the bottleneck thesis is that labor-management relations are not solely responsible for the policy dilemma. Differences in the intensity of demand in various sectors would alone make rising prices a feature of most prosperity periods and would present to the policymakers a continuing choice between a higher level of material welfare and a greater degree of price stability. The conflict between these goals is inescapable in my opinion.

The CHAIRMAN. Thank you very much. Discussion will be continued by Prof. Charles Schultze of Indiana University. As we all know, the first study paper of this committee is a very able monograph by Professor Schultze. It is entitled "Recent Inflation in the United States," dealing primarily with the 1955-57 period. I take it that the summary of the paper which he is going to read now deals primarily with this subject and perhaps illuminates some of the points which he has discussed. I may say in connection with the papers both of Mr. Anderson and Professor Schultze, we will print them in the record as submitted to us and print also the shorter statement which they will now make.

STATEMENT OF CHARLES L. SCHULTZE, DEPARTMENT OF  
ECONOMICS, INDIANA UNIVERSITY

Mr. SCHULTZE. While there is relatively little controversy over the nature and causes of inflation during periods of war or postwar reconversion, there is substantial disagreement over the causes of the relatively mild inflation of recent years. Those who believe that inflation stems, now as always, from "too much money chasing too few goods" are ranged against those who attribute postwar inflation to the upward pressure of wage costs on prices.

An analysis of the behavior of the economy during the past several years suggests, however, that neither of these two lines of analysis provides a sufficient explanation of the price rises which occurred.

In particular, it turns out that the relatively moderate upward drift in the average price level cannot be analyzed in terms of aggregate data alone. Demands for goods and services were not, in the aggregate, excessive during most of the period in which prices were rising. Nor is there much evidence of an overall upward pressure on prices from the side of wage rates. It was the shift in the composition of demand rather than its aggregate magnitude which provided the initial impulse to the inflation.

The price and cost system of the modern American economy is so constructed that it responds to a sizable shift in the structure of demands not merely by a realignment of relative prices but also by a rise in the general price level. Even though rapidly rising demands in some sectors are balanced by declining demands in others, rigidities in the structure of prices and costs insures that the net result will be an increase in the average price level.

Further, the nature of costs in American industry has been undergoing a radical change in the postwar period; an ever-increasing proportion of total costs is represented by items of overhead and a declining portion by direct costs. This little-noted development has widespread implication for many facets of our economic life. Not the least of these is its impact on the behavior of prices.

Under the conditions which prevailed during the 1955-57 inflation, rising overhead costs were a significant factor contributing to price increases in a number of industries. In the discussion which follows the theoretical analysis is presented first. This is followed by an examination of the rise in the general level of prices in the period from 1955-57, illustrating the points developed in the theoretical section.

The current debate about the nature of inflation: The controversy over the nature and origin of rising prices in recent years finds the protagonists generally divided into two groups: those who stress the importance of aggregate excess demand for goods and services as the causal factor, and those who attribute the price rise to an independent increase in wage rates or administered prices.

The terms "demand-pull" and "cost-push" have generally been applied to the respective theories. In actuality, however, those contributors to the controversy who recognize the complexity and interrelationships which characterize all economic processes bridle at being so neatly assigned to one of two categories, particularly when the categories are considered as mutually exclusive. In fact, of course, they are not.

Various theories of the inflationary process may preliminarily be thought of as constituting a spectrum. The place of any particular theory in that spectrum depends on what it postulates about the likelihood of significant and sustained increases in prices without the prior and continuing stimulus of rising demands for commodities and factors of production. The greater the degree of "independence" one assigns to price and wage decisions, the closer one is to the cost-push end of the spectrum; and, of course, vice versa.

If prices and wages are sensitive to the level of demand, then no inflation can continue unless aggregate excess demand is constantly being renewed. The appearance of relatively small amounts of additional unemployment or excess capacity would quickly halt any price rise. Monetary and fiscal policy, appropriately handled, can achieve full employment and price stability; all that needs to be done is to prevent the growth of excess demand. Moreover, according to demand-pull theories of inflation, it is only aggregate excess demand which can produce inflation.

So long as excess demands in particular sectors of the economy are offset by declining demands in other sectors the general level of prices will not rise. Since prices are flexible in response to changes in demand the price decreases in areas with falling demands will balance the price increases in areas with excess demands. It is only an excess of demand in the aggregate which can lead to a rise in the overall price index.

If, on the other hand, price and wage decisions are relatively insensitive to the state of demand, then an inflation can occur in the absence of excessively rising aggregate demand. This is the basic theoretical position of the cost-push theorists. There are two aspects to this approach. If prices are marked up to cover increases in costs regardless of demand conditions, and if wages in turn tend to rise with productivity and the cost of living even in the face of unemployment, then an inflation once begun can continue indefinitely.

Prices rise and wages are raised to compensate for the higher cost of living. This raises costs, which are passed along in higher prices. Thus the spiral continues, even if unemployment and excess capacity are growing. To this inherently unstable situation, the cost-push theorists usually add an additional ingredient—the power of unions to win wage increases in excess of productivity gains. The resultant rise in costs is the initiating factor which sets the spiral in motion; the mutual upward adjustment of prices to wages and wages to prices keeps it going.

Clearly no cost-push theorists adhere to the extreme position that the insensitivity of price and wage decisionmaking to demand conditions is absolute. At very high levels of unemployment or excess capacity the spiral could be broken. But the essence of their position is that it takes unbearably high levels of unemployment and idle-plant resources to halt the inflation.

The controversy between the demand-pull and cost-push theorists is in reality, therefore, a debate about the consistency of full employment and price stability. And the key to this debate, as it has been carried on in recent years, is the degree of sensitivity of prices, wages, and other costs to the state of demand for goods and services.

The response of prices and wages to changes in demand cannot, in reality, be forced into the simple categories of "sensitive" or "insensitive." The most important fact about their behavior, for the purpose of analyzing creeping inflation, is its asymmetry. Prices and wages tend to be more flexible upward in response to increases in demand than they are in a downward direction in response to decreases in demand. As a consequence, the composition of demand as well as its aggregate magnitude, takes on a central role in the generation of inflation.

The nature of creeping inflation: An examination of recent history suggests that creeping inflation is not a phenomenon which can be dealt with in aggregate terms. In particular the price increases from 1955-1957 stemmed, in the main, neither from autonomous upward pushes of administered prices or wages nor from the existence of an aggregate excess demand. Neither of these explanations can satisfactorily account for a number of apparent paradoxes during this period: the dissipation of a relatively modest 5 percent per annum rise in money expenditures in a 3½-percent price rise and only 1½-percent output gain; the apparent correlation of price increases with demand increases industry by industry, but with an upward bias, so that the overall level of prices rose while the overall level of demand was not excessive; the fact that prices rose more rapidly than unit wage costs, while at the same time net profit margins were shrinking; and finally the high level of investment activity followed by a disappointing gain in productivity and consequent increases in unit costs.

The theoretical and empirical analysis of the economic processes which lead to creeping inflation is not easily summarized. It is not a relatively simple matter which can be condensed into a short formula, like the popular "to much money chasing too few goods." Nor is it a "devil" theory in which abound the villains of most cost-push theories—the union boss and the greedy monopolist. We shall attempt, however, to sketch the characteristics of economic behavior which lead to creeping inflation and indicate briefly the application of the analysis to the 1955-57 period.

The importance of the composition of demands: Prices and wages in the modern American economy are generally flexible upwards, in response to excess demand, but they tend to be rigid downward. There is, as we noted earlier, an asymmetry in their behavior.

Even if demands in the aggregate are not excessive, a situation of excess demand in some sectors of the economy balanced by deficient demand in other sectors will still lead to a rise in the general level of prices. The rise in prices in markets characterized by excess demand will not be balanced by falling prices in other markets.

The kind of inflationary pressure arising out of a sharp change in the composition of demand will not be confined to the kind of averaging process described above. Excess demand in particular sectors of the economy generates upward pressure on prices in the rest of the economy through its influence on the prices of materials and the wages of labor. Crude materials prices are normally quite sensitive to changes in demand, and are unlikely to rise significantly unless demand for them in the aggregate are excessive.

Prices of intermediate materials supplies and components, on the other hand, are more likely to be rigid downward, but flexible upward

in response to an increase in demand or costs. Prices of those materials chiefly consumed by industries with excess demand rise, since excess demand for the final good will usually imply excess demand for specialized materials. Materials used daily in industries with deficient demand will not fall in price, unless the demand deficiency is quite large.

Thus excess demand in particular sectors of the economy will result in a general rise in the prices of intermediate materials, supplies, and components; industries which are not experiencing excess demands will find themselves confronted with rising materials costs.

Wages will also be bid up in excess demand industries. Wages in other industries will tend to follow. Even though demand for labor is not excessive, firms cannot allow the wage differential between themselves and other firms get too large; this is not because they fear the wholesale desertion of their work force, but because they do not wish to experience the inefficiencies and lowered productivity which result from dissatisfaction over widening differentials. Rising wage rates, originating in the excess demand sectors, thus spread throughout the economy. Because productivity gains in the short run are greatest where demand and output are increasing, firms in those sectors where demand is rising slower than capacity will often be faced with even larger increases in unit wage costs than firms in the areas of excess demand. In some cases the size of wage increases will be determined by long-term contracts concluded in earlier periods. Except as the increases are modified by changes in the cost of living (through escalator clauses) they will have little relationship to the current state of the market.

The tendency of wage gains in most industries to equal those granted in the most rapidly expanding industries is brought out in table 1 below. Between mid-1955 and mid-1957 the increase in output in the most rapidly expanding manufacturing industries was almost five times greater than the average rise for all industries; the lowest quartile experienced on the average a 6 percent decline in output. Because productivity gains tend to be largest in industries with the largest output increases, the variation of employment change was less than the variation of output change. Nevertheless employment in the lowest output quartile fell about 9 percent while it rose by 2 percent in the industries whose output was increasing most rapidly. Changes in average hourly earnings were insignificantly different, however.

TABLE 1.—*Changes in output, employment, and wage rates; manufacturing, May-June 1955 to May-June 1957*

[Percent change]			
	Output	Production worker em- ployment	Average hourly earnings
All industries.....	2.7	-3.1	9.8
Average of highest quartile <sup>1</sup> .....	12.0	1.8	9.5
Average of lowest quartile <sup>1</sup> .....	-6.0	-9.1	9.0

<sup>1</sup> Highest and lowest quartile selected in all cases on the basis of changes in output.

Sources: Board of Governors of the Federal Reserve and Bureau of Labor Statistics.

Despite the larger rise in demand and productivity in the expanding industries, the increase in wage rates was about the same as the average for all manufacturing, and only slightly higher than the rise for the lowest quartile. The same relationship between output, employment, and wages prevailed during the longer period, 1953 to 1957. The average rise in hourly earnings was about 2 percent lower than the rise in the top output quartile and 1½ percent higher than the lowest quartile. But the difference between the average increase in wages and the increase in the two outer quartiles was only one-half of 1 percent per year.

A United Nations study of these relationships for a number of industrialized nations between 1950 and 1956 and between 1954 and 1956 matches our findings exactly (United Nations World Economic Survey 1954, table 8, p. 37). There is a systematic tendency for the average wage increase to equal the increase in the most rapidly expanding industries.

Clearly the uniformity of size of increases in production-worker average hourly earnings does not imply the existence of a highly mobile labor force facing an aggregate excess demand for labor. In the first place the degree of mobility in the labor force is not so great in the short run as to lead to such uniform wage behavior. More importantly, the demand for production workers was not excessive during the period. Indeed from mid-1955 to mid-1957 production-worker employment in manufacturing declined. The uniformity reflects, rather, the tendency of wage-rate increases in a wide variety of industries to match those granted in the rapidly expanding industries.

The spread of wage increases from excess demand sectors to other parts of the economy accentuates the rise in the price of semifabricated materials and components. Thus the influence of rising costs and the resistance of prices to declining demands will be larger at the later stages of the production process, other things being equal. The opportunities for rigidities to build up and for rising costs, particularly labor costs, to affect prices are multiplied as products approach the finished state.

Producers of finished goods will be confronted with a general rise in the level of costs, even when the demand for their products and their



own demands for materials and labors are not excessive. The more cost-determined are the pricing policies of the industries involved, the greater will be the price rise. In competitive sectors of the economy the rising costs will be at least partly absorbed. But in very many industries they will be more fully passed on in higher prices.

Markups will of course be shaded when excess capacity begins to rise. As inflationary pressures spread out from excess demand sectors, their force will be somewhat damped in the absence of excess aggregate demand. Similarly the tendency of wages to follow the pattern set in the rapidly expanding industries will be modified as unemployment rises. But so long as markups and wages are more sensitive in an upward than in a downward direction, a rise in the general level of prices can be set off by excess demand in particular industries.

If the hypothesis we have presented is substantially correct, we should find that the relative rise in prices among different commodities is related to the relative strength of demand, but with an upward bias. A given increase in demand will lead to a price increase significantly larger than the price decline accompanying a fall in demand of the same magnitude. This result emerges from the existence of downward rigidities in prices and from the influence on prices of cost increases generated in areas of rising demands.

We have no measures of excess demand. During the 1955-57 period, however, capacity in general was rising more rapidly than output. In such a situation the relative rates of growth in output among different industries provide us with a rough and ready substitute measure of relative rates of demand growth. A growing labor force and productivity imply a constantly increasing level of full employment output. If prices and costs were perfectly flexible with respect to changes in demand, price increases would only be associated with increases in output larger than the rightward shift in supply curves.

A plot of price changes against output changes industry by industry during some given period, say a year, should then produce a relationship about like that shown in chart 1. If aggregate demand is not excessive, aggregate output can rise moderately with no increase in the average level of prices. Prices should fall in industries whose output gain is less than average, while industries with larger than average output gains experience price increases.

Chart 1

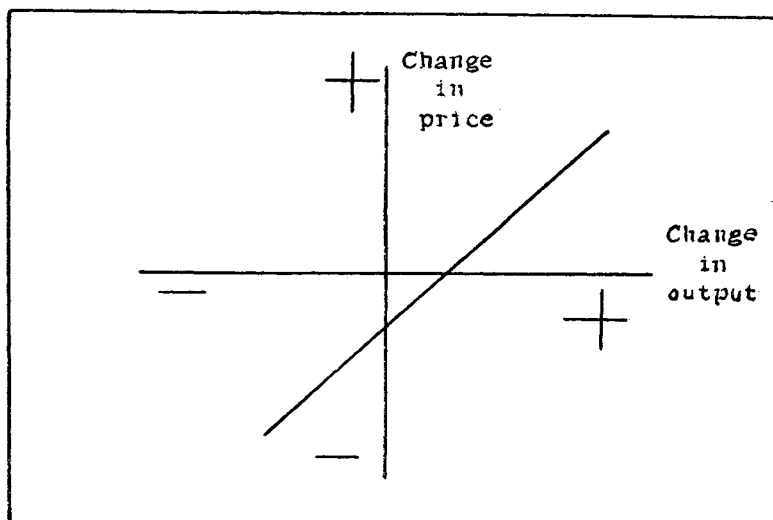
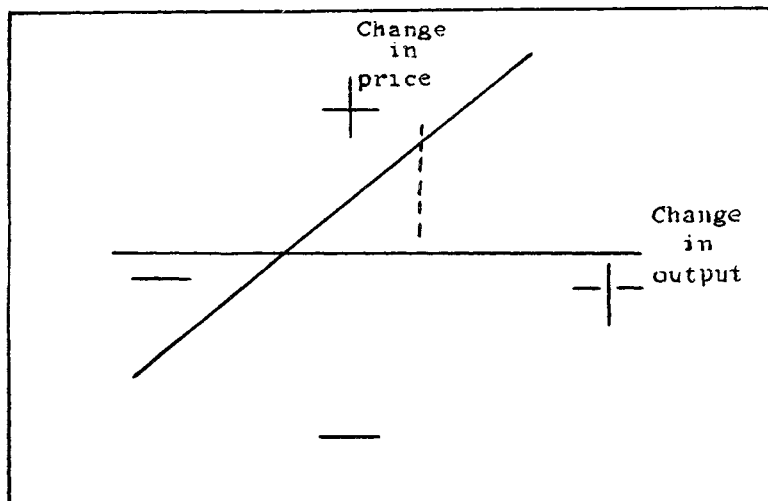


Chart 2



In our explanation of creeping inflation, however, the composition of demand is an important determinant of the general price level. Even if sharp increases in demand in some areas are balanced by decreases in others, an overall rise in the price level will normally result. If we plot the relationship of changes in prices to changes in output, our hypothesis would lead us to expect a relationship such as that shown in chart 2. There will be an upward bias in the relationship of prices to demand. Industries with no excess demands (under

our rough assumptions, those whose output is expanding modestly) will nevertheless be characterized by rising prices. Only those industries with substantial deficiencies of demand will be marked by falling prices. If we match, in some detail, changes in industrial prices and output during the 1955-57 period, we find a relationship exactly as depicted above.

There is positive association between price increases and output increases, but the relationship is not the one that would exist if prices and wages were symmetrically flexible. Although the average gain in output was quite small, there was a significant rise in the general price level. Many industries whose output rise was significantly less than the rightward shift in their supply curves nevertheless raised their prices. Generally speaking, prices were reduced only in situations where production was sharply curtailed.

Secular inflation: The mechanism by which shifts in the composition of demand tend to generate a rising price level did not suddenly emerge in the postwar period. Many prices and most wages have always been relatively insensitive to moderate downward shifts in demand. The magnetic effect of rising costs in particular sectors of the economy on the general level of costs is not a novel phenomenon. But the recurrence of sharp and prolonged general depressions was usually sufficient to break through these rigidities and enforce a reduction in the most insensitive prices and wages.

During depression years the widespread bankruptcies and reorganizations also led to massive writedowns in the value of fixed assets. This provided an additional damper on secularly rising prices. Increases in capital goods prices which accompany a short-run inflation normally leave a legacy of continued upward pressure on the level of costs.

Even after capital goods prices cease to rise, the replacement of lower priced assets—valued at the prices ruling before the inflation began—with new, higher priced assets tends to raise the level of costs. The fact that the new capital goods are more efficient than the ones they replace is no offset, for the rise in productivity so generated will normally be absorbed by higher returns to factors of production.

One may argue over the importance of capital costs per unit in short-run pricing decisions. In the long run it is quite clear that they do affect prices. The downward revaluations of capital assets during severe depressions removed this legacy of rising costs left by prior inflations. Thus, by breaking through the ratchet which holds up prices and costs, the severe depressions of earlier periods interrupted the tendency of prices and wages to rise secularly. There is little likelihood that any government would permit a recurrence of such protracted depressions in the future.

The downward rigidities in the price system tend to set in motion forces which practically guarantee a secular upward drift to the price level. Whenever profit margins expand to abnormal levels, as they inevitably do on occasion—as the result of an excess demand inflation or of the rapid productivity gains which occur in recovery years—downward price rigidities prevent margins from being returned to normal via price reductions. Rather, the excessive margins lead to an excess demand for factors of production. Wage rates are bid up, and in some cases factors of production are overemployed.

As a consequence, unit costs are raised to provide a new floor under the price level.

If prices were more flexible, the abnormal margins associated with periods of excess demand would generate pressures leading to price reductions when the excess demands were exhausted. Similarly, if prices were flexible during recessions, the rapid growth in productivity during the subsequent recovery (between 1910 and 1957 the average gain in output per man-hour—for the private nonfarm economy—during the first year of recovery from recession or depression was 5.2 percent compared to an average annual gain over the whole period of only 2.1 percent) would restore margins to normal levels, with costs somewhat lower than at the prior peak. The sharp productivity advances in recovery years would thus provide an offset to rise in costs and prices during other periods. Instead, with rigid commodity prices, the productivity gains are dissipated in higher factor prices.

The rigidities in costs and prices are thus sufficient to provide a ratchet under the price level, preventing its falling back from levels attained during periods of inflation. Adjustments in relative prices tend to be accomplished by upward movements only, even though aggregate demand is not excessive. Imbalances in general price-wage relationships also tend to be overcome by a rise in one relative to the other rather than by a mutual adjustment toward a common center.

Some qualifying comments. The kind of inflation which results from the process we have described is a gradual process. So long as aggregate demand is not excessive, inflation will be mild. The rigidities and cost-oriented characteristics of prices and wages are not so firm that they completely withstand the influence of deficient demand.

Our exclusive concentration on the inflationary consequences of sharp changes in the composition of demand should not be interpreted as a sign that the resulting inflation is a particularly awesome affair. Popular articles on inflation often begin by reciting all of the evils of a hyperinflation and then assign those evils as the consequence of any inflation, no matter how gradual. The inflation we have here described need have none of these characteristics. Mild inflation is, in fact, one of the ways in which an economy with downward rigidities in its cost and price structure allocates resources.

There are arbitrary income gains and losses accompanying any shifting about of resources, so long as those resources are not perfectly mobile. Whether individual well-being and social equity are better preserved when resource shifts entail only relative price changes instead of overall price increases, I do not pretend to know. Certainly, however, it is not a question whose answer is obvious.

Overhead costs: A second major factor influencing the determination of prices and the movement in the general price level in recent years has been the rapid growth in the proportion of overhead or fixed costs in total costs. This development played a particularly important role in the 1955-57 period.

Between 1947 and 1955 a very large part of the rise in total costs was accounted for by the rise in relatively fixed costs. Of the total increase in employment during those years, 65 percent represented employment of professional, managerial, clerical, sales, and similar

personnel. Only 20 percent of the increase was accounted for by operatives, laborers, and craftsmen.

In manufacturing, nonproduction worker employment rose 40 percent and production worker employment only 2 percent. During this same period fixed capital costs per unit increased very rapidly. Prices of capital goods rose relative to other prices, and the proportion of short-lived equipment to long-lived plant rose sharply. Depreciation charges thus expanded very substantially. Depreciation and salary costs per unit, taken together accounted for 40 percent of the increase in total unit costs in manufacturing between 1947 and 1955. Adding profits per unit until we account for two-thirds of the cost increase.

TABLE 2.—*Changes in manufacturing costs and prices*

	[Percent points]	
	1947-55	1955-57
Price of value added in manufacturing .....	29.7	9.6
Unit wage cost .....	9.0	3.9
Unit salary cost .....	7.7	5.6
Depreciation per unit .....	4.2	1.0
Profits per unit .....	7.2	-2.2
Indirect tax per unit .....	1.6	1.3

Source: Calculations of the author, described on pp. 82, 83, and in app. A of "Recent Inflation in the United States," study paper No. 1, Joint Economic Committee, September 1959.

The period between 1955 and 1957 was characterized by a very sharp rise in investment outlays accompanied by a quite modest growth in aggregate demand and output. Not only was capacity expanded rapidly but there was a continuation, indeed an acceleration, of the postwar growth in the number of overhead employees. Unlike earlier postwar booms, however, the expansion in these relatively fixed inputs was not matched by a corresponding rise in output (table 3).

TABLE 3.—*Indexes of capacity, employment, and output in manufacturing industries*

[1947=100]

	1955	1957
Capacity .....	147	164
Nonproduction worker employment .....	140	155
Production worker man-hours .....	103	109
Output .....	140	145

Fixed costs per unit of output therefore rose sharply, not because output was falling but because in very many industries it did not rise rapidly enough. In industries faced with slowly rising or declining demands, prices were raised almost, but not quite enough to cover these higher costs.

Of the total rise in unit costs (including profit margins) almost 60 percent was accounted for by higher salary costs per unit as compared to 40 percent by higher wage costs. Book depreciation charges are unreliable for most purposes; nevertheless, in combination with other costs, they put pressure on profit margins and to some extent prices.

The fact that a large part of the increased employment during the period was in the nature of overhead employment helps explain why the general price rise, during a period in which monetary demands were not excessive, did not lead to significant unemployment. By the same token the lack of rise in output relative to fixed inputs accounts for the disappointing gain in productivity. The rise in prices was accompanied by a relatively moderate increase in money expenditures.

Real expenditures and output rose by substantially less than the normal postwar rise to be expected from growth in the labor force and productivity gain. Yet instead of a rise in unemployment, there occurred a shortfall of productivity below its potential. Output per production worker man-hour continued to increase fairly sharply throughout the period—indeed production worker employment declined. But the failure of output to match the rise in overhead labor input substantially moderated the overall gain in productivity. In general, the more important fixed costs become, the more sensitive productivity will be to changes in output.

The failure of output to rise toward the levels implicit in the expansion of fixed inputs was partly due to the fact that declining demand in particular sectors of the economy—housing and automobiles—largely offset the rising demands for investment goods. But in addition the attempt to recapture in prices a substantial expansion in fixed costs at existing levels of output tended to raise the level of prices relative to any given money income; the gross saving rate at any given level of output was increased. This in itself damped the rise in output, so that the process tended to be self-defeating. Had output risen along with capacity, overhead costs would have been spread over a larger volume of output.

By restricting the growth in real demand, the very pricing policies which attempted to recover fixed costs at low levels of output, led to a rise in fixed costs per unit. To some extent a kind of "vicious circle" occurred. The failure of aggregate output to increase, raised fixed costs per unit. Insofar as prices were marked up relative to wage and salary rates in order to recover these higher unit costs, the forces impeding the growth in output were strengthened. This kept fixed unit costs high, and so on around the circle again.

The major part of the general rise in prices during recent years thus may be attributed to two sets of factors:

1. The downward rigidity and cost oriented nature of prices and wages in most of industry. During a period in which dynamically stable aggregate demand veils a fairly violent shift in the composition of demands, such market characteristics will result in a general rise in the level of prices. This rise cannot be said to result either from excess aggregate demand or from autonomous upward adjustments of administered prices and union wages. Rather it stems from excess demand in particular markets, and is propagated throughout the rest of the economy by a cost mechanism.

2. The attempt to recapture in prices at least some of the increase in fixed unit costs which occurred in a number of industries when a vigorous investment boom and a rapid substitution of fixed for variable labor input impinged on a situation of sluggish growth in output. Further, the fact that most of the employ-

ment rise was in overhead labor helps explain why the subnormal growth in output did not involve a rise in unemployment. It did however lead to the growth of excess capacity.

None of the foregoing is designed to indicate that all inflations are mainly the result of these processes. Excess aggregate demand has been the basic cause of all of our major inflations, including the postwar reconversion inflation.

And for a short while in late 1955 there seemed to be some excess aggregate demand. But the major thesis of this paper is that the creeping inflation of 1955-57 is different in kind from such classical inflations, and that mild inflation may be expected in a dynamic economy whenever there occur rapid shifts in the mix of final demands. It is, in effect, a feature of the dynamics of resource adjustment where prices and wages tend to be rigid downward. Moreover, it gives a secular upward bias to the price level so long as the major depressions which "broke" the ratchet in the past are avoided in the future.

Similarly there is no attempt here to prove that autonomous upward pressures of wage rates have had no impact on the price structure. Such pressures may have played a role in recent inflation. But the role was not a major one. The mere showing that wage rate increases exceeded productivity gains proves nothing at all with respect to the magnitude of this role. It is interesting to note, however, that the substitution of overhead for direct labor implies that wage rates cannot rise as fast as the statistical number called output per production worker if total unit costs are to be stable.

An analysis of inflation, 1955-57: Most of the features which characterized the rise in the general level of prices between 1955 and 1957 can be satisfactorily accounted for by the hypotheses developed in the preceding pages. The detailed results of an empirical analysis of the economic developments during that period are given in chapter 5 of the author's "Recent Inflation in the United States," study paper No. 1 of this committee's current investigation. The major conclusions of that analysis are summarized below:

Demands and prices:

1. As the economy recovered from the 1954 recession it reached a situation of aggregate excess demand in late 1955. Demands in all sectors of the economy were high and rising. This aggregate excess lasted only briefly however. After the end of the year purchases of automobile and houses fell rapidly, and remained at reduced levels in 1956 and 1957. Business demand for capital goods, on the other hand, continued to boom throughout the period.

2. On balance aggregate money outlays, after mid-1955, rose at a rate of about 5 percent per year. Prices rose at a 3½ percent annual rate and output by only 1½ percent. The normal postwar rate of growth in output has been about 4 percent per year.

3. The slow rate of growth in output and productivity cannot be explained by the "indigestion" hypothesis—i.e., the very size of the investment boom itself caused such dislocations that normal productivity gains were temporarily impossible. Output per man-hour of production workers did rise significantly; producers were able to substitute overhead for fixed labor; most

importantly there was a strong interindustry correlation between output and output per man-hour. Those industries whose output rose also achieved substantial productivity gains.

4. Thus the difference between the rise in aggregate money expenditures and output did not represent aggregate excess demand. The output rise was clearly less than the economy's potential. The growth of widespread excess capacity is a good commonsense indicator of this.

5. The magnitude of price rises among different sectors of the economy and among different industries was associated with the magnitude of the rise in demand in each sector or industry. But there was a substantial upward bias; in the aggregate, demands were not excessive, but on the average prices rose. In general prices rose even in industries where output was stable or falling moderately.

6. The magnitude of price rises among industrial commodities was related to two major factors. With a few important exceptions, commodities which experienced the largest price rises were those which had the largest increases in demand. Most commodities with large price rises were those associated with the boom in capital goods. The frequency of price declines and the magnitude of average price increases among different groups of commodities differed also according to the stage of fabrication. Very few finished commodities were reduced in price; price increases were, on the average, somewhat less and the evidence of price flexibility slightly greater for semimanufactured materials; the smallest average price rise, after late 1955, and the most flexibility occurred among crude materials.

7. Steel and automobiles were the major exception. In both of these industries the rise in price relative to the change in output was substantially greater than the average relationship between price change and output change in other industries which relationship was itself "biased" upward.

#### Wages:

1. Wage rate increases were fairly uniform among different industries. Wages in industries with stable or declining output rose by the same amount as they did in rapidly expanding industries. A United Nations study has found this uniformity of behavior to exist among industrial countries generally.

2. Productivity gains were closely associated with the degree of rise in output. Industries with rising output tended to have larger productivity gains than other industries, and vice versa.

3. As a consequence of these characteristics of wage and productivity behavior, wage costs per unit of output quite probably rose less in expanding than in contracting industries.

4. Price increases in the capital goods and associated industries accounted for two-thirds of the rise in the industrial wholesale price index between 1955 and 1957. Their prices rose 15 percent compared with an average increase of 4 percent for all other industries. Yet wage rate increases in the two groups were almost identical. Because of the relationship between productivity and output mentioned above, unit wage costs in the industries with large price increases averaged less than in other



industries. Prices in industries which accounted for the bulk of the overall inflation also rose substantially more than wage costs. In other industries unit wage costs rose proportionately (but not absolutely) more than prices.

Overhead costs:

1. All of the employment rise during the period was in overhead type employment. In fact the employment of the direct labor fell substantially.

2. More than 50 percent of the rise in total unit costs in manufacturing was accounted for by rising unit salary costs and an additional 20 percent by rising depreciation.

3. In the booming capital goods industries prices were raised by more than enough to cover the rise in costs. Net profit margins expanded. In other industries, however, prices on the average were increased almost but not quite enough to offset rising costs. As a consequence net profit margins per unit of output declined from the high levels reached in 1955. In the industries which were not experiencing rapidly rising demands the increase in unit overhead costs reinforced the upward pressure on prices arising out of wage and material cost increases.

4. The rise in salary costs per unit was not only due to an increase in salary rates—which rose by about the same amount as wage rates—but also by the rising ratio of salaried employment to output. The increase in this ratio stemmed chiefly from the failure of output to rise along with capacity. Had it done so, evidence from other postwar years indicates that the salaried employment-output ratio would not have increased.

5. Since productivity of both direct and overhead labor is output sensitive, it is clear that, within moderate limits, a further rise in output among industries operating below capacity could have resulted in lower unit costs. The data suggest an elasticity of at least minus one-half; i.e., a 1 percent further rise in output in industries operating below capacity could have yielded a one-half percent decline in total unit costs. (This assumes that the additional demand for production labor would not have led to even more rapid wage increases. Considering the large reductions in production worker employment during the period, this is a most reasonable assumption.)

Consumer prices:

1. In the consumer price index, food nonfood commodities, and services each account for approximately one-third of the total weight. Even among nonfood commodities manufacturers' prices make up not much more than half of the total price, the rest being transportation, wholesaling, and retailing costs. The service component of the CPI is made up of a long list of heterogeneous items, including such things as auto, real estate, and medical insurance, public utility rates, hair cuts, postage, and interest rates. Thus it would seem that the direct impact of changes in industrial prices and wages on the Consumer Price Index is relatively limited. Yet an increase in the prices of manufactured products diffuses itself throughout the economy by many indirect routes. Steel prices rise, school construction costs go up, and property tax rates are adjusted upward; an initial rise in the CPI on account of an

increase in industrial prices leads, with some time lag, to rising wages in the service industries and, for example, auto repair charges rise; and the examples could be multiplied ad infinitum.

2. About one-third of the rise in the consumer price index was contributed by increasing food prices. In turn, half of the rise in food prices was attributable to rising farm prices for livestock and half to increased marketing costs. The livestock rise chiefly reflected changing supply conditions. But an examination of the details of the increase in marketing costs shows that the same factors were operative as in the industrial sector generally.

3. The heterogeneity and institutional character of service prices makes any simple characterization suspect. The rise in consumer prices generated in other sectors of the economy and the general rise in wage rates did, however, lead after some time lag to a significant speedup in the rate of increase in service prices after mid-1956. And the rise in service prices in turn had repercussions on the increase in wages and prices in the industrial sector of the economy.

Some implications: Although it may not be obvious at first, this analysis is fairly optimistic with respect to its implications for the magnitude of the potential secular upward drift in the price level. In particular the size of the price increases between 1955 and 1957 are not a good indicator of the kind of problem which may be confronting us (assuming, of course, we do not allow classical excess aggregate demand inflation to get started).

The magnitude of the shifts in demands between mid-1955 and mid-1957 were unusually great, even for a dynamic economy. We should not be continually subject, for example, to a 2-year increase in expenditures for fixed business investment of some 25 percent (and a much larger rise in order backlogs) accompanied by 20-percent decline in residential construction and automobile sales.

The upward price pressure arising out of attempts to recapture fixed costs at reduced standard volume is not a continuing phenomena. It is unlikely, indeed impossible, for the average operating rate at which entrepreneurs attempt to recapture fixed costs to fall indefinitely.

Indeed the very size of the current ex ante profit margin, at full utilization of capacity, which resulted from this reduction in standard volume should become a moderating factor, offsetting price pressures from other sources as output rises toward full utilization of capacity.

This study does not attempt to evaluate the policy aspects of creeping inflation. It does, however, lead to certain general conclusions which are relevant in the formulation of anti-inflationary policy.

In the first place it is quite obvious that monetary and fiscal policies designed to combat an inflation arising out of excess aggregate demand are not suitable to a situation in which demand in the aggregate is not excessive. When, as in recent years, a rise in the general level of prices accompanies a growth in excess capacity, further restriction of the general level of demand may be positively harmful. Since productivity is sensitive to changes in output, when output is running below capacity, a general reduction in demand is more likely to raise unit costs by its effects on productivity than to lower them by its effects on wage rates. This will be particularly true if the restriction of aggre-

gate demand continues to leave the booming sectors of the economy relatively unaffected.

Monetary and fiscal policies which do not restrain aggregate demand, but impinge only on the sectors where demand is excessive, may indeed limit the inflationary forces during a period of creeping inflation.

Had investment demand risen more slowly between 1955 and 1957, and automobile and housing demand more evenly, we would have experienced a larger rise in aggregate output and a smaller rise in prices.

The question of selective tax and credit controls is far too broad to be discussed here; their application involves a host of economic and social questions which cannot be casually answered. At the same time, however, our analysis does indicate that counterinflationary monetary and fiscal policies must take into account the composition as well as the magnitude of demand. The use of monetary and fiscal policy to prevent the emergence of aggregate excess demand can prevent one type of inflation—indeed the most harmful type. But inflation can still arise in a situation of dynamically stable aggregate demand.

Under these circumstances we can either attempt to alter the composition of demand by using selective controls or we can accept the moderate price increases which take place. This is our choice. We cannot solve the problem, indeed we shall do positive harm, by a further restriction of aggregate demand through monetary and fiscal policy.

There is one final implication of this analysis. Creeping inflation is part of the process of resource allocation. Simply because it is called inflation, one cannot attribute to it the dire consequences associated with classical hyperinflation. It does indeed benefit some individuals and harm others—like many other aspects of the resource allocation process. In fact, it is, in part, a reflection of the attempt by individuals and groups in society to ease the adjustments in relative incomes which a shift in the composition of demand entails.

Creeping inflation probably disturbs the social structure much less than do the rapid changes in technology, the shift of income between industries, and the movement of industries from one region to the other, which we take to be the marks of a dynamic economy.

This does not mean that creeping inflation does not present problems. But it is one among many problems posed by a dynamic economy. Policy is quite rightly addressed toward minimizing the social costs of economic flexibility, but not at the expense of eliminating the flexibility.

All reasonable social goals are a mixture of objectives, and price stability is no exception. We do not aim at the maximum rate of economic growth to the complete exclusion of current living standards; nor would we choose maximum economic flexibility wholly ignoring the problem of individual security.

In a democratic society it is not the function of an economist to specify the particular combination of economic objectives at which policy should aim. This is the sphere of politics, in the broadest sense of the term. But an intelligent choice of goals does require an understanding of the economic relationships between various objectives and a knowledge of the probable consequences of choosing one combination rather than another. In formulating overall policy

to cope with the kind of inflation we have experienced in recent years, it is particularly important to have an awareness of the relationship between inflation and the process of resource allocation and between the control of aggregate demand and the behavior of productivity.

Mr. SCHULTZE. In the first place, let me assure you that I will not read this lengthy summary.

The CHAIRMAN. We will print the whole thing.

Mr. SCHULTZE. This is a summary, and I will now try to summarize the summary, and I hope in the process I won't lose too much.

Let me simply add as an aside that I rather wish I had come before Mr. Okum because really in two or three pithy sentences he has put across an idea that took me 100 pages to put across, and that is the importance of the composition of demand as well as its aggregate. I want to make two major points. The first one is that analysis of inflationary pressure in recent periods cannot really be explained fully neither by looking at excess aggregate demand nor can it be explained by an autonomous wage push. If I may retrace steps a little bit, let us look at the current controversy which generally divides the two schools of thought on inflation: the demand-pull and the cost-push theories. In the first place, I think we ought to be pretty clear about the meaning of cost push. It doesn't mean simply that wage increases are rising more rapidly than productivity. This is a phenomenon that would be associated with any kind of inflation, a demand or cost inflation. In fact, I will go further and say that no wartime inflation, for example, could really last very long until wages did rise more than productivity. Because if wages didn't rise more than productivity, you would have a tremendous shift of income to profit. What this would do to consumption would damp the inflation down. So even a demand inflation has to have wages rising faster than productivity, and we prove nothing by simply pointing to this fact.

The CHAIRMAN. In demand inflation wages have to rise faster.

Mr. SCHULTZE. They have to rise faster than productivity for any substantial demand inflation. If wages didn't rise faster than productivity the increases in prices relative to wages would soon shift income from wages to profits and over any long period would eliminate the inflation.

The CHAIRMAN. Because of reinvestments?

Mr. SCHULTZE. Eventually the impact on consumption. Driving down consumption as real consumers' income is pushed down would offset any stimulating effect that the rise in margins would have on investment. Perhaps not immediately but eventually.

Let me go further and, without attempting to document, note that the wartime inflation of 1939-48 was an inflation which almost everybody attributes to excessive demand. Yet in this period the excess of the rise in wages over the rise in productivity was about 5 to 6 times greater than the postwar excess of the rise in wages over the increase in productivity.

This should not seem strange but perhaps it does because we have heard so much from people attempting to prove a cost-push inflation solely by pointing to the fact that wages have risen faster than productivity. All I am trying to say is that this may or may not mean it is a cost-plus inflation. This does not tell us why wages rose. Wages can rise because of demand or because of the autonomous power

of unions. We may be able to find out the basic nature of the inflation, but not by simply looking at the relationship of wages and productivity. Therefore, considered in a fairly refined sense, if you want, the cost-plus thesis rests on the sensitivity of price and wage decisionmaking to demand. If prices and wages are relatively sensitive to changes in the state of the market, then a cost-push inflation is in the long run impossible, because relatively small increases in unemployment or in excess capacity would soon damp down the excessive rises in wages and/or prices.

This, therefore, is the real issue around which the current debate hinges, the sensitivity of prices and wages to demand. It boils down, therefore, to an argument about the compatibility of full employment and price stability. If prices and wages are very sensitive to small changes in demand, then monetary and fiscal policy, by controlling demand and manipulating it, can prevent price and wage increases without having to have substantial unemployment or excess capacity. If, on the other hand, prices and wages are insensitive to changes in demand, then clearly you can have a continued inflationary spiral even if you put the screws on demand. Nobody in this controversy takes an extreme position. The cost push theorists don't deny that there is some level of unemployment or excess capacity which would damp down the rise in wages and prices. But the mere fact that they do not deny such a possibility doesn't take away the seriousness of their contention. Because if it takes substantial increases in unemployment and substantial excess capacity to halt price increases then we really do have a policy problem of equating full employment and price stability.

Let me make one additional point on this current controversy. On the demand-pull side where the case rests on the flexibility or sensitivity of prices and wages, it is essentially an aggregate theory. Demand has to be excessive in the aggregate if prices and wages are flexible in order to get inflation. If you have excess demands in one sector balanced by deficient demands in another sector, you will get some prices rising and some falling. But so long as, in the aggregate, demands are not excessive the demand-pull theorist would say you will get no overall price inflation. I think this sums up the basic issue of the controversy.

I would like to suggest, after this attempt to present the nature of the current controversy, that to some extent at least it is beside the point. We cannot really classify wage and price behavior simply into flexible and inflexible. The key fact about prices and wages in a modern economy is the asymmetry of their behavior. By that I mean it takes a substantially larger decrease in demand to get a given decrease in price or wage than the demand increase associated with a price or wage rise of the same magnitude. This is Mr. Okum's point. Because of this very fact, we can have inflation arising in a period in which excess aggregate demand is absent simply because the composition of the demand is changing rapidly. In areas in which demand is rising very swiftly, prices will rise. Even if this is balanced by other areas in which demands are falling, prices will not fall there. Even more so wages will not fall. Consequently, from this simple fact alone we can generate a rise in the general price level when we shift resources rather violently or rapidly. I will go

further and attempt to show that the kind of inflation we get out of this is not simply confined to this averaging procedure. What I have described so far is really an averaging problem. Prices rise in some sectors and don't fall in others. I would suggest that the impact on the economy of the excess demand sectors leads to cost increases even in sectors where there are no excess demands.

Take materials. Crude materials, let us say scrap, raw agricultural products and the like, are very sensitive to demand. In general they are not going to rise in price unless demand in the aggregate is excessive. We can see this in the behavior of raw material prices in the 1955-57 period. In the early part of that period, late 1955, there probably was some aggregate excess demand. Raw material prices rose very rapidly considering we were in a peacetime economy. After late 1955 when other prices continued to rise, raw material prices leveled off and were fairly stable for 2 years. Industrial production was not rising. Aggregate demand was not excessive. But other materials, semifabricated components, parts and the like, are rigid downward, to some extent at least, with respect to decreases in demand. There were some industries which had excess demands. In turn materials which were specialized to those industries had price increases. Other materials specialized to industries with deficient demands did not decline in price.

On the average, therefore, semifabricated materials and components parts will rise in price. As you go up the vertical stages of production you will find that these price increases get built in more and more and more. What is originally an excess demand situation in particular sectors gets translated over into cost increases for finished-goods producers who may not be facing excess demand. So the feed-out of cost increases from excess demand sectors reinforce the averaging process which I described earlier.

The CHAIRMAN. How does the same process take place in the matter of wage rates?

Mr. SCHULTZE. Let me go on to wage rates. I must say on the wage rate question I feel a little shaky theoretically. I think, however, in a summary fashion you might say this: Roughly speaking, wages throughout the economy will tend to imitate wage behavior in the most rapidly expanding industries. The reason for this is that in industry after industry producers will find that they simply cannot afford to let the wage differential get too big between themselves and other firms in the same labor market; not so much because they are afraid of losing their workers, but rather because they are afraid of the exceedingly bad effects on efficiency, morale, and productivity of growing wage differentials. A machinery firm in a steel town can not let steel wages get too far ahead of itself. No so much because all its workers will desert en masse, but the productivity losses are so large that it becomes uneconomical not to grant the wage increase even if such an increase does raise costs in a situation of no excess demand.

I don't want to make this too rigid. I don't mean that there are not differentials. I do mean you do tend, even without unions, to get an imitative pattern in wage bargainings. If we look at the fact that during the 1955-57 period, as Mr. Okum pointed out, the average wage increase in industries which expanded the most was just about

the same as the average wage increase for all industries. The average wage increase for industries which expanded the least, (and in fact during this period this means industries with decreasing output) was also the same as the average and the same as the most rapidly expanding industries.

There were differences, of course, but when we average in the top group and the bottom group we find there is not a substantial difference in their wage behavior. So again costs feed out from the excess demand sectors into the other sectors of the economy. There price results of these cost increases were damped down in sectors with weak demand, but nevertheless there were cost increases simply because there were large sectors of the economy which were expanding rapidly.

Let me go on, if I may, to my second major point, and I hope to make that more brief. This is that there was an additional feature of the modern economy which played a particular role in the inflation in 1955-57, the behavior of overhead costs. Again I don't want to be too rigid about what I mean by overhead. In general for purposes of discussion let us confine ourselves to salaries and depreciation per unit of output. Throughout the postwar period there has been a rapid substitution of overhead labor for direct labor. This obviously follows from a number of technological developments. It has been suggested to me that some of it follows from Parkinson's law. I refuse to attempt to classify as between the two reasons.

The CHAIRMAN. There is another version of Parkinson's law that the less important the measure the greater the length of the congressional discussion.

Mr. SCHULTZE. I was wondering whether there is a minimum point on that, too. Regardless of the reasons there has been the fact in industry, perhaps as well as in Congress. In 1955-57 the rapid rise in overhead costs was a natural accompaniment of the investment boom. During 1955-56-57 even though most areas of economy were not expanding, there was an investment boom. Most firms were adding to their overhead complement to staff the additional capacity. At the same time in most industries output didn't rise very rapidly. Faced with a continuing addition to their payrolls, not wages but salaries—wages also but particularly salaries—producers, I believe, attempted in many cases to recover at least part of the increased unit costs in the form of higher prices, even though the additional personnel had been hired with the expectation of much higher output in mind. It was an attempt to recover these overhead costs at too low a level of output. If we look at the data, we find that in manufacturing about 60 percent of the total increase in unit costs during this 1955-57 period came in salaries per unit of output. About an additional 10 to 15 percent in depreciation per unit of output. I don't want to say, and I don't want to be understood to say, that this necessarily meant a price increase or that we can necessarily prove that the reason the prices went up is because these costs went up. I do say, however, that these overhead costs explain some of the paradoxes of the period: In many industries prices were rising where demands were not excessive. Prices in fact rose by more than wage costs per unit; yet profit margins narrowed. I suspect what happened was that producers attempted to recapture part of these overhead costs by raising prices.

I had hoped to present a recap of some of the evidence for the hypotheses I have constructed. Such evidence is in chapter 5 of the monograph. Let me simply indicate a couple of points. I won't take your time up by repeating what is available to be read.

In the first place, during the 1955-57 period, as Mr. Anderson pointed out, it was fairly clear that demand in the aggregate was not excessive. On an annual rate, after late 1955, money income rose at about 5 percent a year. The "normal" postwar gain in real output in the economy has been about 4 percent a year. Instead of having 1 percent price increase and 4 percent output increase to make up this 5 percent money income increase, we got 3½ percent price rise per year and only 1½ percent output gain. I would say that this suggests that the lack of rise in output was not because of capacity limitations. The 5 percent increase in money income did not generally represent excess demand. We were not faced with a situation of aggregate excess demand.

Let me go further to indicate another reason why I think this is true. The productivity gain during the period was subnormal not for technological reasons but simply because output didn't rise. As Mr. Anderson pointed out, in industries in which output did rise productivity also rose. Producers were able to substitute overhead labor for production labor, which means they were able physically to take advantage of the new facilities that were built. Consequently the very small rise in output was not a phenomenon of supply limitation. The excess in the rise of the money income over and above the rise in output didn't represent excess demand.

During this period we find that the rate of increase in prices as among given industries was, generally speaking, related to the rate of increase in output. The industries with the largest output gains in general tended to have the largest price gains and vice versa.

Let me interpolate at this point the reason that this conclusion differs from the one which Mr. Anderson came to. He is using the period from 1955 through 1959. In 1959 the entire industry pattern of output was dominated by the remnants of the recession. For example, he has machinery as a slowly growing industry. I am measuring solely the boom of 1955-57. I have machinery as a high growing industry with large price increases. This explains the apparent discrepancy between our numbers.

Let me finally note that in this period, even though the rate of increase in prices was related to the rate of increase in demand and output, it was biased upward. Industries with small gains in output didn't have zero price increase. They had fairly sizable price increases. It is simply that industries with significant output gains had even larger price increases.

Now a few implications. I am not attempting to state that all inflation is the result of the process I have described. Our worst inflations are the classical aggregate excess demand inflations; that is, demand rising more rapidly in the aggregate than our economy can support. The World War II inflation, the Korean war inflation, these are the ones that destroy economies if they go on. I am not attempting to describe this inflation. There is, however, a difference between such classical inflation and what has been going on in the last few years.



We can have an inflation which is not the classical kind and which is not at the same time mainly attributable to autonomous wage-rate increases. In such a situation it seems to me that while we must be very careful to control aggregate demand so as not to allow excess demand inflation to occur, an attempt to control the kind of inflation I have described, where prices are rising along with excess capacity, does more harm than good. Just as Mr. Anderson pointed out, it may do more to decrease productivity and raise costs than it does to hold down prices. In any event, it is not getting at the basic source of problem which is not aggregate excess demand, not aggregate money supply, but selective excess demands. I don't pretend to be in a position to evaluate the obvious answer to this—selective tax and monetary control. These raise problems which would require careful evaluation. I would like to point out, however, that in a period such as the one we have gone through we can take our choice. We can recognize that creeping inflation is partly due to the resource allocation process and live with it. On the other hand we can decide we want to introduce selective controls and attempt to restrain the inflation without holding down output and employment throughout the economy. This is our choice. An attempt to meet the kind of a problem that I have described by tools designed basically to meet the classical aggregate demand will probably end up doing more harm than good.

Thank you.

(Mr. Schultze's prepared statement follows:)

## RECENT INFLATION IN THE UNITED STATES

### A SUMMARY ANALYSIS

Statement of Charles L. Schultze, department of economics, Indiana University

#### INTRODUCTION

While there is relatively little controversy over the nature and causes of inflation during periods of war or postwar reconversion, there is substantial disagreement over the causes of the relatively mild inflation of recent years. Those who believe that inflation stems, now as always, from "too much money chasing too few goods" are ranged against those who attribute postwar inflation to the upward pressure of wage costs on prices. An analysis of the behavior of the economy during the past several years suggests, however, that neither of these two lines of analysis provides a sufficient explanation of the price rises which occurred. In particular, it turns out that the relatively moderate upward drift in the average price level cannot be analyzed in terms of aggregate data alone. Demands for goods and services were not, in the aggregate, excessive during most of the period in which prices were rising. Nor is there much evidence of an overall upward pressure on prices from the side of wage rates. It was the shift in the composition of demand rather than its aggregate magnitude which provided the initial impulse to the inflation. The price and cost system of the modern American economy is so constructed that it responds to a sizable shift in the structure of demands, not merely by a realignment of relative prices but also by a rise in the general price level. Even though rapidly rising demands in some sectors are balanced by declining demands in others, rigidities in the structure of prices and costs insures that the net result will be an increase in the average price level. Further, the nature of costs in American industry has been undergoing a radical change in the postwar period; an ever-increasing proportion of total costs is represented by items of overhead and a declining portion by direct costs. This little-noted development has widespread implications for many facets of our economic life. Not the least of these is its impact on the behavior of prices. Under the conditions which prevailed during the 1955-57 inflation, rising overhead costs were a significant factor contributing to price

increases in a number of industries. In the discussion which follows the theoretical analysis is present first. This is followed by an examination of the rise in the general level of prices in the period from 1955 to 1957, illustrating the points developed in the theoretical section.

#### THE CURRENT DEBATE ABOUT THE NATURE OF INFLATION

The controversy over the nature and origin of rising prices in recent years finds the protagonists generally divided into two groups: Those who stress the importance of aggregate excess demand for goods and services as the causal factor, and those who attribute the price rise to an independent increase in wage rates or administered prices. The terms "demand pull" and "cost push" have generally been applied to the respective theories. In actuality, however, those contributors to the controversy who recognize the complexity and interrelationships which characterize all economic processes bridle at being so neatly assigned to one of two categories, particularly when the categories are considered as mutually exclusive. In fact, of course, they are not. Various theories of the inflationary process may preliminarily be thought of as constituting a spectrum. The place of any particular theory in that spectrum depends on what it postulates about the likelihood of significant and sustained increases in prices without the prior and continuing stimulus of rising demands for commodities and factors of production. The greater the degree of "independence" one assigns to price and wage decisions, the closer one is to the "cost push" end of the spectrum; and, of course, vice versa.

If prices and wages are sensitive to the level of demand, then no inflation can continue unless aggregate excess demand is constantly being renewed. The appearance of relatively small amounts of additional unemployment or excess capacity would quickly halt any price rise. Monetary and fiscal policy, appropriately handled, can achieve full employment and price stability; all that needs to be done is to prevent the growth of excess demand. Moreover, according to demand pull theories of inflation, it is only aggregate excess demand which can produce inflation. So long as excess demands in particular sectors of the economy are offset by declining demands in other sectors the general level of prices will not rise. Since prices are flexible in response to changes in demand the price decreases in areas with falling demands will balance the price increases in areas with excess demands. It is only an excess of demand in the aggregate which can lead to a rise in the overall price index.

If, on the other hand, price and wage decisions are relatively insensitive to the state of demand, then an inflation can occur in the absence of excessively rising aggregate demand. This is the basic theoretical position of the cost push theorists. There are two aspects to this approach. If prices are marked up to cover increases in costs regardless of demand conditions, and if wages in turn tend to rise with productivity and the cost of living even in the face of unemployment, then an inflation once begun can continue indefinitely. Prices rise, and wages are raised to compensate for the higher cost of living. This raises costs, which are passed along in higher prices. Thus the spiral continues, even if unemployment and excess capacity are growing. To this inherently unstable situation, the cost push theorists usually add an additional ingredient—the power of unions to win wage increases in excess of productivity gains. The resultant rise in costs is the initiating factor which sets the spiral in motion; the mutual upward adjustment of prices to wages and wages to prices keeps it going.

Clearly no cost push theorists adhere to the extreme position that the insensitivity of price and wage decisionmaking to demand conditions is absolute. At very high levels of unemployment or excess capacity the spiral could be broken. But the essence of their position is that it takes unbearably high levels of unemployment and idle plant resources to halt the inflation.

The controversy between the demand pull and cost push theorists is in reality, therefore, a debate about the consistency of full employment and price stability. And the key to this debate, as it has been carried on in recent years, is the degree of sensitivity of prices, wages, and other costs to the state of demand for goods and services.

The response of prices and wages to changes in demand cannot, in reality, be forced into the simple categories of "sensitive" or "insensitive." The most important fact about their behavior, for the purpose of analyzing creeping inflation, is its asymmetry. Prices and wages tend to be more flexible upward in response to increases in demand than they are in a downward direction in

response to decreases in demand. As a consequence, the composition of demand as well as its aggregate magnitude, takes on a central role in the generation of inflation.

#### THE NATURE OF CREEPING INFLATION

An examination of recent economic history suggests that creeping inflation is not a phenomenon which can be dealt with in aggregate terms. In particular the price increases from 1955-57 stemmed, in the main, neither from autonomous upward "pushes" of administered prices or wages nor from the existence of an aggregate excess demand. Neither of these explanations can satisfactorily account for a number of apparent paradoxes during this period: The dissipation of a relatively modest 5 percent per annum rise in money expenditures in a 3½-percent price rise and only 1½-percent output gain; the apparent correlation of price increases with demand increases industry by industry, but with an upward bias, so that the overall level of prices rose while the overall level of demand was not excessive; the fact that prices rose more rapidly than unit wage costs, while at the same time net profit margins were shrinking; and finally the high level of investment activity followed by a disappointing gain in productivity and consequent increases in unit costs.

The theoretical and empirical analysis of the economic processes which lead to creeping inflation is not easily summarized. It is not a relatively simple matter which can be condensed into a short formula, like the popular "too much money chasing too few goods." Nor is it a "devil" theory in which abound the villains of most cost-push theories—the union boss and the greedy monopolist. We shall attempt, however, to sketch the characteristics of economic behavior which lead to creeping inflation and indicate briefly the application of the analysis to the 1955-57 period.

#### THE IMPORTANCE OF THE COMPOSITION OF DEMANDS

Prices and wages in the modern American economy are generally flexible upward, in response to excess demand, but they tend to be rigid downward. There is, as we noted earlier, an asymmetry in their behavior. Even if demands in the aggregate are not excessive, a situation of excess demand in some sectors of the economy balanced by deficient demand in other sectors will still lead to a rise in the general level of prices. The rise in prices in markets characterized by excess demand will not be balanced by falling prices in other markets.

The kind of inflationary pressure arising out of a sharp change in the composition of demand will not be confined to the kind of averaging process described above. Excess demand in particular sectors of the economy generates upward pressure on prices in the rest of the economy through its influence on the prices of materials and the wages of labor. Crude materials prices are normally quite sensitive to changes in demand, and are unlikely to rise significantly unless demand for them in the aggregate are excessive. Prices of intermediate materials supplies and components, on the other hand, are more likely to be rigid downward, but flexible upward in response to an increase in demand or costs. Prices of those materials chiefly consumed by industries with excess demand rise, since excess demand for the final good will usually imply excess demand for specialized materials. Materials used mainly in industries with deficient demand will not fall in price, unless the demand deficiency is quite large. Thus, excess demand in particular sectors of the economy will result in a general rise in the prices of intermediate materials, supplies, and components; industries which are not experiencing excess demands will find themselves confronted with rising materials costs.

Wages will also be bid up in excess demand industries. Wages in other industries will tend to follow. Even though demand for labor is not excessive, firms cannot allow the wage differential between themselves and other firms get too large; this is not because they fear the wholesale desertion of their work force, but because they do not wish to experience the inefficiencies and lowered productivity which result from dissatisfaction over widening differentials. Rising wage rates, originating in the excess demand sectors thus spread throughout the economy. Because productivity gains in the short run are greatest where demand and output are increasing, firms in those sectors where demand is rising slower than capacity will often be faced with even larger increases in unit wage costs than firms in the areas of excess demand. In some cases the size of wage-increases will be determined by long-term contracts concluded in earlier periods. Except as the increases are modified by changes in the cost of living (through

escalator clauses) they will have little relationship to the current state of the market.

The tendency of wage gains in most industries to equal those granted in the most rapidly expanding industries is brought out in table 1 below. Between mid-1955 and mid-1957 the increase in output in the most rapidly expanding manufacturing industries was almost five times greater than the average rise for all industries; the lowest quartile experienced on the average a 6-percent decline in output. Because productivity gains tend to be largest in industries with the largest output increases, the variation of employment change was less than the variation of output change. Nevertheless employment in the lowest output quartile fell about 9 percent while it rose by 2 percent in the industries whose output was increasing most rapidly. Changes in average hourly earnings were insignificantly different, however. Despite the larger rise in demand and productivity in the expanding industries, the increase in wage rates was about the same as the average for all manufacturing, and only slightly higher than the rise for the lowest quartile. The same relationship between output, employment, and wages prevailed during the longer period, 1953 to 1957. The average rise in hourly earnings was about 2 percent lower than the rise in the top output quartile and 1½ percent higher than the lowest quartile. But the difference between the average increase in wages and the increase in the two outer quartiles was only one-half percent per year. A United Nations study of these relationships for a number of industrialized nations between 1950 and 1956 and between 1954 and 1956 matches our findings exactly.<sup>1</sup> There is a systematic tendency for the average wage increase to equal the increase in the most rapidly expanding industries.

TABLE 1.—*Changes in output, employment, and wage rates: manufacturing industries, May-June 1955 to May-June 1957*

[Percent change]

	Output	Production worker em- ployment	Average hourly earnings
All industries.....	2.7	-3.1	9.8
Average of highest quartile <sup>1</sup> .....	12.0	1.8	9.5
Average of lowest quartile <sup>1</sup> .....	-6.0	-9.1	9.0

<sup>1</sup> Highest and lowest quartile selected in all cases on the basis of changes in output.

Sources: Board of Governors of the Federal Reserve and Bureau of Labor Statistics.

Clearly the uniformity of size of increases in production worker average hourly earnings does not imply the existence of a highly mobile labor force facing an aggregate excess demand for labor. In the first place the degree of mobility in the

<sup>1</sup> "United Nations World Economic Survey, 1957," table 8, p. 37.

labor force is not so great in the short run as to lead to such uniform wage behavior. More importantly, the demand for production workers was not excessive during the period. Indeed from mid-1955 to mid-1957 production worker employment in manufacturing declined. The uniformity reflects, rather, the tendency of wage rate increases in a wide variety of industries to match those granted in the rapidly expanding industries.

The spread of wage increases from excess demand sectors to other parts of the economy accentuates the rise in the price of semifabricated materials and components. Thus the influence of rising costs and the resistance of prices to declining demands will be larger at the later stages of the production process, other things being equal. The opportunities for rigidities to build up and for rising costs, particularly labor costs, to affect prices are multiplied as products approach the finished state.

Producers of finished goods will be confronted with a general rise in the level of costs, even when the demand for their products and their own demands for materials and labor are not excessive. The more cost determined are the pricing policies of the industries involved, the greater will be the price rise. In competitive sectors of the economy the rising costs will be at least partly absorbed. But in very many industries they will be more fully passed on in higher prices. Markups will of course be shaded when excess capacity begins to rise. As inflationary pressures spread out from excess demand sectors, their force will be somewhat damped in the absence of excess aggregate demand. Similarly the tendency of wages to follow the pattern set in the rapidly expanding industries will be modified as unemployment rises. But so long as markups and wages are more sensitive in an upward than in a downward direction, a rise in the general level of prices can be set off by excess demand in particular industries.

If the hypothesis we have presented is substantially correct we should find that the relative rise in prices among different commodities is related to the relative strength of demand, but with an upward bias. A given increase in demand will lead to a price increase significantly larger than the price decline accompanying a fall in demand of the same magnitude. This result emerges from the existence of downward rigidities in prices and from the influence on prices of cost increases generated in areas of rising demands.

We have no measures of excess demand. During the 1955-57 period, however, capacity in general was rising more rapidly than output. In such a situation the relative rates of growth in output among different industries provide us with a rough and ready substitute measure of relative rates of demand growth. A growing labor force and productivity imply a constantly increasing level of full employment output. If prices and costs were perfectly flexible with respect to changes in demand, price increases would only be associated with increases in output larger than the rightward shift in supply curves. A plot of price changes against output changes industry by industry during some given period, say a year, should then produce a relationship about like that shown in chart 1. If aggregate demand is not excessive, aggregate output can rise moderately with no increase in the average level of prices. Prices should fall in industries whose output gain is less than average, while industries with larger than average output gains experience price increases.

Chart 1

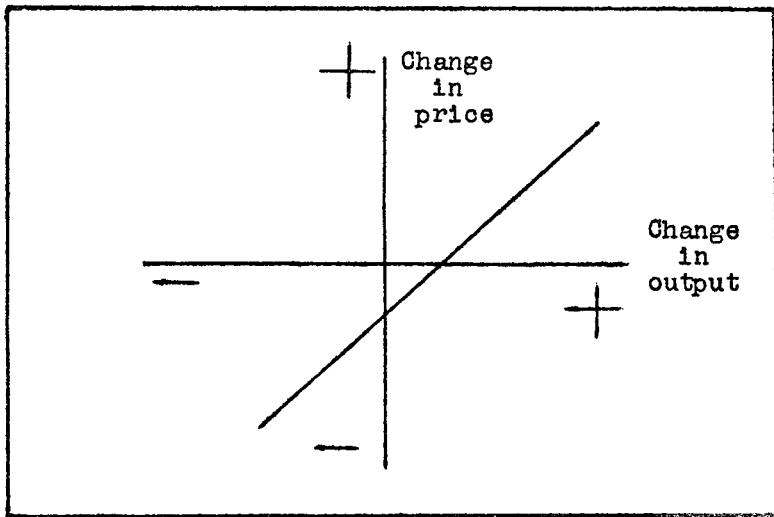
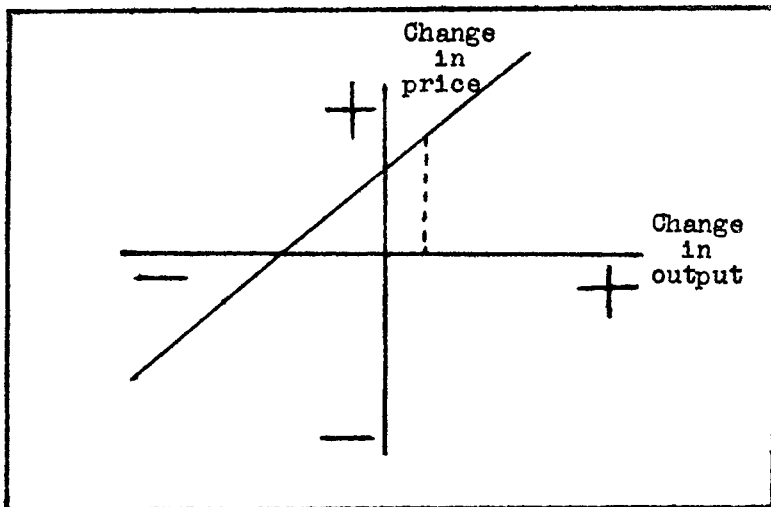


Chart 2



In our explanation of creeping inflation, however, the composition of demand is an important determinant of the general price level. Even if sharp increases in demand in some areas are balanced by decreases in others, an overall rise in the price level will normally result. If we plot the relationship of changes in prices to changes in output, our hypothesis would lead us to expect a relationship such as that shown in chart 2. There will be an upward bias in the relationship of prices to demand. Industries with no excess demand (under our rough assumptions, those whose output is expanding modestly) will nevertheless be characterized by rising prices. Only those industries with substantial deficiencies of demand will be marked by falling prices. If we match, in some detail, changes in industrial prices and output during the 1955-57

period we find a relationship exactly as depicted above.<sup>2</sup> There is positive association between price increases and output increases; but the relationship is not the one that would exist if prices and wages were symmetrically flexible. Although the average gain in output was quite small, there was a significant rise in the general price level. Many industries whose output rise was significantly less than the rightward shift in their supply curves nevertheless raised their prices. Generally speaking prices were reduced only in situations where production was sharply curtailed.

#### SECULAR INFLATION

The mechanism by which shifts in the composition of demand tend to generate a rising price level did not suddenly emerge in the postwar period. Many prices and most wages have always been relatively insensitive to moderate downward shifts in demand. The magnetic effect of rising costs in particular sectors of the economy on the general level of costs is not a novel phenomenon. But the recurrence of sharp and prolonged general depressions was usually sufficient to break through these rigidities and enforce a reduction in the most insensitive prices and wages.

During depression years the widespread bankruptcies and reorganizations also lead to massive writedowns in the value of fixed assets. This provided an additional damper on secularly rising prices. Increases in capital goods prices which accompany a shortrun inflation normally leave a legacy of continued upward pressure on the level of costs. Even after capital goods prices cease to rise the replacement of lower priced assets—valued at the prices ruling before the inflation began—with new, higher priced assets tends to raise the level of costs. The fact that the new capital goods are more efficient than the ones they replace is no offset, for the rise in productivity so generated will normally be absorbed by higher returns to factors of production. One may argue over the importance of capital costs per unit in shortrun pricing decisions. In the long run it is quite clear that they do affect prices. The downward revaluations of capital assets during severe depressions removed this legacy of rising costs left by prior inflations. Thus by breaking through the ratchet which holds up prices and costs, the severe depressions of earlier periods interrupted the tendency of prices and wages to rise secularly. There is little likelihood that any government would permit a recurrence of such protracted depressions in the future.

The downward rigidities in the price system tend to set in motion forces which practically guarantee a secular upward drift to the price level. Whenever profit margins expand to abnormal levels, as they inevitably do on occasion—as the result of an excess demand inflation or of the rapid productivity gains which occur in recovery years—downward price rigidities prevent margins from being returned to normal via price reductions. Rather, the excessive margins lead to an excess demand for factors of production. Wage rates are bid up, and in some cases factors of production are overemployed. As a consequence, unit costs are raised to provide a new floor under the price level.

If prices were more flexible, the abnormal margins associated with periods of excess demand would generate pressures leading to price reductions when the excess demands were exhausted. Similarly, if prices were flexible during recessions, the rapid growth in productivity during the subsequent recovery<sup>3</sup> would restore margins to normal levels, with costs somewhat lower than at the prior peak. The sharp productivity advances in recovery years would thus provide an offset to the rise in costs and prices during other periods. Instead, with rigid commodity prices, the productivity gains are dissipated in higher factor prices.

The rigidities in costs and prices are thus sufficient to provide a ratchet under the price level, preventing its falling back from levels attained during periods of inflation. Adjustments in relative prices tend to be accomplished by upward movements only, even though aggregate demand is not excessive. Imbalances in general price-wage relationships also tend to be overcome by a rise in one relative to the other rather than by a mutual adjustment toward a common center.

<sup>2</sup> See below for a more extended discussion of this evidence.

<sup>3</sup> Between 1910 and 1957 the average gain in output per man-hour (for the private non-farm economy) during the first year of recovery from recession or depression was 5.2 percent compared to an average annual gain over the whole period of only 2.1 percent.

## SOME QUALIFYING COMMENTS

The kind of inflation which results from the process we have described is a gradual process. So long as aggregate demand is not excessive, inflation will be mild. The rigidities and cost-oriented characteristics of prices and wages are not so firm that they completely withstand the influence of deficient demand. Our exclusive concentration on the inflationary consequences of sharp changes in the composition of demand should not be interpreted as a sign that the resulting inflation is a particularly awesome affair. Popular articles on inflation often begin by reciting all of the evils of a hyperinflation and then assign those evils as the consequence of any inflation, no matter how gradual. The inflation we have here described need have none of these characteristics. Mild inflation is, in fact, one of the ways in which an economy with downward rigidities in its cost and price structure allocates resources. There are arbitrary income gains and losses accompanying any shifting about of resources, so long as those resources are not perfectly mobile. Whether individual well-being and social equity are better preserved when resource shifts entail only relative price changes instead of overall price increases, I do not pretend to know. Certainly, however, it is not a question whose answer is obvious.

## OVERHEAD COSTS

A second major factor influencing the determination of prices and the movement in the general price level in recent years has been the rapid growth in the proportion of overhead or fixed costs in total costs. This development played a particularly important role in the 1955-57 period.

Between 1947 and 1955 a very large part of the rise in total costs was accounted for by the rise in relatively fixed costs. Of the total increase in employment during those years, 65 percent represented employment of professional, managerial, clerical, sales, and similar personnel. Only 20 percent of the increase was accounted for by operatives, laborers, and craftsmen. In manufacturing, nonproduction worker employment rose 40 percent and production worker employment only 2 percent. During this same period fixed capital costs per unit increased very rapidly. Prices of capital goods rose relative to other prices and the proportion of short-lived equipment to long-lived plant rose sharply. Depreciation charges thus expanded very substantially. Depreciation and salary costs per unit, taken together, accounted for 40 percent of the increase in total unit costs in manufacturing between 1947 and 1955. Adding profits per unit, we account for two-thirds of the cost increase.

TABLE 2.—*Changes in manufacturing costs and prices*

[Percent points]

	1947-55	1955-57
"Price" of value added in manufacturing.....	29.7	9.6
Unit wage cost.....	9.0	3.9
Unit salary cost.....	7.7	5.6
Depreciation per unit.....	4.2	1.0
Profits per unit.....	7.2	-2.2
Indirect taxes per unit.....	1.6	1.3

Source: Calculations of the author, described on pp. 82 and 83 and in app. A of "Recent Inflation in the United States," study paper No. 1, Joint Economic Committee, September 1959.

The period between 1955 and 1957 was characterized by a very sharp rise in investment outlays, accompanied by a quite modest growth in aggregate demand and output. Not only was capacity expanded rapidly but there was a continuation, indeed an acceleration, of the postwar growth in the number of overhead employees. Unlike earlier postwar booms, however, the expansion in these relatively fixed inputs was not matched by a corresponding rise in output (table 3). Fixed costs per unit of output, therefore, rose sharply, not because output was falling but because in very many industries it did not rise rapidly enough. In industries faced with slowly rising or declining demands, prices were raised almost but not quite enough to cover these higher costs. Of the total rise in unit costs (including profit margins), almost 60 percent was accounted for by higher salary costs per unit as compared to 40 percent by higher wage costs. Book



depreciation charges are unreliable for most purposes; nevertheless, in combination with other costs, they put pressure on profit margins and to some extent prices.

TABLE 3.—*Indexes of capacity, employment, and output in manufacturing industries*

[1947=100]

	1955	1957
Capacity.....	147	164
Nonproduction worker employment.....	140	155
Production worker man-hours.....	103	100
Output.....	140	145

The fact that a large part of the increased employment during the period was in the nature of overhead employment helps explain why the general price rise, during a period in which monetary demands were not excessive, did not lead to significant unemployment. By the same token the lack of rise in output relative to fixed inputs accounts for the disappointing gain in productivity. The rise in prices was accompanied by a relatively moderate increase in money expenditures. Real expenditures and output rose by substantially less than the normal postwar rise to be expected from growth in the labor force and productivity gain. Yet instead of a rise in unemployment, there occurred a short fall of productivity below its potential. Output per production worker man-hour continued to increase fairly sharply throughout the period—indeed production-worker employment declined. But the failure of output to match the rise in overhead labor input substantially moderated the overall gain in productivity. In general, the more important fixed costs become, the more sensitive productivity will be to changes in output.

The failure of output to rise toward the levels implicit in the expansion of fixed inputs was partly due to the fact that declining demand in particular sectors of the economy—housing and automobiles—largely offset the rising demands for investment goods. But in addition the attempt to recapture in prices a substantial expansion in fixed costs at existing levels of output tended to raise the level of prices relative to any given money income; the gross saving rate at any given level of output was increased. This in itself damped the rise in output, so that the process tended to be self-defeating. Had output risen along with capacity, overhead costs would have been spread over a larger volume of output. But, by restricting the growth in real demand, the very pricing policies which attempted to recover fixed costs at low levels of output, led to a rise in fixed costs per unit. To some extent a kind of vicious circle occurred. The failure of aggregate output to increase, raised fixed costs per unit. Insofar as prices were marked up relative to wage and salary rates in order to recover these higher unit costs, the forces impeding the growth in output were strengthened. This kept fixed unit costs high, and so on around the circle again.

The major part of the general rise in prices during recent years thus may be attributed to two sets of factors:

1. The downward rigidity and cost-oriented nature of prices and wages in most of industry. During a period in which dynamically stable aggregate demand veils a fairly violent shift in the composition of demands, such market characteristics will result in a general rise in the level of prices. This rise cannot be said to result either from excess aggregate demand or from autonomous upward adjustments of administered prices and union wages. Rather it stems from excess demand in particular markets, and is propagated throughout the rest of the economy by a cost mechanism.

2. The attempt to recapture in prices at least some of the increase in fixed unit costs which occurred in a number of industries when a vigorous investment boom and a rapid substitution of fixed for variable labor input impinged on a situation of sluggish growth in output. Further, the fact that most of the employment rise was in overhead labor helps explain why the subnormal growth in output did not involve a rise in unemployment. It did however lead to the growth of excess capacity.

None of the foregoing is designed to indicate that all inflations are mainly the result of these processes. Excess aggregate demand has been the basic cause of all of our major inflations, including the postwar reconversion inflation. And for a short while in late 1955 there seemed to be some excess aggregate demand. But the major thesis of this paper is that the creeping inflation of 1955-57 is different in kind from such classical inflations, and that mild inflation may be expected in a dynamic economy whenever there occur rapid shifts in the mix of final demands. It is, in effect, a feature of the dynamics of resource adjustment where prices and wages tend to be rigid downward. Moreover, it gives a secular upward bias to the price level so long as the major depressions which broke the ratchet in the past are avoided in the future.

Similarly there is no attempt here to prove that autonomous upward pressures of wage rates have had no impact on the price structure. Such pressures may have played a role in recent inflation. But the role was not a major one. The mere showing that wage-rate increases exceeded productivity gains proves nothing at all with respect to the magnitude of this role. (It is interesting to note, however, that the substitution of overhead for direct labor implies that wage rates cannot rise as fast as the statistical number called output per production worker if total unit costs are to be stable.)

#### AN ANALYSIS OF INFLATION, 1955-57

Most of the features which characterized the rise in the general level of prices between 1955 and 1957 can be satisfactorily accounted for by the hypotheses developed in the preceding pages. The detailed results of an empirical analysis of the economic developments during that period are given in chapter 5 of the author's "Recent Inflation in the United States," Study Paper No. 1 of this committee's current investigation. The major conclusions of that analysis are summarized below:

##### *Demands and prices*

1. As the economy recovered from the 1954 recession it reached a situation of aggregate excess demand in late 1955. Demands in all sectors of the economy were high and rising. This aggregate excess lasted only briefly however. After the end of the year purchases of automobiles and houses fell rapidly, and remained at reduced levels in 1956 and 1957. Business demand for capital goods, on the other hand, continued to boom throughout the period.

2. On balance aggregate money outlays, after mid-1955, rose at a rate of about 5 percent per year. Prices rose at a 3½ percent annual rate and output by only 1½ percent. The normal postwar rate of growth in output has been about 4 percent per year.

3. The slow rate of growth in output and productivity cannot be explained by the "indigestion" hypothesis—(i.e., the very size of the investment boom itself caused such dislocations that normal productivity gains were temporarily impossible). Output per man-hour of production workers did rise significantly; producers were able to substitute overhead for fixed labor; most importantly there was a strong interindustry correlation between output and output per man-hour. Those industries whose output rose also achieved substantial productivity gains.

4. Thus the difference between the rise in aggregate money expenditures and output did not represent aggregate excess demand. The output rise was clearly less than the economy's potential. The growth of widespread excess capacity is a good common sense indicator of this.

5. The magnitude of price rises among different sectors of the economy and among different industries was associated with the magnitude of the rise in demand in each sector or industry. But there was a substantial upward bias; in the aggregate demands were not excessive, but on the average prices rose. In general, prices rose even in industries where output was stable or falling moderately.

6. The magnitude of price rises among industrial commodities was related to two major factors: With a few important exceptions, commodities which experienced the largest price rises were those which had the largest increases in demand. Most commodities with large price rises were those associated with the boom in capital goods. The frequency of price declines and the magnitude of average price increases among different groups of commodities differed also according to the stage of fabrication. Very few finished commodities were reduced in price; price increases were, on the average, somewhat less and the

evidence of price flexibility slightly greater for semimanufactured materials; the smallest average price rise, after late 1955, and the most flexibility, occurred among crude materials.

7. Steel and automobiles were the major exception. In both of these industries the rise in prices relative to the change in output was substantially greater than the average relationship between price change and output change in other industries, which relationship was itself "biased" upward.

#### *Wages*

1. Wage rate increases were fairly uniform among different industries. Wages in industries with stable or declining output rose by the same amount as they did in rapidly expanding industries. A United Nations study has found this uniformity of behavior to exist among industrial countries generally.

2. Productivity gains were closely associated with the degree of rise in output. Industries with rising output tended to have larger productivity gains than other industries, and vice versa.

3. As a consequence of these characteristics of wage and productivity behavior, wage costs per unit of output quite probably rose less in expanding than in contracting industries.

4. Price increases in the capital goods and associated industries accounted for two-thirds of the rise in the industrial wholesale price index between 1955 and 1957. Their prices rose 15 percent compared with an average increase of 4 percent for all other industries. Yet wage rate increases in the two groups were almost identical. Because of the relationship between productivity and output mentioned above, unit wage costs in the industries with large price increases averaged less than in other industries. Prices in industries which accounted for the bulk of the overall inflation also rose substantially more than wage costs. In other industries unit wage costs rose proportionately (but not absolutely) more than prices.

#### *Overhead costs*

1. All of the employment rise during the period was in overhead-type employment. In fact, the employment of direct labor fell substantially.

2. More than 50 percent of the rise in total unit costs in manufacturing was accounted for by rising unit salary costs, and an additional 20 percent by rising depreciation.

3. In the booming capital goods industries prices were raised by more than enough to cover the rise in costs. Net profit margins expanded. In other industries, however, prices on the average were increased almost but not quite enough to offset rising costs. As a consequence, net profit margins per unit of output declined from the high levels reached in 1955. In the industries, which were not experiencing rapidly rising demands, the increase in unit overhead costs reinforced the upward pressure on prices arising out of wage and material cost increases.

4. The rise in salary costs per unit was not only due to an increase in salary rates—which rose by about the same amount as wage rates—but also by the rising ratio of salaried employment to output. The increase in this ratio stemmed chiefly from the failure of output to rise along with capacity. Had it done so, evidence from other postwar years indicates that the salaried employment-output ratio would not have increased.

5. Since productivity of both direct and overhead labor is output sensitive, it is clear that, within moderate limits, a further rise in output among industries operating below capacity could have resulted in lower unit costs. The data suggest an elasticity of at least  $-0.05$ ; i.e., a 1-percent further rise in output in industries operating below capacity could have yielded a one-half percent decline in total unit costs.<sup>4</sup>

#### *Consumer prices*

1. In the Consumer Price Index, food, nonfood commodities, and services, each account for approximately one-third of the total weight. Even among nonfood commodities manufacturers' prices make up not much more than half of the total price, the rest being transportation, wholesaling, and retailing costs. The service component of the CPI is made up of a long list of heterogeneous items, including such things as auto, real estate, and medical insurance, public

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<sup>4</sup> This assumes that the additional demand for production labor would not have led to even more rapid wage increases. Considering the large reductions in production worker employment during the period, this is a most reasonable assumption.

utility rates, haircut, postage, and interest rates. Thus it would seem that the direct impact of changes in industrial prices and wages on the Consumer Price Index is relatively limited. Yet an increase in the prices of manufactured products diffuses itself throughout the economy by many indirect routes. Steel prices rise, school construction costs go up, and property tax rates are adjusted upward; an initial rise in the CPI on account of an increase in industrial prices leads, with some timelag, to rising wages in the service industries and, e.g., auto repair charges rise; and the examples could be multiplied ad infinitum.

2. About one-third of the rise in the Consumer Price Index was contributed by increasing food prices. In turn, half of the rise in food prices was attributable to rising farm prices for livestock and half to increased marketing costs. The livestock rise chiefly reflected changing supply conditions. But an examination of the details of the increase in marketing costs shows that the same factors were operative as in the industrial sector generally.

3. The heterogeneity and institutional character of service prices makes any simple characterization suspect. The rise in consumer prices generated in other sectors of the economy, and the general rise in wage rates did, however, lead after some timelag to a significant speedup in the rate of increase in service prices after mid-1956. And the rise in service prices in turn had repercussions on the increase in wages and prices in the industrial sector of the economy.

#### SOME IMPLICATIONS

Although it may not be obvious at first, this analysis is fairly optimistic with respect to its implications for the magnitude of the potential secular upward drift in the price level. In particular, the size of the price increases between 1955 and 1957 are not a good indicator of the kind of problem which may be confronting us (assuming, of course, we do not allow classical excess aggregate demand inflation to get started).

The magnitude of the shifts in demands between mid-1955 and mid-1957 were unusually great, even for a dynamic economy. We should not be continually subject, for example, to a 2-year increase in expenditures for fixed business investment of some 25 percent (and a much larger rise in order backlogs) accompanied by 20 percent decline in residential construction and automobile sales.

The upward price pressure arising out of attempts to recapture fixed costs at reduced "standard volume" is not a continuing phenomena. It is unlikely, indeed impossible, for the average operating rate at which entrepreneurs attempt to recapture fixed costs to fall indefinitely. Indeed the very size of the current *ex ante* profit margin, at full utilization of capacity, which resulted from this reduction in standard volume should become a moderating factor, offsetting price pressures from other sources as output rises toward full utilization of capacity.

This study does not attempt to evaluate the policy aspects of creeping inflation. It does, however, lead to certain general conclusions which are relevant in the formulation of anti-inflationary policy.

In the first place it is quite obvious that monetary and fiscal policies designed to combat an inflation arising out of excess aggregate demand are not suitable to a situation in which demand in the aggregate is not excessive. When, as in recent years, a rise in the general level of prices accompanies a growth in excess capacity, further restriction of the general level of demand may be positively harmful. Since productivity is sensitive to changes in output, when output is running below capacity, a general reduction in demand is more likely to raise unit costs by its effects on productivity than to lower them by its effects on wage rates. This will be particularly true if the restriction of aggregate demand continues to leave the booming sectors of the economy relatively unaffected.

Monetary and fiscal policies which do not restrain aggregate demand, but impinge only on the sectors where demand is excessive may indeed limit the inflationary forces during a period of creeping inflation. Had investment demand risen more slowly between 1955 and 1957, and automobile and housing demand more evenly, we would have experienced a larger rise in aggregate output and a smaller rise in prices. The question of selective tax and credit controls is far too broad to be discussed here; their application involves a host of economic and social questions which cannot be casually answered. At the

same time however, our analysis does indicate that counterinflationary monetary and fiscal policies must take into account the composition as well as the magnitude of demand. The use of monetary and fiscal policy to prevent the emergence of aggregate excess demand can prevent one type of inflation—indeed the most harmful type. But inflation can still arise in a situation of dynamically stable aggregate demand. Under these circumstances we can either attempt to alter the composition of demand by using selective controls or we can accept the moderate price increases which take place. This is our choice. We cannot solve the problem, indeed we shall do positive harm, by a further restriction of aggregate demand through monetary and fiscal policy.

There is one final implication of this analysis. Creeping inflation is part of the process or resource allocation. Simply because it is called inflation, one cannot attribute to it the dire consequences associated with classical hyperinflation. It does indeed benefit some individuals and harm others—like many other aspects of the resource-allocation process. In fact it is, in part, a reflection of the attempt by individuals and groups in society to ease the adjustments in relative incomes which a shift in the composition of demand entails. Creeping inflation probably disturbs the social structure much less than do the rapid changes in technology, the shift of income between industries, and the movement of industries from one region to the other, which we take to be the marks of a dynamic economy.

This does not mean that creeping inflation does not present problems. But it is one among many problems posed by a dynamic economy. Policy is quite rightly addressed towards minimizing the social costs of economic flexibility, but not at the expense of eliminating the flexibility. All reasonable social goals are a mixture of objectives, and price stability is no exception. We do not aim at the maximum rate of economic growth to the complete exclusion of current living standards; nor would we choose maximum economic flexibility wholly ignoring the problem of individual security. In a democratic society it is not the function of an economist to specify the particular combination of economic objectives at which policy should aim. This is the sphere of politics, in the broadest sense of the term. But an intelligent choice of goals does require an understanding of the economic relationships between various objectives and a knowledge of the probable consequences of choosing one combination rather than another. In formulating overall policy to cope with the kind of inflation we have experienced in recent years, it is particularly important to have an awareness of the relationship between inflation and the process of resource allocation and between the control of aggregate demand and the behavior of productivity.

The CHAIRMAN. Mr. Minsky, are you ready now?

**SUMMARY STATEMENT OF HYMAN P. MINSKY, ASSOCIATE PROFESSOR OF ECONOMICS, UNIVERSITY OF CALIFORNIA, BERKELEY, CALIF.**

Mr. MINSKY. The typical inflation—of the kind that has occurred from time to time—has been characterized as being generated by excess aggregate demand. On the other hand, it has been argued that the most recent inflation occurred at a time when no such excess demand existed, and that this inflation was generated by the action of sellers—it has been labeled a cost-push inflation. In many ways, this distinction between buyers' and sellers' inflations may be considered to be a false distinction. However, I wish in this statement, which is in part an extension of the statement I have filed with the committee, to examine one possible mechanism by which such cost-push inflation can be generated.

Inasmuch as this is a new type of inflation, it may be useful to identify what is new about the postwar economy so that it will work in a different manner than it did in earlier times. For the problem of cost-push inflation, I think we can identify four major ways in which the present day economy differs from earlier economies. Two of the

ways are subjective, dealing with the attitudes and beliefs of the various decision makers, and two are objective, dealing with the institutions and usages of the economy.

The subjective new attributes are—

1. The expectation that full employment can and will be maintained.

2. The expectation that economic growth, accompanied by improvement in the standards of life will take place.

As a corollary to the above, there is the expectation that financial stability will be maintained, that is, that no financial crisis of the sort that took place from 1929 to 1933 will ever occur again. Hence, in the present world, decisions are made in a framework that is basically optimistic.

The objective institutional changes that are relevant are—

1. The increased significance of trade unions.

2. The greater sophistication of firms that operate in the non-competitive sectors of the economy.

In addition, an objective institutional change is the continuing, in times of general prosperity, of price maintaining techniques adopted to combat a deep depression.

How do these new factors tend to generate inflation in the absence of current excess demand? First of all, the objective institutional changes make the possibility of a cost or sellers inflation greater.

If a seller is confronted by an infinitely elastic demand curve, of the kind that characterizes a competitive market, then he must take price as given. If a seller is confronted by a negatively sloped demand curve, of the kind that characterizes markets where deviations from competition exist, then it is technically possible for the seller to raise price, allowing the quantity he sells to decline. A negatively sloped demand curve confronting a seller is a necessary condition for a rise in price to be initiated by a seller.

There is no reason to assume that once a seller adjusts his price to his negatively sloped demand curve, any further rise in prices will take place due to the sellers initiative. However, in a world where deviations from competition exist many prices are set intermittently and once set will not be changed for some time. The optimistic expectation that growth will occur means that prices are set assuming that demand curves will shift to the right. Hence, the decline in sales that will result from a rise in prices, given the negatively sloped demand curve, will be soon offset by the rise in demand due to the growth of the economy. If the rise in demand does not come quickly, employment will fall but it is expected that if a significant amount of unemployment occurs, appropriate monetary and fiscal action will be taken. And it is expected that this action will be successful and it will shift demand curves upward.

Whether appropriate action is taken by the authorities or whether the workings of the economy induce the required changes, if an inflation initiated by sellers is not to result in rising unemployment then the increase in prices must be ratified by an increase in aggregate demand.

Before going on to policy recommendations, I would like to point out that in my statement I examine how what I call the cohesiveness of wages operates to spread price and cost increases that start in one

set of sectors so that they become quite general. This cohesiveness of wages depends upon the absence of large-scale unemployment.

What is the relevance of the above argument to the determination of appropriate public policy? To the extent that inflationary movements of prices are initiated by sellers exploiting negatively sloped demand curves, appropriate policy should be directed toward changing the nature of the demand curves that confront sellers rather than to constraining aggregate demand. For if aggregate demand is not allowed to rise to ratify the initiating upward movement of prices, unemployment and a decline in aggregate output occurs.

The optimistic expectations of price setters and portfolio owners are necessary for inflation to take place in the absence of current excess aggregate demand. These optimistic expectations can be removed by demonstrating to all concerned that they are false. This can be done by generating large-scale unemployment and by making sure that the economy enjoys another period of stagnation such as took place in the 1930's. No one, I hope, seriously suggests that this be done. But this would be the result of trying to prevent such sellers' inflations by constraining aggregate demand. If sellers are allowed to exploit their noncompetitive position, then to avoid punishing us all by forcing mass unemployment and stagnation on us all, the rise in prices that takes place must be ratified by a rise in demand.

Monetary and fiscal policy by constraining demand can make sure that large-scale unemployment and a period of economic stagnation result from inflationary pressures by sellers, and hence are not appropriate.

This does not mean that there are no weapons that can be used against these inflations. It does mean that the weapons have to be designed to attack the cause of the inflation, which is the existence of noncompetitive markets. I shall sketch a number of policy measures that can be undertaken to combat cost-push inflations.

I do not offer the following set of policies as a panacea that will cure our economic problems for all times and for all circumstances. I do believe that if some such program is adopted in the present circumstances, the possibility of inflation taking place in the absence of excess demand will be decreased, and if anything the program would operate to increase output and the prospects for vigorous growth.

First, I would make more concrete the employment goal of the economy. I suggest that 3 percent of the labor force should be designated as the maximum tolerated unemployment rate. Congress should declare that any excess of unemployment over this rate shall be taken to mean that there is a deficiency of demand and monetary and fiscal measures are to be vigorously used to increase demand. Should the excess supply of labor be due to pockets of unemployment arising from structural change, the appropriate demand increasing measures would be designed to eliminating these pockets. With this assurance of an overall availability of jobs, Congress should also state that it will not guarantee nor will it protect the existence of any particular job.

Once this assurance of a sufficient number of jobs is given, Congress should repeal all legislation which insulates domestic producers from competition, thereby making the demand curve confronting sellers of transportable commodities more nearly like the demand curves confronting sellers in purely competitive markets. This means that all

farm legislation, all tariffs and quotas, and laws permitting so-called fair trade agreements should be eliminated and the legislation determining the behavior of the regulated industries should be rewritten to foster, rather than to stifle competition.

The freeing of markets would make it impossible for sellers to raise the price of transportable commodities above world market price. In addition to transportable commodities, there are nontransportable commodities and services. If these markets are noncompetitive, then prices and incomes earned in these sectors can rise. However, if this occurs, and with constrained prices and wages in the sectors producing transportable goods, the differential in incomes that can be earned in the two sectors will increase. This will tend to induce entry into the sectors that produce nontransportable outputs. The Congress should make all constraints that tend to prevent entry into professions, trades, or businesses illegal. Trade unions and professional associations, while permitted to set standards for their members, should be prevented from blocking the entry of new firms and new practitioners into their trades and professions.

Economists are familiar with, know how to analyze, and can offer agreed-upon policy recommendations to correct inflationary situations that are due to excess demand. As a result of this proficiency there is a tendency to analyze inflationary situations as they occur in terms of the existence of excess demand, and to deny—or ignore—the possibility of inflation being brought about by the operation of other than the familiar set of mechanisms. The questions which this panel has been asked to consider, whether and how inflationary movements can arise in the absence of overall excess demands and how price and wage increases in one sector can lead to price and wage increases in other sectors, forces us to consider what, if any, other mechanisms can generate inflation. Both questions posed by the committee can be interpreted as dealing with the relation between the behavior of product and factor markets on the one hand and the generation of increases in the general price level. In particular, the question can be interpreted as asking the panel members whether cost-push—or sellers—inflation exists and if it does exist what is the mechanism by which it is generated.

In a very meaningful sense, the distinction between demand-pull—buyers—and cost-push—sellers—inflations is a false distinction. Inflation is a complex process in time that affects the behavior of almost all of the markets that make up the economy. Irrespective of the initiating forces, any inflation will contain both post-push and demand-pull elements. In an inflation set off by an excess of demand, there will be intervals of time in which cost adjustments dominate the scene; such intervals can be characterized as periods of cost-push inflation. And if an inflation is initiated by a cost push, there will be a need to ratify the rise in costs by an increase in aggregate demand if unemployment is not to result. As this new aggregate demand is greater than the full employment gross national product prior to the cost push, excess demand defined in this special sense is necessary even for a cost-push inflation to occur. But there is a large difference as far as the efficacy of any particular policy measure if the increase in aggregate demand is an initiating or a ratifying factor in the inflation.



It may help if I describe the approach I adopt in examining problems such as that posed by inflation. First of all, I am mainly interested in exploring the short-run step-by-step aspects of such problems. Results derived from examining statistical regularities, while interesting and important, are not by themselves accepted as solutions to the problem. In addition to the statistical regularity, I desire to know the mechanism, the who did what, where and how of the processes that are presumed to have generated the observations. Hence to say that velocity increased in the expansion of 1955-56 is not a satisfactory analysis of the monetary change that took place. A more satisfactory analysis explains that velocity increased because various specified portfolios adjusted in response to rising interest rates and that specific new (or rediscovered) techniques for profitably employing otherwise idle cash holdings were being utilized; this analyzes the path by which the change was brought about.

Similarly to point out that there is now an excess supply of money (or liquid assets) and that money (or liquid assets) are among the determinants of demand and to deduce from these observations that if inflation occurs, it will be the result of a demand pull, is not a satisfactory statement. In addition to extrapolating historic velocity relations, a satisfactory analysis will state the steps by which the excessive supply of money or liquid assets is transformed into an increased demand for goods and services. It will be argued that in the present environment a plausible mechanism for activating excess cash involves steps that are best characterized as cost pushes.

In order to examine the inflationary process in the way I have indicated, it is necessary to examine what I call, for want of a better term, the relevant institutional framework of the economy. The term institutions is not precise in this context for it refers to attitudes, expectations, beliefs, ways of doing things, and even relative magnitudes as well as the legal and organizational structure. Each time the relevant institutions undergo a significant change, it is risky to extrapolate relations derived from observations of the past. Of course, to a considerable extent, it is a matter of judgment as to when a "relevant" institution changes to a "significant" degree.

It follows that in order to analyze the post-World War II inflationary behavior in the United States the significance for the behavior of prices of a number of differences between the pre- and post-World War II worlds have to be examined. In my judgment, four institutional changes, two subjective, dealing with attitudes and beliefs, and two objective, dealing with organizations, are of the greatest significance for our problem. The subjective changes are: (1) The expectation that reasonably full employment can and will be maintained, and (2) the expectation that economic growth accompanied by improvements in standards of living will take place. The objective changes are: (1) The increased significance of trade unions, and (2) the greater sophistication of the firms that operate in the non-competitive sectors of the economy. In addition the continuation in times of general prosperity of price maintaining techniques adopted to combat a deep depression is a relevant change in institutions.

Another change in expectations that has taken place is worthy of being mentioned. This is the widely held belief that financial panics and crises of the kind that occurred between 1929 and 1933 cannot

happen again. This belief will reinforce the employment and growth expectations by making wealth owners willing to accept the portfolio changes that are necessary if aggregate demand is to ratify a cost-push sellers inflation in spite of constraining monetary and fiscal policies.

The expectation that reasonably full employment will be maintained is based upon: (1) A belief in the efficacy of fiscal and monetary policy in maintaining employment (2) a belief that Government intervention to maintain employment will take place if and when serious unemployment occurs. On a more sophisticated plane, there may be a realization that the steps that will be taken to maintain full employment will at least prevent price and wage deflation from occurring and that these steps may have some inflationary repercussions. In examining current inflationary price movements, we have to assess how the expectations that aggregate demand will not be allowed to fall very far below the full-employment level and that the increase of aggregate demand to combat unemployment will occur quickly affects market behavior. This expectation would seem to be particularly significant in determining behavior at times when excess supply exists even though unemployment is not serious enough to induce the various well-known demand increasing acts.

As an aside I wish to note that my confidence in the permanence of this expectation is being undermined by the high level of unemployment that is being tolerated at present in the midst of what is called a boom. If through a succession of cycles of the type we have been having in the postwar period, the boom unemployment rate is allowed to rise, the expectation that large-scale unemployment will not be allowed to occur in time of depression may be undermined.

The expectation that economic growth, accompanied by an improve in the standard of living, will take place is an important determinant of current decisions. In particular it means that household expenditure decisions are based upon some discounting of the future higher real income and that business investment expenditures are based upon an expected rise in demand. The substitution of the optimistic expectation of growth for the pessimistic expectation of stagnation affects the evaluation of situations so that the occurrence of the possible unfavorable results of various economic acts is considered to be relatively unlikely. Hence, a firm faced by a rise in costs will not fear the consequences of raising its prices as much as it would have if it did not expect that the market demand for its product will increase as times goes on. In addition a firm with optimistic expectations, confronted by a decrease in demand for its product during a recession, may be tempted to maintain the price of its products and certainly it will attempt to maintain the loyalty of the labor force it is employing by not cutting money wage. Furthermore, such optimistic expectations mean that investment will be maintained in periods where excess supply exists.

I will assume that trade unions have increased in significance in the economy. This will be taken to imply that wage negotiations and wage rates are set for contractual periods, so that the wage contracts being signed at any time reflect not alone present but also expected labor market situations. It will also be taken to imply that whenever labor contracts are being negotiated, there is more resist-

ance to a decline and more pressure for a rise in money wages than was true in earlier periods.

The growing sophistication of the firms in the noncompetitive sectors of the market means that the deviations from competitive behavior are less crude, that within the limitations imposed by the various antitrust laws the firms in the noncompetitive sectors are better able to achieve their objectives. As one of the objectives of the firms in the noncompetitive sectors is to know what their rivals are doing, I assume that the spread of knowledge of what such firms are doing is better than it was in earlier days. As the possibility of secret price changes are lessened, I assume, that in periods of excess capacity, the firms in the noncompetitive sectors do not readily cut price. I also assume that if costs are lowered as a result of changes in productive technique, this will not automatically result in a fall in prices.

As the first question posed by the committee is of more general interest, I will leave that to the end of my statement. I will first discuss how wage and price increases in one sector can lead to wage and price increases in other sectors. First of all, it is obvious that as the price of an input rises, the costs of the output also rises, which implies that a tendency exists for the price of the output to rise. Analytically this relation is obvious and estimates of how a rise in the price of the commodity will affect the price of other commodities are available. More interesting, because they are more subtle, are the factors that lead to the cohesiveness of wages, that tend to have wages move together.

The output produced by any productive unit depends not only on the machines, material, and organization with which labor is combined; it also depends upon the attitude, the morale, of the labor force. A major determinant of labor morale is labor's belief as to how fairly they are being treated. This is particularly important when the content of the job is frequently changed by the introduction of new techniques and products; the adaptability of the labor force is a question of morale. An important measure of the fairness of an employer, which generate the workers willingness to work and to adjust to changes, is the relative wage and rate of change of wages. A well-publicized rise in wages in one sector will lower the productivity of workers whose relative wages have decreased. Hence, for any particular firm, in the absence of an increase in its own productivity and without the existence of any excess demand for its product, a rise in wages may be necessary to offset the decline in productivity of its labor force induced by increases in wages in other sectors of the economy. Such a defensive rise in wages by preventing any decline in labor productivity will result in lower labor cost than would have ruled had wages not risen.

Additional factors tending to make wages move at the same rate for firms with different demand and productivity changes are that the relative wages are a determinant of labor turnover rates and of the ranking of firms as desirable places to work by new entrants into the labor force. A rise in wages by other firms, in other industries and even in other places, will tend to raise the labor costs of firms whose wages have not risen. These factors reinforce the morale factor intending to raise wages in sectors where no excess demand exists; this rise in wages being motivated by the desire to lower costs.

Of course the morale, labor turnover, and ranking of a firm by new entrants factors would not have a significant effect on the productive-

ness of the labor force of any firm if large-scale unemployment existed. Hence, the cohesiveness of wages, the proposition that a wage rise in any large sector will tend to become generalized throughout the economy, depends upon the assumption that large-scale unemployment will not be allowed to arise.

The cohesiveness of wages has policy implications in a world where productivity increases at different rates in the various sectors of the economy. First of all, in a world where the competitive pricing mechanism really works, the proposition that money wage rates should reflect increases in productivity is of course false. If a large increase in the productivity of labor takes place in the production of a commodity whose demand is inelastic, wages in that industry will fall. With inelastic demand, the response to the decrease in price that would result from the decrease in costs would not offset the increase in output per worker—hence there would be too many workers in the industry where productivity has risen. This would lead to a fall in wages and a further fall in costs. The community benefits from the increase in labor productivity by realizing a decrease in the price of the commodity that more than reflects the increase in productivity.

However, let us assume that prices and wages are “sticky” as far as decreases are concerned, and that, as has been suggested, wages are tied to increases in productivity. Then, given the decentralized wage-determination process, tying wages to changes in productivity is inflationary. With decentralized wage determination, the rise in wages will tend to reflect the rise in productivity that takes place in those industries where productivity is rising most rapidly. As a result costs and hence prices will rise in the industries where productivity is not increasing so rapidly. However, to the extent that prices are sticky with respect to decreases in the industries where productivity is rising most rapidly, this type of cost-induced inflation may be preferable to the type of wage behavior that would tend to keep the price level constant.

For, if wages rise by an average of the increase in productivity in these industries where prices are flexible, so that the price level is stabilized, profits will rise in the rapidly progressing noncompetitive sectors where prices are sticky. This will occur because with prices constant, the price-level constant and wages rising at a lower rate than productivity, the revenue of these sectors will not decrease even though their costs have gone down. The shift of increase from wages to profits will tend to increase savings. The increased flow of savings at full employment will tend to lower interest rates and hence increase investment; the more slowly rising consumption that will result tends to lower investment. Assuming that the effect of the decreased rate of increase of consumption upon investment is greater than the effect of the decline in interest rates, aggregate demand generated by the private sector will tend to fall, or at least not increase as rapidly. This, of course, may be a good thing; for example, if aggregate demand is increasing at a faster rate than productive capacity. However, in the absence of such excess demand such a shift to profits implies that either unemployment will increase or the Government will have to take the appropriate monetary and fiscal policy actions to maintain full employment.

It should be noted that the cohesiveness of wages does not depend upon the existence of effective trade unions. It depends upon the expectation that full employment will be maintained. Even in the absence of trade unions, money wages would tend to rise at the same rate in the various markets. However, to the extent that trade unions tend to make the rate of change of wages conform to the rate of change of labor productivity in the sectors where productivity is increasing most rapidly, rather than allow them to grow at some lower rate, trade unions tend to raise the price level. On the other hand, if the practical alternative to raising wages at the rate that productivity is increasing in the most rapidly advancing sectors is a profit inflation in these sectors; trade unions, by preventing the shift to profits, help to maintain consumption and therefore tend to sustain growth. Effective trade unions therefore may tend to increase both the rate of growth and the rate of increase of the price level.

How can inflationary movements arise in the absence of overall excess demand? A mechanism which may bring this about can be derived by combining the subjective expectations that full employment will be maintained and that economic growth will be sustained with the objective institutional factors that trade unions are stronger and that the noncompetitive sellers are more effective than in earlier periods.

Noncompetitive sellers are free to fix the price of what they sell, allowing buyers to adjust the quantity they will take. This relation is usually stated in the form that a negatively sloping demand curve confronts the seller. Hence a rise in prices initiated from the sellers' side is technically possible in the case of noncompetitive markets. On the other hand, all who sell in purely competitive markets are forced to accept prices as they find them; for if a seller in a competitive market attempts to raise his price, no one will buy from him.

The exploitation by the noncompetitive sellers of their ability to adjust price is constrained by the fact that the quantity taken will decline if prices rise. The greater the proportionate decline in quantity for a given proportionate rise in price, the less willing will the seller be to raise his price. However, if the expectation is that no appreciable decline in overall employment and hence in overall output can take place, then it is expected that if widespread unemployment results from a rise in prices, appropriate action will be undertaken to offset the decline in quantity. This action will take the form of an increase in aggregate demand which will have the effect of shifting demand curves upward. The expectational framework within which prices are formed is that the movement along the demand curve that the rise in prices or wages set off (which decreased the quantity sold) will soon be offset at least in part by a shift of the demand curve (which increases the quantity sold) as aggregate demand is increased to sustain full employment.

In addition, the expectation that economic growth will take place affects wage and price formation quite directly. If prices or wages are being set, the decisionmakers are concerned not only with the present demand and supply situation, but also with the demand and supply situation that will exist in the relevant future. These estimated demand and supply situations are based upon the full employment plus growth expectations. It follows that even in periods of

excess supply, wages and prices may be set on the basis of an expanded expected demand—this, of course, is analogous to the way in which investment is determined not only by the present situation but also by the situation that is expected to exist over the life of the investment. Wages and prices therefore may rise during periods in which current excess supply exists. The existence of current excess supply may act only to moderate the wage and price increases. Certainly if we want to look at wage determination for a moment, optimistic expectations by employers weakens their ability to resist pressures making for wage increases.

A necessary step in this process is the upward shift in demand curves that must occur if the rise in prices is to be offset. This occurs in two ways. One way is the expected way, Government action to maintain full employment, either by Government spending or tax reduction or monetary policy actions, or by the operation of the built-in stabilizers. Another way is through the behavior of household and business firms, in part directly due to the rise in prices and in part only indirectly due to the rise in prices. The direct effects occur if the increase in the income of the employed workers, and the rise in the profits of the relevant firms induces enough expenditures to offset the employment and output decline due to the rise in prices. The indirect effects occur through the investment and portfolio behavior of households and firms.

Within an optimistic expectations framework, the rise in wages and profits in the noncompetitive sectors may act as a signal to shift portfolios and to engage in investment. For the portfolio owners and investing firms are influenced by the same optimistic expectations that affect the price setters—and the rise in prices may be taken as a signal that more good times and more inflation is in prospect. Put into technical language, the rise in wages and prices initiated by the price determining process in the noncompetitive sectors induces a rise in velocity that shifts the various demand curves upward. This induced increase in demand spreads the price rise from the noncompetitive sectors to the competitive sectors and, of course, by not permitting unemployment or a decrease in output to occur in the noncompetitive sectors “proves” that the initiating rise in wages and prices is justified.

What is the relevance of the above argument to the determination of appropriate public policy? To the extent that inflationary movements of prices are initiated by sellers exploiting negatively sloped demand curves, appropriate policy should be directed toward changing the nature of the demand curves that confront sellers rather than to constraining aggregate demand. For if aggregate demand is not allowed to rise to ratify the initiating upward movement of prices, unemployment and a decline in aggregate output occurs.

The optimistic expectations of price setters and portfolio owners are necessary for inflation to take place in the absence of current excess

aggregate demand. These optimistic expectations can be removed by demonstrating to all concerned that they are false. This can be done by generating large-scale unemployment and by making sure that the economy enjoys another period of stagnation such as took place in the 1930's. No one, I hope, seriously suggests that this be done. But this would be the result of trying to prevent such sellers' inflations by constraining aggregate demand. If sellers are allowed to exploit their noncompetitive position, then to avoid punishing us all by forcing mass unemployment and stagnation on us all, the rise in prices that takes place must be ratified by a rise in demand.

Monetary policy, especially as operated by the Federal Reserve System, and taking into account the current financial environment, would be ineffective in constraining a sellers' inflation. The effectiveness of monetary policy depends upon the policy objectives, the institutional arrangements, and the financial environment of the economy. In the present situation, if monetary policy is used to constrain inflationary pressures originating from the behavior of prices in particular markets, and if the optimistic expectations are not broken, a large-scale rise in velocity, unaccompanied by any substantial further rise in interest rates will occur. This is true because a huge increase in velocity can be induced by the rising prices within a subjective framework which expects full employment, growth, and financial stability to rule. The relevant velocity to use in judging whether an economy can generate increases in demand in spite of constraining monetary policy is not the conventional ratio of gross national product to money defined as demand deposits plus currency. The relevant velocity is the Pigouvian ratio of gross national product to money defined as the assets of the public and the banking system whose monetary value is not tied to the performance of the economy. This relevant money supply is closely approximated by the gold stock plus the Government debt outside Government trust funds. In table I an estimate of these velocities is shown, and it is evident that even though conventional velocity is approaching the level of the 1920's, Pigouvian velocity is still low. If monetary constraints are used, and the optimistic expectations are not broken, a rise in Pigouvian velocity will occur as households and firms shift their portfolios in order to finance their expenditures. Such a shift in portfolios is dangerous, for when Pigouvian velocity is very high, financial instability can occur.

Fiscal policy by constraining demand can make sure that large-scale unemployment and a period of economic stagnation result from such inflationary pressures.

This does not mean that there are no weapons that can be used against cost-push or sellers' inflations. It does mean that the weapons have to be designed to attack the cause of the inflation, which is the existence of noncompetitive markets. I shall sketch a number of policy measures that can be undertaken to combat cost-push inflations.

TABLE I.—*Conventional and pigouvian velocity*

Year	Conventional velocity <sup>1</sup>	Pigouvian velocity <sup>2</sup>	Year	Conventional velocity <sup>1</sup>	Pigouvian velocity <sup>2</sup>
1920	3.82	3.29	1940	2.38	1.49
1921	3.55	2.65	1941	2.59	1.56
1922	3.55	2.80	1942	2.53	1.26
1923	3.86	3.30	1943	2.42	1.08
1924	3.55	3.36	1944	2.34	.90
1925	3.62	3.76	1945	2.09	.78
1926	3.91	4.12	1946	1.91	.83
1927	3.72	4.30	1947	2.06	.94
1928	3.76	4.63	1948	2.32	1.06
1929	3.96	4.96	1949	2.32	1.05
1930	3.71	4.43	1950	2.42	1.16
1931	3.49	3.54	1951	2.64	1.35
1932	2.87	2.42	1952	2.69	1.39
1933	2.82	2.08	1953	2.80	1.44
1934	2.81	1.83	1954	2.70	1.42
1935	2.68	1.73	1955	2.88	1.56
1936	2.67	1.68	1956	3.00	1.68
1937	3.07	1.74	1957	3.18	1.78
1938	2.68	1.53	1958	3.06	1.74
1939	2.52	1.49			

<sup>1</sup> Gross national product in current dollars divided by the sum of demand deposits and currency outside banks.

<sup>2</sup> Gross national product in current dollars divided by the sum of gold stock, silver dollars and bullion, subsidiary silver and mint coin, U.S. notes and U.S. Government debt outside U.S. Government trust funds.

First, I would make more concrete the employment goal of the economy. I suggest that 3 percent of the labor force should be designated as the maximum tolerated unemployment rate. Congress should declare that any excess of unemployment over this rate shall be taken to mean that there is a deficiency of demand and monetary and fiscal measures are to be vigorously used to increase demand. With this assurance of an overall availability of jobs, Congress should also state that it will not guarantee nor will it protect the existence of any particular job.

Once this assurance of a sufficient number of jobs is given, Congress should repeal all legislation which insulates domestic producers from competition, thereby making the demand curve confronting sellers of transportable commodities more nearly like the demand curves confronting sellers in purely competitive markets. This means that all farm legislation and all tariffs and quotas should be eliminated and the legislation determining the behavior of the regulated industries should be rewritten to foster, rather than to stifle, competition.

The freeing of markets would make it impossible for sellers to raise the price of transportable commodities above world market price. In addition to transportable commodities, there are nontransportable commodities and services. If these markets are noncompetitive, then prices and incomes earned in these sectors can rise. However, if this occurs, and with constrained prices and wages in the sectors producing transportable goods, the differential in incomes that can be earned in the two sectors will increase. This will tend to induce entry into the sectors that produce nontransportable outputs. The Congress should make all constraints that tend to prevent entry into professions, trades, or businesses illegal. Trade unions and professional associations, while permitted to set standards for their members, should be prevented from blocking the entry of new firms and new practitioners into their trades and professions.



I do not offer the above set of policies as a panacea that will cure our economic problems for all times and for all circumstances. I do believe that if some such program is adopted in the present circumstances, the possibility of inflation taking place in the absence of excess demand will be decreased, and if anything the program would operate to increase output and the prospects for vigorous growth.

The CHAIRMAN. Thank you, sir.

There is a striking degree of similarity and agreement among these papers. I only wish that they would be called to the attention of the Federal Reserve Board and its policymaking staff members. There are some questions which occur to me. I wondered if we could get any consensus from the group as to what the effects would be of an increase in demand for certain products such as automobiles and housing (*a*) upon prices, (*b*) upon wages in that industry, and then see the proper process by which these price and wage increases would spread to other industries, if they do.

That has been touched on separately by each of you, but I wonder if there is any general agreement on this.

Professor Schultze, would you lead off and then if there are any dissents they can be added by other members of the panel. Did I misread your study? I inferred from your study that you thought that the increasing demand for automobiles in 1955 and also housing, I think, in that year helped to set in play inflationary forces in these sectors of the economy which spread elsewhere.

Mr. SCHULTZE. I would say you have about half of it. There is an additional part to it. In late 1955 almost all of the volatile sectors of the economy were expanding very rapidly. First, this meant, I think, that we were approaching, we were not already in, a state of aggregate overall excessive demand. This had certain implications for prices at that time and because of long-term wage contracts, lags and the like, it had implications for price and wage behavior later. However, after late 1955 the economy changed its character. Automobile and housing demand declined whereas demand for investment goods, for machinery, equipment, and construction—not housing—continued to rise very rapidly. It was out of these sectors, the investment goods sector, that the pressures came helping to raise prices in other sectors. I would agree with you that in addition to this, there was a hangover effect, if you will, from the very high and rising levels of auto and housing in 1955. But the thing I stressed was that after the latter half of 1955 general cost pressures fed out from the investment goods industries into other industries, both through their impact on materials—I don't mean crude materials which are pretty sensitive to demand conditions—but to components, parts, semifabricated materials, containers, those sorts of things which every industry uses. Excess demands in the rapidly expanding industries resulted in price increases for some materials; the failure of materials prices to fall in other cases where the situation was dominated by the purchases of weak industries meant an overall rise in semifabricated materials prices. So producers in industries with relatively weak demand—for example, consumer durables—experienced rising prices for their materials partly because of the excess demands for those same materials on the part of the investment goods industry. There is further, I believe, an inherent tendency in our economy for wage increases in most industries to imitate

the kind of wage increases that are given in the rapidly expanding industries.

These are the factors which resulted in a general rise in costs. To those I added the overhead cost impact, but that is a separate point.

The CHAIRMAN. Is there any dissent?

Mr. ANDERSON. I would add one partial dissent. I feel that we cannot generalize about a strong increase in demand bringing about an increase in prices. The reason I say that is the chemical industry has experienced the strongest increase in demand but their prices have risen only one-fourth as much as the average manufacturers prices. The industry experienced the greatest increase in demand, increased prices far, far less than the average.

The CHAIRMAN. Wasn't that because of technical improvements which lowered production costs?

Mr. ANDERSON. Yes; this is why you cannot generalize on these things.

The CHAIRMAN. Other things being equal.

Mr. ANDERSON. Yes; they would not be equal. If you have a big increase in demand it is easier to attract capital. It is easier to increase productivity. Big increases in demand help set the stage for rapid increases in productivity.

Mr. OKUN. I feel that there is a need to distinguish between short run and longer run effects. In the case of shortrun effects, we are talking about the impact of increased demand or excess demand on an industry with given capacity. In that situation, I would be prepared to say that, the greater the level of demand, the greater the chance for price increase. But over the longer run, capacity is one of the variables and continued growth in demand may stimulate investment and may, as Mr. Anderson says, attract capital into the industry. In particular, new capital provides new capacity with a higher, more developed level of technology, and with techniques of production that are likely to stimulate higher productivity rates. The dilemma between price stability and a higher level of output is really a dilemma for the short run. I think over the long run we can step up our growth rate and achieve at least no worse a record of price stability than with a lower growth rate. The growth rate can be raised by shifting the composition of output in favor of capital formation, research and development, since these outlays contribute to higher productivity. There is actually little conflict between the views of Mr. Anderson and those that Mr. Schultze and I presented earlier, when shortrun and longrun effects are separated.

The CHAIRMAN. Mr. Minsky, would you care to comment?

Mr. MINSKY. I think when Mr. Anderson speaks about increases in demand he is very often talking about increases in output. For example, the chemical industry's output increased significantly between 1955 and 1959. At the same time, using his data, it had a relatively small increase in price, relative prices fell. There was a tremendous amount of substitution of chemical products for metal products, for example, I suppose.

The CHAIRMAN. Wouldn't that take place through a lowering of the cost curves?

Mr. MINSKY. And a given demand curve. So it doesn't mean there has to be an increase in demand. It could have been that the increases in productivity meant lower price.

The CHAIRMAN. You could also shift the demand curve to the right so that the two factors together could operate.

Mr. MINSKY. That is right.

Mr. SCHULTZE. I realize it is really my fault. I think I have a false controversy going. It is a problem of attempting not to use technical terms. What I really meant, more precisely expressed, is that excess demands are related to increases in prices. Excess demand is not necessarily the same thing as rapidly rising demand. The chemical industry is a case in point. Very rapid technological gains can mean you can get very rapid increases in demand without excess demand.

Mr. MINSKY. Output.

The CHAIRMAN. Let me see if you agree, as I think you do, on conclusions of Federal Reserve policy in 1956 and 1957. As I understand it you say, and I believe you are correct in this, that Federal Reserve policy tried to prevent price increases by holding down the aggregate demand for products. But this did not control the price increase. The price increases occurred from other causes affecting specific sectors of the economy and spreading from there elsewhere. Do you all seem to agree on that?

Mr. ANDERSON. Yes; I agree with that very much.

Mr. MINSKY. I would like to state that in this period of monetary constraint with the strong investment boom that is going on, the Federal Reserve System seemed to be following at that time almost a strict quantity approach and was not aware of the various possibilities for financing increased aggregate expenditure by sort of portfolio shifts. In evaluating monetary policy the problem always arises that if you have strong tendencies to invest and you try to constrain these tendencies by so-called tight money, velocity changes may occur which, in effect, render the policy rather futile.

The CHAIRMAN. You had a very interesting sentence in your paper. I forget whether it was in the long or short period. You implied that an increase in the interest rate would speed up the rate of turnover of inventory. I have thought about that a great deal. These ideas have always met with derision. Have I interpreted your point correctly?

Mr. MINSKY. It would increase the rate of turnover of cash balance rather than inventories. One of the problems is that we are living in a world where decisions are being made on the expectation that no 1929-33 type of financial instability can ever occur again. Yet the type of economizing of cash balances behavior that we have seen ever since the commercial banks have gotten rid of their Treasury bills, for example, and the way in which the Treasury is forced to issue more and more bills into the market, which are being held to a large extent by private corporations in lieu of holding cash, and other portfolio substitutions that could occur all mean that there is an increased possibility of financial instability. Such financial instability occurs when people try to sell things that presumably have a fixed dollar value because they need the cash, and find that the fixed dollar value is not available.

The CHAIRMAN. The rises is the interest rate sped up the velocity of money and helped to offset in whole or in part any restriction upon the total quantity of money?

Mr. MINSKY. That is right.

The CHAIRMAN. Mr. Okun.

Mr. OKUN. Mr. Minsky's message is that passive tight money was incapable of restraining price rises because of the economizing on cash balances at higher interest rates. I fear that this message might be read by Chairman Martin as advice to use active tight money rather than passive tight money.

The CHAIRMAN. In what way?

Mr. OKUN. It is not enough to hold the money supply constant; instead it is necessary to reduce the total quantity in order to prevent inflation. I would say that is a possibility.

The CHAIRMAN. You mean through open market operations?

Mr. OKUN. Yes; or raising reserve requirements. The quantity of money can be reduced if it is so desired. I would say that a sufficiently restrictive monetary policy could do the job of stabilizing the price level.

The CHAIRMAN. What effect would that have on employment?

Mr. OKUN. That is precisely the issue. Because of the employment effect, it is doubtful that one wants to engage in such a policy. For this purpose, it is necessary to ask some questions about what might be called the welfare economics of inflation. Just how serious is a rising price level as opposed to a rising level of unemployment?

The CHAIRMAN. This raises the question: Suppose you control the total quantity of money and make it constant, whether operating through the total supply of money or otherwise, but you have price increases in certain sectors. Then this will require compensatory price decreases elsewhere. If costs are not immediately responsive to these areas, this will probably increase unemployment; will it not?

Mr. OKUN. Yes; unemployment will rise. I think we are agreed on the policy conclusions. I should argue that, while monetary policy can achieve the objective of stable prices, the costs in terms of output are intolerably high. Under certain conditions, one should accept a moderate amount of inflation due to what Mr. Schultze has happily called selective excess demand rather than try to control this at the expense of creating unemployment and/or perhaps permitting a recession to develop.

The CHAIRMAN. What you are also saying is that this increase in prices in certain sectors may not be caused initially by increases in wages necessarily, but may result from shifting of specific demand curves to the right which will call these other factors into being in their wake; is that right?

Mr. SCHULTZE. May I enter a little dissent on this beautiful harmony? I would not give up quite so quickly on monetary controls. I have, however, a little broader meaning of monetary control in mind. I hesitate to be too positive because it is a fairly complicated point and I am not sure myself. I do think we might do a little about this so-called selective demand problem with selective controls. If, for example, we had had during the 1955-57 period a more even rate of increase in autos and housing instead of a big surge and then a drop and at the same time a somewhat slower rate of growth in investment demand, we might have ended up with more output and less price increase even with the same aggregate money supply and demand.

The CHAIRMAN. I suppose you could have regulations of installment selling on autos.

Mr. SCHULTZE. That would be one thing. Perhaps the use of FNMA to manipulate mortgage rates in a somewhat more discretionary manner. Perhaps—I say “perhaps” because I have not investigated the technicalities—selective changes in depreciation allowance. If you want to stimulate investment, increase it. If investment is rising somewhat faster than you feel desirable, perhaps clamp down on depreciation. Through all of this I have said “perhaps” because without investigation I am not sure how much foresight this requires and I am not sure we have it. I do think it is worth investigating before we give up on the problem.

The CHAIRMAN. Congressman Curtis.

Representative CURTIS. I do not know just how to get into this because it seems that the panel has reached agreement on something that I must say is a little shocking to me: the power that the Federal Government has to alter the value of money is a tool for the Government to use to produce economic effects. That is what I gather from this conclusion here. Does someone disagree? Maybe I have misinterpreted the discussion, but that is certainly the way I have interpreted the answers that have been given to Senator Douglas.

Mr. MINSKY. There are inflations and there are unemployment situations which can properly be cured by monetary fiscal policy.

Representative CURTIS. I know this can be done. Do not misunderstand me.

Mr. MINSKY. The question that I think the panel more or less agrees on is that there are other types of inflations and perhaps other types of unemployment situations where the aggregate monetary fiscal policies may not be the appropriate things to us. The question at issue is, as I see it, whether our current economy has so changed in structure or its characteristics that this second or new type of inflation is now possible where perhaps in earlier days it was not possible.

Representative CURTIS. I was going to get into this very question of what everyone means by inflation. The subject is the analysis of inflation. Dr. Schultze has helped me considerably by referring to classical inflation and then to other kinds. I doubt very much whether a great deal of what is called inflation is really inflation at all in the classic term, or whether it indeed is not the result of changed costs. I mean the real cost that goes to make up something.

In other words, if you have rapid growth and if you have change in technology in a given industry and you have junked a lot of machinery and spent a lot of money on research and development and you have trained a lot of new men you are going to have to recoup that as part of your costs. Where else do you recoup it?

Mr. MINSKY. By going bankrupt.

Representative CURTIS. I am assuming you are trying to stay in business. What I am getting at is this: I don't say that that increased cost is what we are talking about when we are talking about inflation. Maybe it is.

Mr. SCHULTZE. Let me make this distinction. Mr. Anderson and I were talking about this before. If I interpret you correctly, you are saying that many goods which are now sold on the market are not really the same goods they were 10 years ago.

Representative CURTIS. Yes, indeed; that is part of what I am talking about.

Mr. SCHULTZE. This part everyone would agree with. The real problem is our statistics. Our price measures overstate the rise in prices and understate the rise in output. We don't know how much. I am inclined to believe that it is, over the long run, noticeable and significant but simply because of this we cannot say there was no inflation.

I don't mean that there was no rise in general prices from 1955 to 1957. There was some but it was less than the statistics show.

Representative CURTIS. That is one aspect of it. I am glad we are in agreement there, or at least that I have some professional support to the conclusions I have reached as an amateur in this area. I think there is more to it than that in this cost aspect that has nothing to do with what we call traditional inflation. Economic mistakes that are made are going to have to be paid for somewhere, as is the case with something that has no economic value such as military expenses. Nowhere is mentioned the tremendous tax load that ultimately in my judgment is borne by the consumer and must be reflected in prices. That is a cost element, it seems to me, that is going to be so reflected. Again, it would seem to me that the more rapid economic growth you have, you almost certainly are going to have more obsolescence accompanying it and therefore your cost from that process is going to show some increase.

I am now talking about actual cost and not the change in money as a measuring stick. Maybe that is the way to get across what I am trying to say. If we are going to keep money as an accurate measuring stick of economic phenomena, which I thought and still think is the main function of the Federal Reserve, then when we have had an economic situation occur that is not the result of that measuring stick getting out of kilter, we should not at the Federal level use the power we do have to mess with that measuring stick to produce economic effects. I certainly agree with you that you sure can do it. You can stop unemployment temporarily and you can do a lot of such things. However, I am a little shocked to think that you feel that it is a proper thing for the Federal Government to depreciate the dollar to bring about such changes.

Mr. SCHULTZE. May I make a point on this? This won't put us in agreement but I think it will narrow the area of disagreement. I think again all of us here would agree that it is not the function of an economist to tell either legislators, or anybody else, what the objectives of a society ought to be. As citizens we have of course our own views. I think what all of us have said, perhaps with differing emphasis, is that the goal of absolute price stability and full employment may at times be inconsistent. We have to take a pick. I happen to have my own particular views on how I would weigh the desirability of having full employment versus a mild rise in the general level of prices, but as an economist I can't tell you that you are wrong economically to pick one instead of the other. I think we may disagree on our value judgments as to which to emphasize.

Representative CURTIS. You have narrowed it and you have helped considerably. It is agreed that it is a completely inconsistent aim to always have price stability?

Again, price stability is not the same thing as money remaining constant as a measuring stick. I hope you go along with my thought

that we have and can have increased real costs if we are going to have increased quality of goods and services and if we are going to pay for economic mistakes, to have defense and so on, we can and should have price increases that reflects these costs. I don't see that this necessarily means any more unemployment than the other. I think there are ways of coping with the unemployment problem that don't require messing with the value of money at all. In fact, I think messing with the value of money is going to create more problems in this very area.

Could you comment on whether we still disagree?

Mr. SCHULTZE. Yes, I think so. First let me distinguish your cost inflation, if you want to call it that. In cases where the increased costs really represent increased quality, I think everybody would agree we don't really have a price increase.

Unfortunately, we can't measure it well. However, where you have increased costs leading to increased prices without any quality change, then I think there is a real price increase.

It may not stem from any aggregate demand problem but it is a real price increase and it does lower the value of the dollar.

Representative CURTIS. No. It possibly could be in these other areas. Take the cost of defense. Under our tax structure we are going to take it out of our economy and we take it out through the methods of taxation.

Just commenting on the methods of taxation; business taxes largely are going to be paid for at least to some degree in increased costs. I would not regard that as inflation in the traditional sense.

Mr. MINSKY. First of all there is some difference as to what we mean by cost.

Representative CURTIS. Yes.

Mr. MINSKY. Defense takes resources. There is no getting around the fact that 10 percent or so of our resources in the United States are being used on defense expenditures. That is a real cost. We cannot avoid it. At the same time that we are carrying this cost by appropriate fiscal and tax policy we could have prices fall. We could have a \$20 or \$30 billion surplus.

Representative CURTIS. We could?

Mr. MINSKY. Sure.

Representative CURTIS. Where would you get it? I am on the Ways and Means Committee. I have to try to figure such things out.

Mr. MINSKY. I am not suggesting this as a policy. I am saying it is conceivable that we could by taxing more than the Federal Government is spending by a very large amount have a \$40 billion defense program, and simultaneously have mass unemployment, prices falling, and the value of the dollar rising.

We could do it. I am not suggesting that we should.

Representative CURTIS. I do not understand how we could, because if my thesis is correct, your costs for this program are going to be reflected somewhere in the prices.

Mr. SCHULTZE. Let me try to say the same thing in a different way to see if it would help. Suppose you took \$10 billion additional for defense, and let us say raised taxes, and let us go even further and say people attempted to pass those higher taxes on in increased prices,

while all this is going on you reach around with your left hand and take \$30 billion worth of purchasing power out of the economy, by adding 5 percent or whatever it takes to the individual income tax.

In other words, you add \$10 billion of Government spending, you tax people, they try to raise their prices; but at the same time you are doing this you pull out a tremendous amount of purchasing power out of the economy. Business firms find they cannot raise their prices. They find the demand is not there.

You can get demand low enough so that the most rigid pricemaker will lower his prices. It may cause a lot of unemployment but technically it can be done.

Representative CURTIS. I can see that. I was assuming a constant demand, but I can see your point. I see my time is gone. I will come back.

The CHAIRMAN. Senator Sparkman?

Senator SPARKMAN. Mr. Chairman, I have been enjoying all of this. To me, a layman in the field of economics, it seems to me that there are many factors and it is pretty hard to line them up to know what the outcome will be.

You have been talking about a more or less unusual situation that prevailed between 1955-57 if I understand correctly. I want to relate it to the present. Is it likely that the same forces or factors that applied in this 1955-57 period would come into play again now, or are they in play at the present time, or are we in an entirely different situation?

May I start off by asking this: Do you believe we have inflation now?

Mr. OKUN. Price indexes are rising. If we want to use these customary measures, the answer is "Yes," sir.

The CHAIRMAN. Just a minute, Mr. Okum. On that, wholesale prices have been virtually stable. If you take the Economic Indicators which are just out for September—

Dr. ANDERSON. They have been staying at 119 for quite a long time. Wholesale prices have been very stable for quite a few months.

The CHAIRMAN. The index for the 15th of September was 119.6. For March 1959 it was 119.6; July 1958 it was 119.2. So the last 15 months have seen virtually no increase in wholesale prices. In the last 2 months it was 122.9. In May it was 120; in July 1958 it was 122.9. We do not know whether the movement of these last 2 months, June and July, are typical.

But aside from those 2 months there was virtual stability in the retail price index. Within that general index you had farm prices going down and the prices of capital goods going up. This would suggest that you have something of the 1955-57 situation going on.

Mr. OKUN. I was thinking of the gross national product deflator. That price index rose during the first and second quarters of 1959 and even rose consistently during 1958. The most comprehensive price index we have available is the implicit deflator for gross national product.

As you point out, in recent months the Consumer Price Index has shown an upward trend. I think we are confronted by the prospect of slightly and slowly rising prices as we continue to expand output and employment toward a capacity level.



I welcome this combination of prospects. I think they have to be taken as a combination. Any attempt to be rigid in preventing the slow rate of price increase can only produce a failure of the economy to realize its potential in terms of output and employment.

I rather fear excessive optimism about our ability to achieve absolute stability of the price indexes because I think that leads to undesirably restrictive monetary and fiscal policy.

Senator SPARKMAN. When we started these hearings back in the early part of the year, as I recall, Mr. Chairman, the first four economists we had, who were supposed to range across the board, were in complete agreement that things were quite stable at that time.

Representative CURTIS. They predicted in 5 or 6 months we would see rises, and they turned out to be right.

Senator SPARKMAN. I was just going to add this: I was not here yesterday. I noticed the press report this morning. I am certainly not trying to provoke an argument. I noticed that about 4 weeks ago the Vice President's committee, or the President's Cabinet Committee, I suppose we ought to call it, presided over by the Vice President, came out with somewhat a similar finding.

I believe that some of the leading economists at that time predicted that not only were we enjoying a remarkable period of stability, but predicted that it would go on for another year or so.

Frankly, I find difficulty in deciding just where we are now. And how do all of these factors that you lay out before us apply to the present situation? Or what may lie immediately ahead of us?

Mr. SCHULTZE. You pose us quite a problem. Most economists make their reputations on hindsight and lose it on foresight. We are pretty good on hindsight. Nevertheless, let me make at least a couple of comments that I think are relevant.

First, if you look back at the postwar history—although I have not done it—I suspect, going way back before that and look at price history, you will find that the period in which we are most likely, aside from depressions, to get price stability is precisely the first year of recovery after a recession.

In 1950 up until Korea, in 1955, and again in 1959, we are having a substantial rise in output with price stability. In large part, I think this stems from the fact that precisely during recoveries we get our biggest productivity gains and biggest increases in profit margins and, therefore, generate factors which tend to hold price increases down.

In other words, this year is not the test—without trying to predict, at least in this sentence—this year is not the test.

Representative CURTIS. Will next year be?

Mr. SCHULTZE. No more than 1955 was the test or early 1950 was the test.

Yes; I would say next year will probably be a better test. The first year of recovery after a recession almost always shows price stability, even though there may be factors working to give you later price increases. I would personally feel that a lot of the same factors which caused the mild rise in prices from 1955 to 1957 will continue to operate in the economy.

However, I do not feel—and I admit a lot of this is really by hunch—they will operate to the same degree. So while I think all of us agree we may be faced with a problem of mild price rises over

the long pull, I personally would say that they will be somewhat less than the kind of prices which were relatively moderate between 1955 and 1957.

Now, I am out on a limb, but I will leave it there.

Mr. MINSKY. There is one thing which I think we have to face if we are going to discuss the appropriateness of monetary and fiscal policy in the present context, and that is that we still have on a seasonally adjusted basis 5.5 percent of the labor force unemployed.

This is the August figure, page 11 of the statistical indicators.

The CHAIRMAN. That does not include unemployment within employment, which is the equivalent of 1.1 million more, or, roughly, 1.4 percent. So if we include unemployment within employment, you get a figure which is very close to 7 percent.

Representative CURTIS. You want to compare that with your past.

The CHAIRMAN. I understand.

Mr. MINSKY. If I recall the press release that accompanied this data, this is prior to any serious impact of the effect of the steel strike in this unemployment figure. So the problem is, I think, going back to my statement: Are we going to see a sort of eating away of what I consider two very healthy expectations? First, the expectation that the economy is going to operate so that we have on the whole full employment. Secondly, is the economy going to operate so that on the whole we have improvements in the standard of living of people and growth?

As you keep on allowing the percentage of the unemployed that you will tolerate to increase, you are doing a great deal to undermine what I would consider very healthy expectations. The problem is what we will have to do to the price and wage determining processes in our economy if we are going to live with these optimistic expectations.

Senator SPARKMAN. May I go back? I note that between 1955 and 1957 on the Consumer Price Index the rise was from 114.5 to 120.2 and by the next year, 1958, it was 123.5. Yet, I notice that as of July this year the rise is only to 124.9 and a similar situation prevails in the wholesale price index.

From 1955 until 1958 it was 110.7 to 119.2 and in September, on September 15, 1959, it is 119.6.

The CHAIRMAN. Whatever may be true of the deflator—and I think we should publish the index in the economic indicators—certainly, it is true that for the past 15 or 18 months we have had substantial stability in the overall index of wholesale prices and in the overall index of the cost of living.

Mr. ANDERSON. I would like to offer a forecast of price movement over the next 12 months because I have done this for several firms that are interested.

Based on wage contracts that have been signed, and they are often 3 years, and we have enough contracts settled this year so that we can estimate something like a 10-cent settlement in the steel industry, it appears that the wage-costs will be rising about 4 percent over the next 12 months.

It also appears as though productivity will rise somewhere by 2 to 3 percent. The last year it has gone up by 6 percent because we recovered from the recession. In a sharp recovery productivity goes up. We cannot expect another 6 percent gain in productivity because we are too close to full employment.

So I think we are going to revert back closer to our long-term increase in productivity; namely, of 2 to 3 percent. Profit margins are relatively high because corporate profits jumped from \$32 billion in the recession to about \$52 billion currently.

I think there will be some squeeze on profit margins. So not all of the differential between the increase in wages and increase in productivity will go on in the form of higher prices. I would guess that the price increases over the next 12 months with our estimates of the future increases in wages, salary, fringe compensation total cost of around 4 percent and our best expectations of productivity of somewhere close to 3 percent, the price increases over the next 12 months should not exceed roughly 1 percent.

Given the constant improvement in the quality of goods and the diversification of goods and services, we get virtual price stability. Prices do not allow for the increase in quality of services. If you put that in, we are getting in a statistical form maybe a 1 percent price increase over the next year but in a real form virtually none.

The CHAIRMAN. As a corollary to this, if we have had substantial price stability during the last year and if there is this upward bias in the price index because of improving quality, then it follows that there has really been a slight decrease in prices during the last year per unit of quality.

What I am saying is that a lot of people who have been shouting about inflation and worried to death about inflation have been as falsely worried as the old maid who is afraid that a young, virile man is underneath the bed.

Representative CURTIS. Now the Senator is leaving me. I agreed up to a point. During this recession there were a lot of comments as to why prices were not down and I thought they actually were, as a matter of fact.

The CHAIRMAN. I am speaking of the last year at the time when the President and the banks and insurance companies have all been shouting about the terrors of inflation, we have had substantial price stability and improving quality so per unit of quality prices have actually been going down.

Representative CURTIS. Senator, they are looking ahead.

The CHAIRMAN. I am looking at what is happening.

Senator SPARKMAN. I have thought that there has been so much shouting about inflation and I will say ordinarily it has been couched in terms of a threat of inflation, I feel that the people out over the country have gained the impression that we are actually in an inflationary period at the present time.

I will agree that the terminology has been rather well expressed as the threat of inflation, but it seems to me it has been overplayed and the country would be more likely to maintain its stability if they understood just such things as you gentlemen have stated now with reference to the next 12 months.

Therefore, I was rather gratified to see the report from the Vice President's committee to the effect that we did not have inflation.

The CHAIRMAN. That was the second report.

Senator SPARKMAN. Yes. The first played up the threat of inflation. The second one said we had looked into it now and that it was not as bad as we had thought. Likely, it will be even better.

Representative CURTIS. The reason I might give to the Senator as to why there is hope is that we did balance the budget. If we will approach our Federal expenditures next session in that way we might really hold it.

Senator SPARKMAN. I join with the gentleman from Missouri that we balance the budget next year. I go further and say we can pay something on the national debt.

Dr. ANDERSON. I would rather have tax reduction and stimulate a healthy rate of capital production and growth. I think the best way of resting the burden of the debt is through substantial economic growth rather than reducing the monetary level of the debt.

If I saw surplus coming up I would prefer tax reduction to stimulate a better growth rate. More capital investment, better gains in productivity and rise in real income would make the burden of the debt easier.

We all want the same thing, to ease the burden of the debt, but I think the best way to ease the burden is through a very healthy growth rate in the economy and tax reduction should come first.

Senator SPARKMAN. If you can attain a good balance in that I would be for it. We tried it in 1954 and you saw what happened.

Dr. ANDERSON. This is theory.

Senator SPARKMAN. In fact, I am rather of the opinion that the recession of 1957 and 1958 was the reaction from the overboom that was produced by the 1954 tax cut. Am I badly off on that?

Mr. OKUN. It was not a very strong boom by most standards.

Senator SPARKMAN. In construction?

Mr. SCHULTZE. In investment it was.

Mr. OKUN. One might say we were not prepared to adopt the policies that would justify a high ratio of investment to GNP over the long run. We could well consider such policy measures.

The CHAIRMAN. Senator Bush?

Senator BUSH. We have before the Congress two or three bills which are identical in purpose and they raise this question: Is price stability a desirable explicit goal of national policy in the furtherance of maximum employment and economic growth? In the light of this discussion would each of you care to express yourselves on that issue in turn, briefly?

Do not give all your reasons. We have been through a lot of the background of this, but I would like to have an answer from each of you on that explicit question if you care to make it.

Mr. OKUN. I think one might put it this way: We would all accept the behavior of prices as a legitimate concern of economic policy. One reason why I would be hesitant about making price stability a goal or a stated objective of economic policies is that price stability necessarily means stability of some index prices. We are all aware of an upward bias in the conventional indexes of prices. They do not accurately reflect quality change and the presence of new goods in the economy.

We have all complained about the upward bias in the price indexes. I wonder whether someone could not do something about that. It should be possible by standard economic research techniques to estimate quantitatively just how improvement in product quality and new products add to the purchasing power of the dollar. The pro-

ducers' durable sector and the realm of consumer services are the two areas where I think the indexes may overstate most.

If we had a price index that we believed in, I would be prepared to say that price stability is one of the objectives of economic policy.

Senator BUSH. Thank you. Would you care to express an opinion?

Mr. SCHULTZE. I cannot think of anything in Mr. Okun's statement with which I disagree except I might go a little further, I think, in the direction away from you, Senator, and say this: Only if it could be so written that it put greater priority on growth and on full employment than on preventing modest inflation, only under those conditions would I go along with it. Let me hasten to add this is my opinion as a citizen and not as an economist.

Senator BUSH. The whole purpose is to promote economic growth and maximum employment. If you would care to write me personally, any language that you think would be helpful I would be glad to hear from you privately on that as a citizen.

I am sponsor of one of those amendments.

Mr. Minsky?

Mr. MINSKY. As you increased the number of dimensions that you state your policy in terms of, you increase the possibility that the objectives are mutually incompatible. I would like to second Mr. Schultze's comment that if you want to have price stability, I think you should state at what unemployment level you are willing to give up price stability as an objective.

If, for example, you can achieve price stability, correcting the indices as Mr. Okun suggested, with 5½ percent of the labor force unemployed during boom times, are you willing to do it?

Senator BUSH. This amendment to the Employment Act would not go into detail of that kind. The point of the amendment is to state, if we believe it is true, that price stability is a stimulus to economic growth. Relative price stability. I do not mean it has to be exact. I think the term "relative price stability" is in the amendment that I filed myself.

The point is that is a stimulus for investment. It makes for confidence. It makes for long-range planning. It makes for stability in employment. It promotes economic growth. That is the theory of the thing.

What I am asking you is whether you believe that is true: That theoretically it does or should have that effect. Never mind the refinements about the degree of unemployment that we have and so forth. This would be an amendment that would be on the books indefinitely just as the Employment Act was.

Is it a desirable goal of national policy for the purpose of stimulating economic growth and for maximum employment?

Mr. MINSKY. In the abstract it is a desirable goal. If the goal has to be purchased at a price of starting to constrain the expansion of the economy by monetary and fiscal measures, while you still have 5½ percent unemployed, then I think we have to decide whether it is worthwhile doing.

There is nothing inherently consistent between all the good things in life. You can't have your cake and eat it, too. It may be that the attempt to rapidly invest in productive resources, such as occurs at the height of a boom, may so strain capacity that prices begin to rise.

It may be that the unwillingness to tolerate unemployment during a depression puts a sufficiently high floor under the price level and employment that you do not undo the price rise of the boom in the recession.

I believe in the earlier hearings before this committee it was Mr. Friedman who said that every boom has seen a rise in prices and in the normal mild recessions you do not fully undo the rise in prices that occurred in the preceding boom. But we have had price stability in the past because periodically we have had serious depressions.

Eliminate the serious depressions and what do we have? A secular trend in prices.

MR. ANDERSON. I would like to add one other point. We really should recognize that economic growth can promote price stability. You raised the question, won't price stability sometime be some stimulus to confidence, and a case can be made.

I wanted to make the case here that healthy growth rate of around 4 percent stimulates price stability by giving us relatively good productivity gains.

Senator BUSH. And for that reason it is highly desirable to promote it. I agree with you. I think that is a very good point. I thank you, gentlemen, for that.

I would like to go back to Mr. Minsky and his paper because you made some suggestions that I would like to run down with you. You say, first make more concrete the employment goal of the economy. You suggest 3 percent of the labor force should be designated as the maximum tolerated unemployment rate, and that Congress should declare any excess of unemployment over this rate shall be taken to mean that there is a deficiency of demand and monetary and fiscal measures are to be vigorously used to increase demand.

Give us an idea without exhausting the subject of what monetary and fiscal measures you would suggest.

MR. MINSKY. Yes, sir. First of all the reason I said 3 percent—and it is some such goal that I have in mind—is that it is my belief that some of the European countries, Britain, for example, have gotten along with much smaller unemployment rates with inflation perhaps a little worse than here.

Senator BUSH. I am not arguing about the 3 percent.

MR. MINSKY. What monetary and fiscal measures should be used if we have more than 3 percent unemployed. I think it would be a signal for an easy money policy by the Treasury and a signal for reduction in taxes or increases in Government expenditures as the will of Congress may have it.

Senator BUSH. Reducing taxes?

MR. MINSKY. Or raising expenditures or some combination of the two.

Senator BUSH. Or increasing the Government expenditures or a combination of both?

MR. MINSKY. Yes.

Senator BUSH. You also recommend that, should the excess supply of labor be due to pockets of unemployment arising from structural change the appropriate demand, increasing measures should be designed toward eliminating these pockets. With that assurance of

overall availability of jobs Congress should also state that it will not guarantee nor will it protect the existence of any particular job.

You believe that assurance can be given in that way; is that right?

Mr. MINSKY. The problem I am worried about, and I am glad you brought this up, is this: There is the issue like featherbedding. The desire to protect industries that exist in particular localities against competition from abroad or other localities within the United States.

I think that the attempt to protect particular industries and protect particular jobs is a mistake. I think it would be much easier for Congress to undo the various measures which were designed to protect these jobs if it were done within the context and framework of an employment guarantee of the kind that I mentioned.

Senator BUSH. You say that once this assurance is given of a sufficient number of jobs, which I parenthetically say seems to be rather difficult to give, Congress should then repeal all legislation which insulates domestic producers from competition, thereby making the demand curve confronting sellers of transportable commodities more nearly like the demand curve confronting sellers in purely competitive markets.

This means that all farm legislation, all tariffs and quotas and laws permitting so-called fair trade agreements should be eliminated and the legislation determining the behavior of the regulated industries should be rewritten to foster, rather than to stifle, competition.

Mr. MINSKY. That is right.

Senator BUSH. That is a very interesting statement. I am not approaching this in any frivolous point of view, Mr. Minsky, I assure you. I was on the Randall Commission and I have been very much interested in this whole subject right along. I am deeply interested in it now. So this statement struck me with full force.

What you are saying, if I understand it, is that once we get into a position where we find we have 3 percent of the labor force unemployed, then we should move in and suddenly do all these things. I wonder if that is what you mean or whether we should not begin now and go to work on this farm legislation and perhaps on the matter of tariffs and quotas and the fair trade agreements and get them out of the way before we find ourselves in a position where we are imperiled.

Mr. MINSKY. I agree with you. This is bad phrasing in my statement. I did not mean to say that these things be done in sequence.

Senator BUSH. What you are really saying is that we should not wait for this kind of crisis but we likely might avoid that kind of crisis if we took these steps.

Mr. MINSKY. Let me retreat a moment to the framework within which I am thinking. The ability of prices to rise in the absence of overall excess demand I imputed to a number of things which are different about the present economy, the world as it is in 1959 as compared to the world as it was in 1939.

These things are the expectation that virtual full employment will be attained, which I want to strengthen. The expectation that growth and progress will take place. In addition to these we have had the phenomenon of stronger trade unions and we have in addition what I call the increased sophistication of sellers in noncompetitive markets.

In order to be able to raise prices you must have a demand curve

which is of the kind that characterizes a noncompetitive market. If you have a demand curve of the type that exists in competitive markets you would not have any control over the prices that you could charge. Earlier when Mr. Curtis made the remark about covering costs I stated that people can go bankrupt. The only time you can set your price on the basis of historic costs is if you have some control over the market price. Salary of workers goes up, overhead goes up—this should not affect price unless you have some sort of control over your market as you do in noncompetitive industries.

So my argument is that the only thing we can really give up in order to prevent price increases of the kind we presumably had in the postwar period are the noncompetitive markets.

Senator BUSH. May I observe there that this recommendation of yours reaches into virtually every phase of our economic life. I cannot think of an enterprise or an industry that is not in one way or another subsidized quite substantially by the U.S. Government.

The CHAIRMAN. I agree.

Senator BUSH. Transportation in almost every form, sea, air, and land, labor rates, imports, manufacturers.

Mr. SCHULTZE. College professors.

Senator BUSH. They do not get as good a break as they deserve. I have always felt that they never got as good a break as they deserve. Having been a trustee of a college for a good many years I would not put them in that class.

Mr. SCHULTZE. I hope you do not consider this special pleading.

Senator BUSH. But, Mr. Minsky, the reason I am focusing on this is because this is a terrifically sweeping recommendation.

Mr. MINSKY. I know that.

Senator BUSH. I just wonder if you realize the extent—I am sure you must—to which these subsidies and protections have been built into practically every form of endeavor in this country. Advertising has it.

Dr. ANDERSON. Trade associations.

Mr. MINSKY. It is not easy to suggest that the fresh air of competition may be desirable or may be necessary. I am always struck by what happened to the automobile industry in the recent past, where they were on their way producing bigger and more powerful cars year after year until we had this competition come in from abroad. Lo and behold, they are now producing another type of car next year.

Senator BUSH. Whereas 3 years ago they told me, and I am sure others, that they could not do it.

Mr. MINSKY. That is right. I believe the price of automobiles is lower (or at least not higher) than the price last year.

Dr. ANDERSON. But they did follow consumer phase. I was the economist at Ford for many years and consulted. You could not sell the six cylinders, you could not sell the main line. They produced what the people bought and wanted. Then, when the people changed and decided they wanted more economy it took a couple of years to turn around.

It is the consumer who shifts. He leads and the industry lags. I insist that the Falcon sales followed the consumer and we have to accept that.



Senator BUSH. There is this exception that I feel and I have stated many times that the automobile makers created the market for these large cars by their own advertising and high pressure methods.

Dr. ANDERSON. But they go where it is easiest to sell. They will create it. It is easier to follow the consumer than go another way. It costs less.

Senator BUSH. That is true. But the consumer also is a very impressionable guy, according to the advertising agencies. They do not think much of him. They rate him at a very low age. They say he is only about average 14 years old and he is very impressionable.

Mr. MINSKY. Senator, I would like to draw your attention to page 23 of the Economic Indicators. There, if you look down at the apparel column, if that were the consumer price index, we would not be discussing inflation here today.

What is the difference between the apparel industry and some of our other industries in the United States?

Senator BUSH. You tell us.

The CHAIRMAN. Take medical care.

Mr. MINSKY. Yes.

Mr. ANDERSON. We are getting more calls and we are getting more medical care.

Representative CURTIS. That is one you ought to take. There again is the cost element. I hope I did not mishear you, Mr. Minsky, when you said that you did not think that prices were based upon cost. I do not see where else you get your prices except in relation to costs.

Did you not say that you did not think that costs made any difference in prices?

Mr. MINSKY. Historical costs.

Representative CURTIS. How far is history?

Mr. ANDERSON. This is in Stigler's textbook. It is not in the real world.

Representative CURTIS. Does historical mean 10 years ago?

Mr. MINSKY. No. If I have gone and made a mistake and built a factory to make harnesses in 1919 when the automobiles came in and I also had a shoe factory, the fact that I had made a mistake in building a harness factory is not going to give me the ability in a highly competitive shoe industry to raise the price of the shoes I sell.

Representative CURTIS. They will try to.

Mr. MINSKY. Why? If I raise my price I lose all my sales. Why would anyone buy from me?

Representative CURTIS. That is the limitation on what you can do. You say if you are unable to recoup costs you will go broke. But you will certainly try. You will try to recoup your costs. Industries are constantly recouping their costs from mistakes they have made. They have to. It is a necessary process.

Mr. SCHULTZE. I was going to suggest there is a little misunderstanding here. If everybody in the shoe industry made a mistake and built a buggy whip factory, then probably everybody could get away with raising their prices. But if only one fellow in that shoe industry of a thousand factories made the mistake, he would not be able to raise his prices.

I think the real point Mr. Minsky is making is where you get competition it does not mean you won't get inflation. It makes it much

more difficult for individualized, particularized behavior of one seller or a group together to raise prices. It does not mean it is the only factor.

Representative CURTIS. The point I am getting at is that all industries make mistakes and they average out. The public, in prices, is paying a certain percentage for the mistakes made in the competitive processes.

Mr. ANDERSON. In the real world all costs, almost, are going up. Most firms are experiencing rising costs and this is why most firms are raising prices and this is why the indices are showing up. Even in the absence of excess demand you can experience rising costs from several sources: More rapid product development, wage increases that are relatively high, and you can have rising costs in the absence of strong or excess demand or carryover.

Since most firms operate in the same general environment and they have the same trade association, they will be raising prices. They might not have 50 or 100 years ago, but they have had enough experience now with failure to raise prices as costs go up.

Their experience over the last 100 years has been when costs go up, the best thing is to raise prices. Sooner or later that wins out.

Senator BUSH. I would like to get back to my questioning because I am only part way down the page. I welcome these interjections.

The CHAIRMAN. I want to say that when Adam Smith wrote his book in 1896, he said it was idle and conjecture to believe any of the changes he was advocating would be put into effect in the future. Yet, within 70 years from the time he wrote the "Wealth of Nations," Britain went on the free-trade basis.

Senator BUSH. Getting back to your paper, Mr. Minsky, and I want to congratulate you on your boldness in making these recommendations—

Mr. MINSKY. Thank you, sir. I do not have to run for reelection.

Senator BUSH. I might say I was less bold but nevertheless quite bold when I proposed earlier this year that this committee make a study of these subsidies with a view to considering the very propositions which you are imposing upon us. I do not know any committee, really, in Congress that is better suited to make this kind of study.

I think it would be a very enlightening one and a very surprising one to most all the American people.

To get to the practicality at the present time, which is what we are faced with, I wonder what you think would happen to wage levels after we get to the bottom of paragraph 2 on page 5. Have you thought about that?

Mr. MINSKY. I lived in Rhode Island for a number of years. At one time Rhode Island had a very extensive broad-woven textile industry.

Senator BUSH. It was tremendous.

Mr. MINSKY. I believe that industry does not exist any more. It moved south. If today you were going to organize a textile factory in Rhode Island you would find that the demands of the workers for wage increases would be constrained by the experience that too high wages in the north meant textile firms move their plants south.

I believe this type of constraint would also be effective in other sectors of the economy. I think, for example, the argument, taken for

what it is worth, by the steel industry in opposition to the union's demands is that if we raise wages we will lose not only foreign markets but part of the domestic market. The loss of sales by the domestic automobile industry to imports certainly was part of the picture within which the last automobile contract was negotiated.

So I think the realization that cost increases might mean a loss of sales not only in foreign countries but domestically, would act as a constraint upon the sort of pressure for wage increases. Does that answer you?

Senator BUSH. My observation in reading this was that if we were to take off all these supports and protections that we would be faced with a general lowering of our cost levels and particularly wage levels.

I frankly wonder about the practicality of bringing all that about. This presents something in the nature of a social revolution. I think it would be resisted bitterly by the labor unions.

Three years ago, I think it was, I made a speech down here on the Senate floor about this automobile business. I predicted that within 3 or 4 years the way this thing was going that the labor unions as well as the manufacturers who had been advocating freer and freer trade would be down here asking for tariff protection on automobiles.

I read in the paper the other day that is exactly what they intend to do.

So you see in powerful groups like those unions and manufacturers—

The CHAIRMAN. It is not primarily the unions. It is primarily the manufacturers.

Senator BUSH. I said both.

The CHAIRMAN. It is primarily the manufacturers.

I think Ford and General Motors have gotten over to the higher tariff school.

Senator BUSH. What I was trying to say is that the unions have had a change in view about the freer trade aspects of life.

The CHAIRMAN. It is true of textiles. I am not sure it is true of automobiles.

Mr. ANDERSON. It is getting there. Traditionally, they sold more abroad. But now that has been reversed, and this calls for new policy.

The CHAIRMAN. I think the enthusiasm of the Fords for freer trade has diminished.

Senator BUSH. I guess we can settle on that. What I wanted you to comment on particularly was this: Do you have any fear of a chaotic situation that might result from this kind of congressional action?

Mr. MINSKY. First of all, I tied it to the sort of employment guarantee. It would be a package deal, as I see it. Secondly, I know that in translating a theorist's suggestion into policy there would be a transition period. Perhaps a decade in which each year you take 10 percent of the present tariffs and remove them. Ten percent of the present subsidies and remove them.

Senator BUSH. I want you to yield on the very first point. You tied it to employment. What I question is the practicality of pulling out all these props and at the same time maintaining that minimum of 3 percent of unemployment. I do not think the Government is big enough to do that; do you?

Mr. MINSKY. Once before we pulled a tremendous prop out from under the country and resumed our growth: this great postwar growth started when the Second World War ended. Things like 52-20 and the GI education bills resulted in a rather quick and painless transition.

Representative CURTIS. There was a lot of saving in the war period.

Mr. MINSKY. Saving. The result of deficit financing over a period of 5 war years.

Representative CURTIS. I meant the consumer.

Mr. MINSKY. This was the result. I am not saying the transition will be easy. I would not be surprised if a return of the British pound to something like its historic \$5 value may be necessary in order to move toward a balance in trade positions when, while we do not lower wages and foreign aid, we allow an increase in imports to occur. I think once we realize the benefits of the increased competition we would be better off.

Senator BUSH. If we could get over that first big hurdle, I think maybe you would be right.

Mr. Chairman, I think I have about exhausted my time and a few other people's, too.

The CHAIRMAN. Thank you, gentlemen.

(Whereupon, at 5:05 p.m., the hearing in the above-entitled matter was recessed.)

## EMPLOYMENT, GROWTH, AND PRICE LEVELS

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THURSDAY, SEPTEMBER 24, 1959

CONGRESS OF THE UNITED STATES,  
JOINT ECONOMIC COMMITTEE,  
*Washington, D.C.*

The committee met, pursuant to recess, at 10 a.m., in room P-63, the Capitol, Hon. Paul H. Douglas (chairman) presiding.

Present: Senators Douglas, Bush, and Sparkman; and Representative Curtis.

The CHAIRMAN. The committee will be in order.

This morning we continue our discussion of administered prices. The sequence that we have, Mr. Lanzillotti, Mr. Lerner, Mr. Ruggles, and Mr. Weston.

If each one of you will start, then we will go through the panel in sequence and then members of the committee will ask such questions as occur to them.

Mr. Lanzillotti.

### STATEMENT OF ROBERT K. LANZILLOTTI, STATE COLLEGE OF WASHINGTON

Mr. LANZILLOTTI. First, I would like to say it is a real honor and pleasure to appear before this committee, Mr. Chairman.

The post-World War II period has been marked by persistent inflationary tendencies which have been masked from time to time, as they are today, by falling prices in some sectors of the economy and constant prices in others. In my view, these inflationary tendencies of our economy arise in significant degree out of the rather high level of concentration prevailing in industry. Aside from the question of whether there has been any important change in the levels of industrial concentration over the past decade, or the past several decades, a high level of concentration has jelled into the economic system and tends to perpetuate itself.

Sheer business motives are primarily responsible, but institutional factors have provided the matrix for the industrial pattern that has emerged. The courts generally have been reluctant to unscramble conglomerate corporations—even where ringing judicial denunciations of antitrust violations have been issued. Federal and State statutes, including the price maintenance and so-called fair trade laws, have resulted in various degrees of immunity from the antitrust laws for agriculture, labor, and business groups. In addition, there is the popularly held view that vast size in industry and high concentration are somehow inevitable and necessary for economic growth, security, and efficiency.

My principal purpose today is:

1. To present some evidence regarding the kind of pricing and price behavior associated with the concentrated sectors of industry; that is, the administered price pattern;
2. To indicate the relationship of these prices to the general inflationary trend of the economy; and
3. To explore some directions in which we might move in preventing, or at least mitigating, the inflationary push from these sectors.

I should like to make clear that while the term is often applied more broadly, when I speak of administered prices, I refer particularly to those situations where firms, individually or in concert, have sufficient market power to manipulate prices in their own favor. The objective of this kind of pricing, and the aspect I would stress for the committee is the desire of firms to administer profits via carefully ordered pricing. Essentially this means that firms in concentrated industries such as steel, automobiles, aluminum, farm machinery, heavy machinery, petroleum, cans, electrical equipment, and many chemicals, have sufficient market power virtually to create their own rates of returns as against accepting market determined rates of return.

Attached are two tables and a chart summarizing the divergent wholesale price movements which give some insight to the role of administered prices in the inflation of the past decade. I will discuss these very briefly in this statement, but would be glad to explore them in more detail later if the committee wishes.

(The tables and chart referred to follows:)

TABLE 1.—Wholesale price changes during post-World War II business cycles,<sup>1</sup>  
by product groups

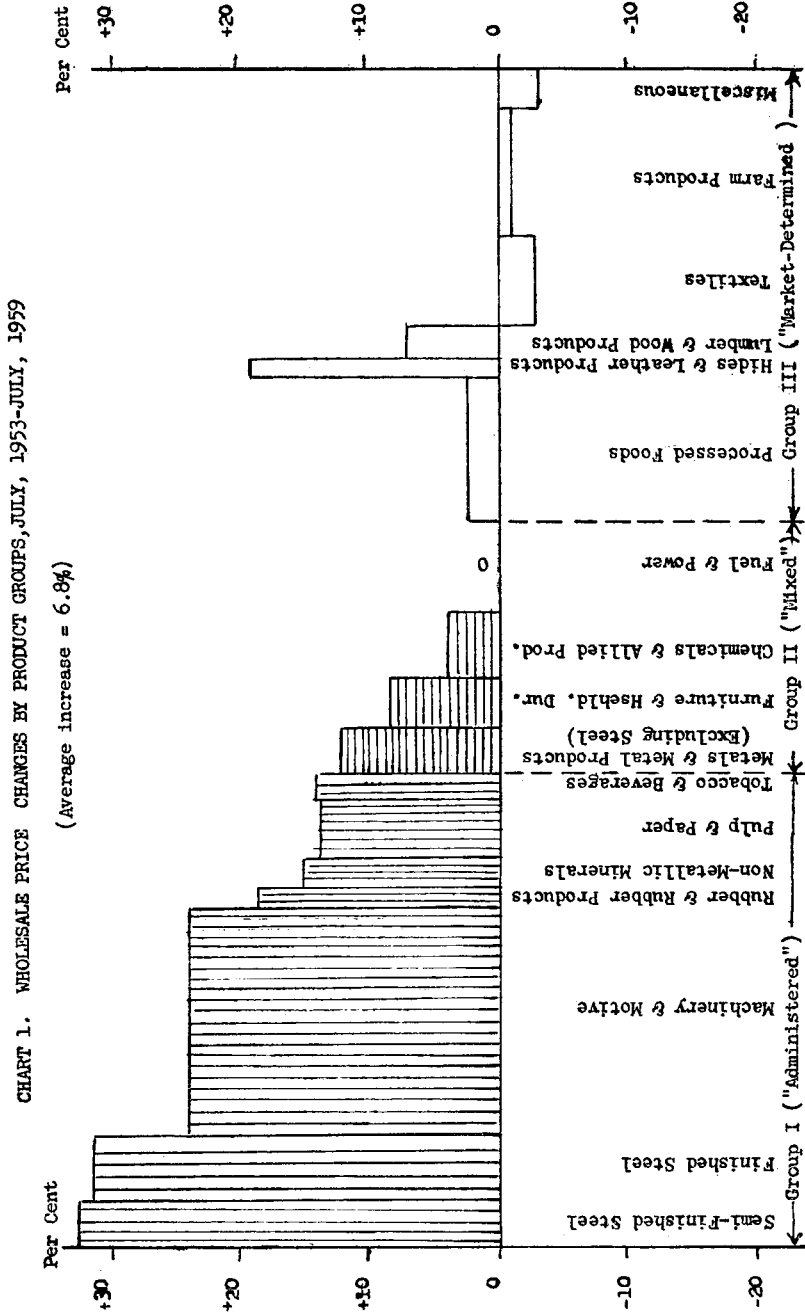
[Percent change]						
Product group	Weight (relative importance in WPI)	November 1948 peak to October 1949 trough	October 1949 trough to July 1953 peak	July 1953 peak to August 1954 trough	August 1954 trough to July 1957 peak	July 1957 peak to April 1958 trough
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Average change.....		-6.8	+13.3	-0.4	+7.0	+0.9
<b>Group I (administered):</b>						
Steel (semifinished).....	0.2	0	+37.9	+2.8	+26.1	0
Steel (finished).....	3.7	+.6	+29.8	+2.0	+25.6	0
Machinery and motive Rubber and rubber prod- ucts.....	19.3	0	+16.3	+.7	+17.3	+2.5
Nonmetallic minerals.....	1.6	-6.9	+29.7	+1.5	+14.6	-.3
Pulp and paper.....	2.6	+.3	+14.5	+.9	+12.2	0
Tobacco and beverages.....	5.2	-7.0	+20.5	+.4	+11.3	+.8
<b>Group II (mixed):</b>	2.4	-.3	+13.9	+5.1	+5.1	+2
Metals and metal prod- ucts (excluding steel).....	9.6	-10.4	+24.4	-1.7	+15.3	-3.6
Furniture and household durables.....	4.2	-3.3	+12.8	+.5	+6.0	+.8
Chemicals and allied products.....	5.8	-9.6	+14.6	+.6	+2.5	+1.4
Fuel and power.....	7.7	-6.3	+9.7	-3.8	-8.9	-4.6
<b>Group III (market-deter- mined):</b>						
Processed foods.....	12.7	-7.6	+10.9	+.9	+.8	+4.0
Hides, leather, and prod- ucts.....	1.4	-3.6	+2.2	-6.0	+7.1	-1.0
Lumber and wood.....	3.0	-9.3	+24.8	-1.7	+.2	-3.0
Textiles and apparel.....	7.4	-8.8	+3.8	-.2	+.1	-1.8
Farm products.....	10.7	-11.5	+8.0	-2.1	-.3	+5.3
Miscellaneous.....	2.4	-.4	+1.3	+7.3	-13.2	+10.1

<sup>1</sup> Reference dates are National Bureau of Economic Research tentative reference dates of business cycle in the United States. Cf. "Employment, Growth, and Price Levels," hearings before Joint Economic Committee, 86th Cong., 1st sess., pt. 2, p. 398

TABLE 2.—*Net changes in wholesale price levels, by product groups, 1948-59*

[Percent change]

Product group (1)	Weight (relative importance in WPI) (2)	Post-World War II: November 1948 peak to July 1959 (3)	Post-Korea: July 1953 peak to July 1959 (4)	November 1948 peak to July 1953 peak (5)	July 1953 peak to July 1957 peak (6)	July 1957 peak to July 1959 (7)
Average change (WPI) .....	100.0	+13.8	+7.8	+5.6	+6.6	+1.1
Group I (administered):						
Steel (semifinished) .....	2	+83.6	+33.0	+37.9	+29.6	+2.6
Steel (finished) .....	3.7	+72.1	+31.8	+30.6	+28.1	+2.9
Machinery and motive Rubber and rubber prod- ucts .....	19.3	+44.2	+24.0	+23.4	+18.2	+4.9
Nonmetallic minerals .....	1.6	+42.9	+18.2	+20.7	+16.3	+1.7
Pulp and paper .....	2.6	+32.1	+15.1	+14.8	+13.2	+1.6
Tobacco and beverages .....	5.2	+28.1	+14.2	+12.1	+11.8	+2.2
Group II (mixed):	2.4	+30.0	+14.4	+13.6	+10.5	+3.5
Metals and metal prod- ucts (excluding steel) .....	9.6	+25.4	+12.5	+11.5	+13.4	-.8
Furniture and household durables .....	4.2	+17.5	+7.8	+9.1	+6.7	+1.0
Chemicals and allied prod- ucts .....	5.8	+7.3	+3.6	+3.6	+3.1	+5
Fuel and power .....	7.7	+2.9	+0	+2.8	+4.8	+4.5
Group III (market-deter- mined):						
Processed foods .....	12.7	+7.3	+3.0	+2.5	+1.6	+1.4
Hides, leather, and prod- ucts .....	1.4	+17.1	+18.9	-1.5	+7	+18.1
Lumber and wood prod- ucts .....	3.0	+20.5	+6.4	+13.2	-1.5	+8.0
Textiles and apparel .....	7.4	-7.9	-2.7	-5.3	-2	-5
Farm products .....	10.7	-12.4	-1.0	-4.5	-5.2	-3.2
Miscellaneous .....	2.4	-6.9	-3.3	-2.5	-6.8	+2.5



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Mr. LANZILLOTTI. Table 1 lists the percentage changes in the wholesale prices of major product groups from business cycle peak to trough, and trough to peak over post-World War II cycles. There is a wealth of information that could be developed from this table,



but these aspects stand out relative to the role of administered prices in the postwar inflation:

1. Prices in all three groups have held up better generally, i.e., they increased, remained constant, or declined less in the 1953-54 and 1957-58 economic downturns, than in the 1948-49 decline.

2. However, the products in group I—administered-price industries—increased or remained constant during the 1953-54 and 1957-58 declines, whereas group III products—market determined price industries—fell, and group II products—mixture of administered and market determined prices—increased or decreased but slightly.

3. During the upswings of 1949-53 and 1954-57, moreover, prices of group I products increased substantially more than those in both groups III and II.

Now let us look at the longer term price movements to see the cumulative effects of administered prices. Table 2 shows the net changes in the price levels of the same three groups of products over longer intervals of time. The important things to notice in this table are:

1. From the November 1948 cycle peak to the present, group I prices have increased substantially more than those in either group III or group II.

2. Similarly, since the end of the Korean conflict most of the increase in the Wholesale Price Index is accounted for by the relatively greater increases in group I prices.

3. Finally, as shown in columns (5), (6), and (7), group I prices and to a lesser extent group II prices, have increased from one cycle peak to the next without exception, while group III prices have generally declined over the same intervals of time, with some exceptions—notably lumber and wood products.

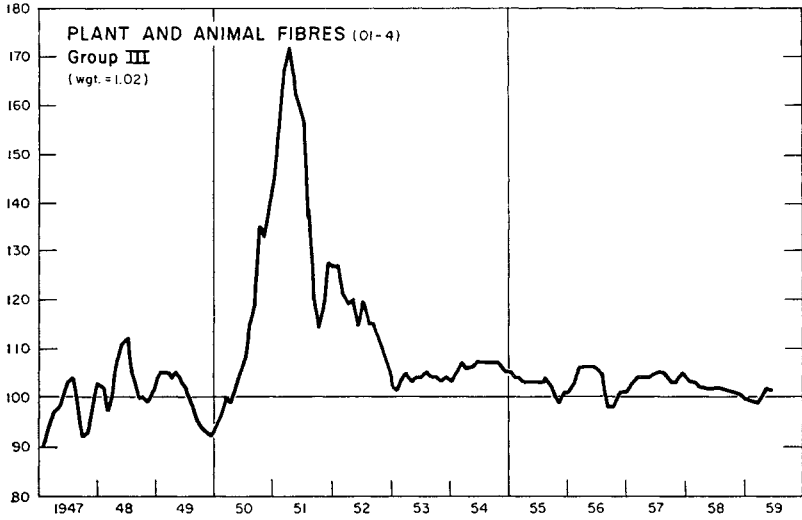
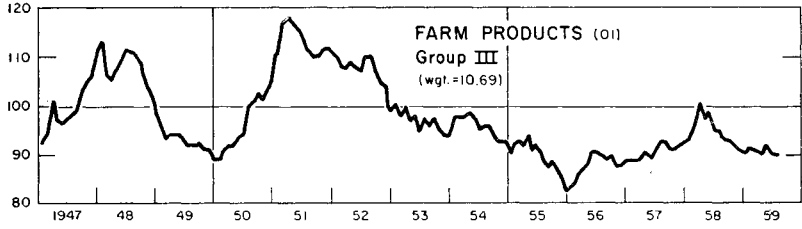
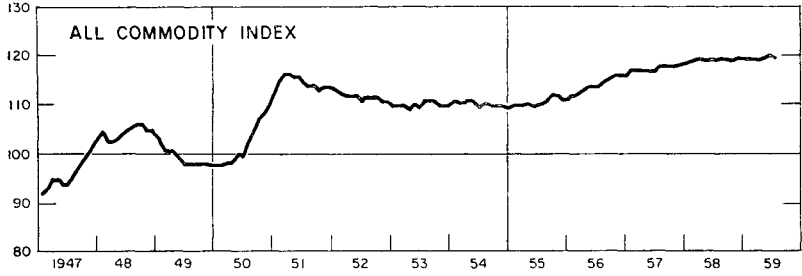
These data indicate the major role played by administratively determined prices in the persistent inflationary trend of the past decade.

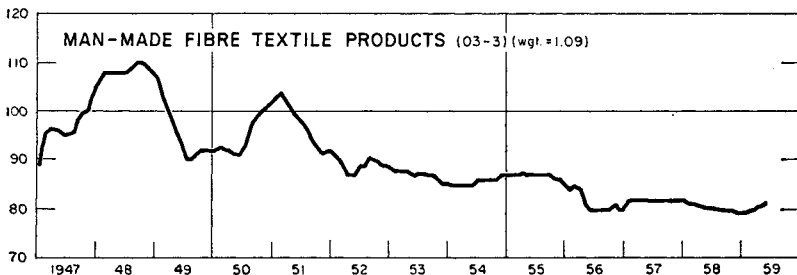
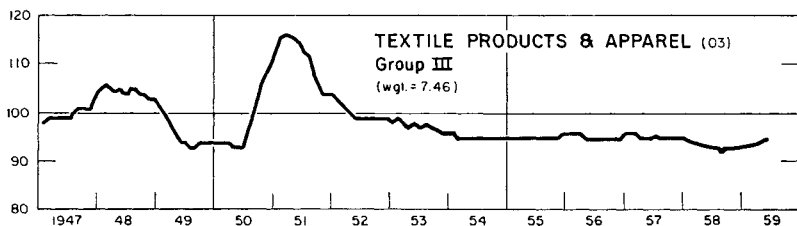
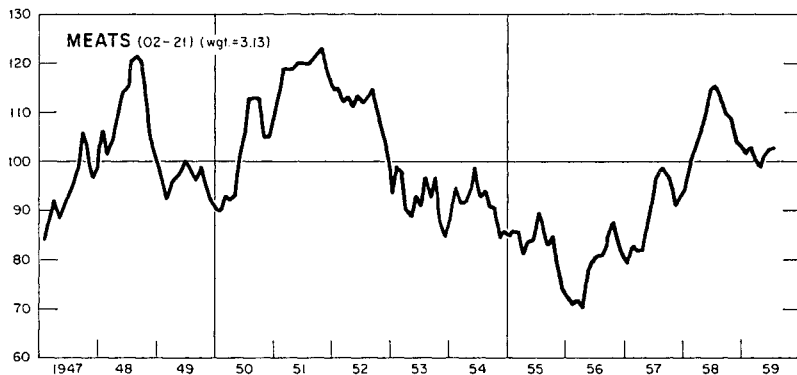
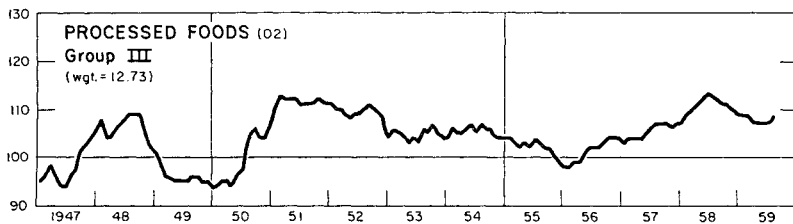
Chart 1 shows their impact even more clearly. Group I commodities, representing over one-third of the total weight in the Wholesale Price Index, account for the bulk of the gross increase in the index, since the end of the Korean period. The width of each vertical bar represents the relative importance of the commodity in our economy, as given by the WPI weights.

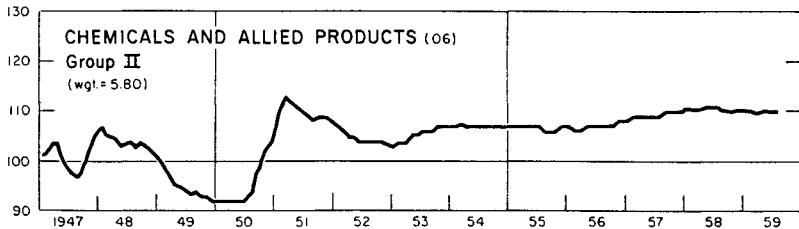
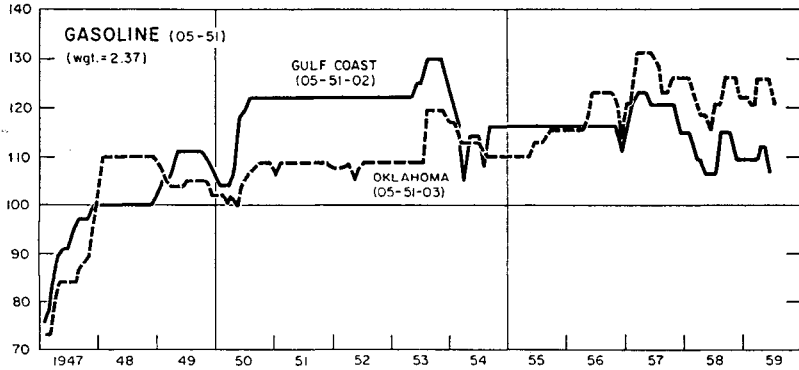
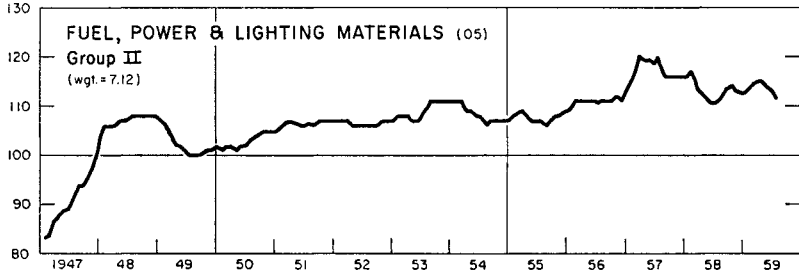
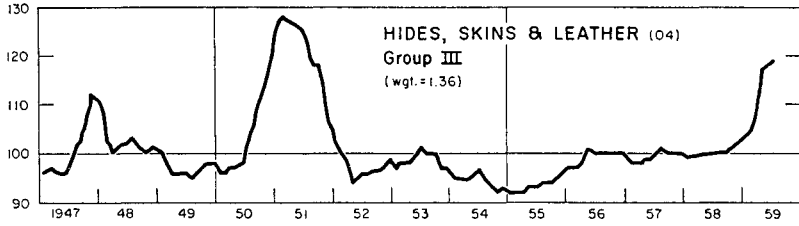
These aggregative data give the general picture of administered prices and their inflationary influence. However, viewed in terms of such broad product groups the price movements of the key products are easily masked. For example, over the post-Korean period metals and metal products prices as a group increased by about 19 percent, but the prices of semifinished and finished steel products, whose effects ramify in all directions, increased by approximately one-third. This means that in order to understand the nature of the inflationary bias of administered prices, it is necessary to examine the process of price formulation on a product-by-product basis, which I would be glad to discuss, if the committee is interested.

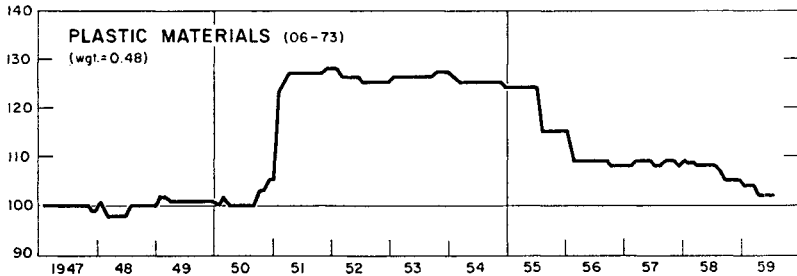
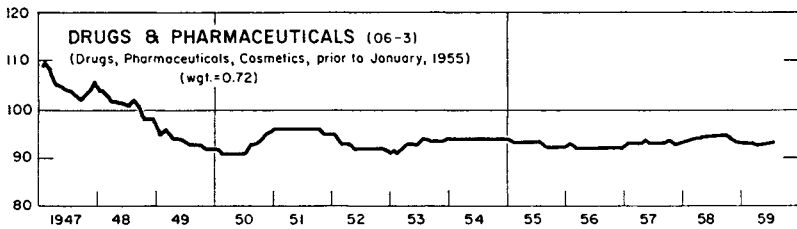
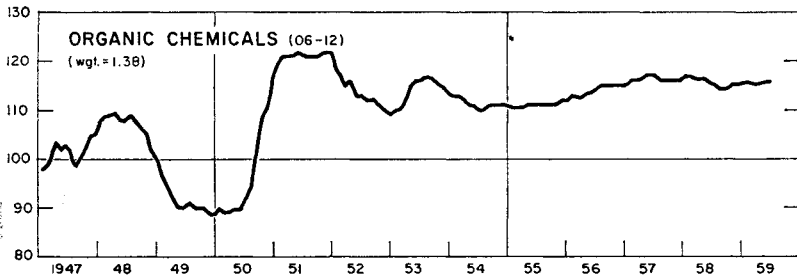
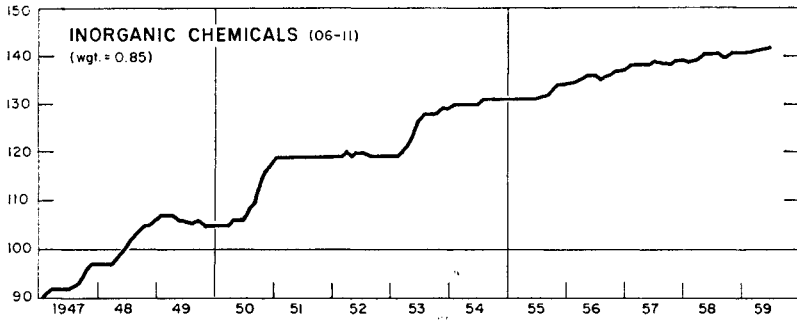
I have with me a number of price charts covering the price behavior of some 60 individual products and product groups which provide a more detailed picture.

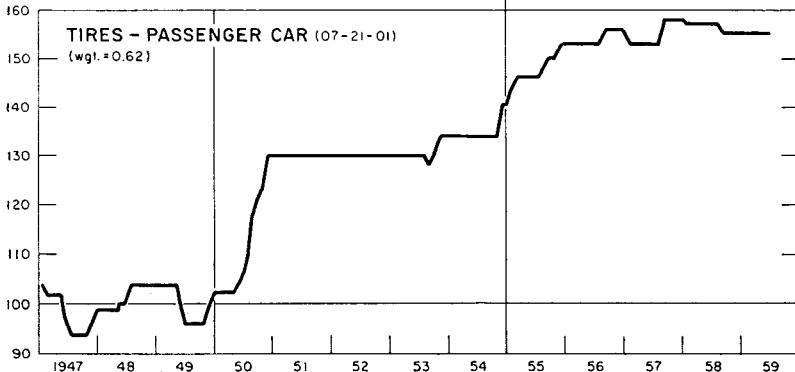
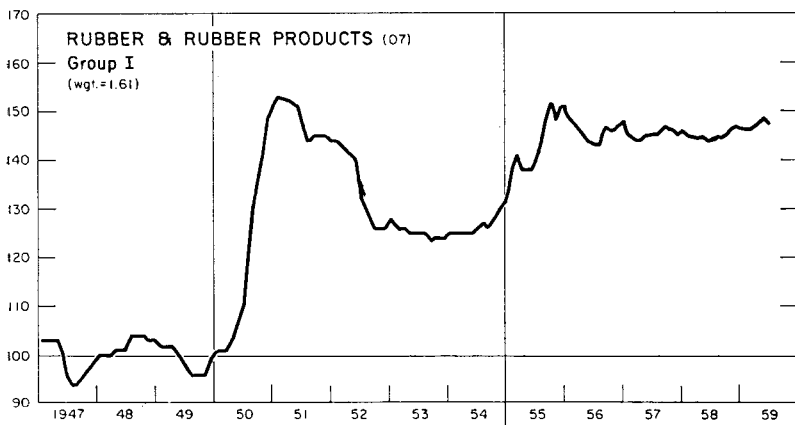
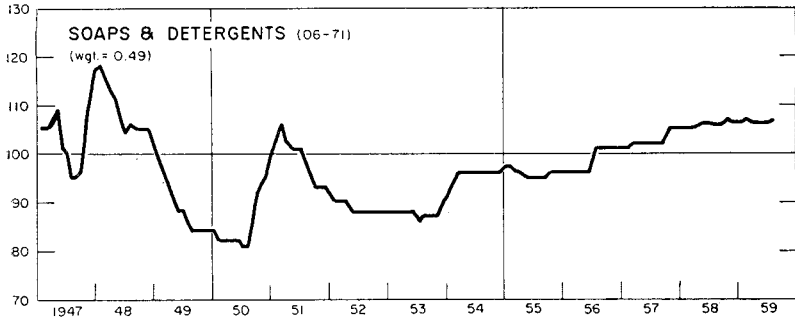
(The charts referred to follow:)

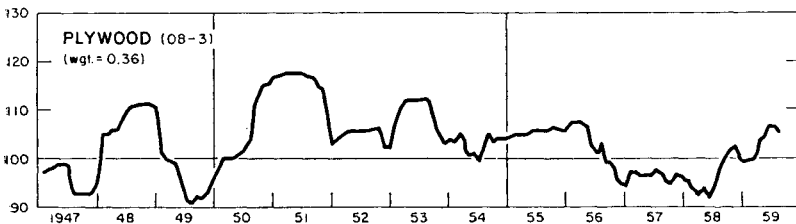
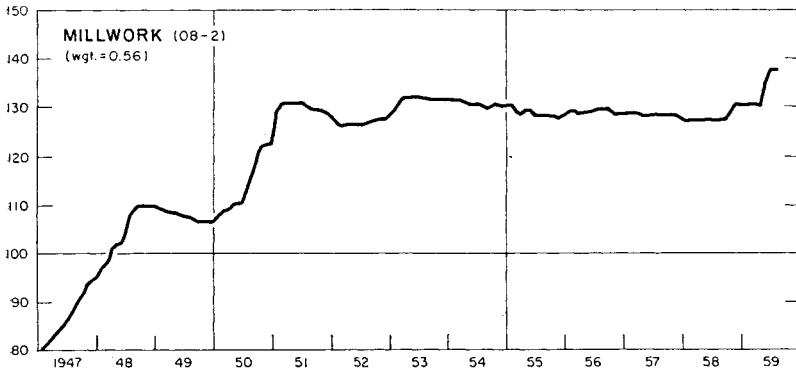
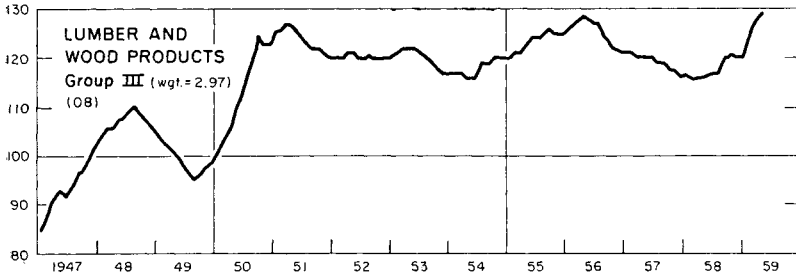
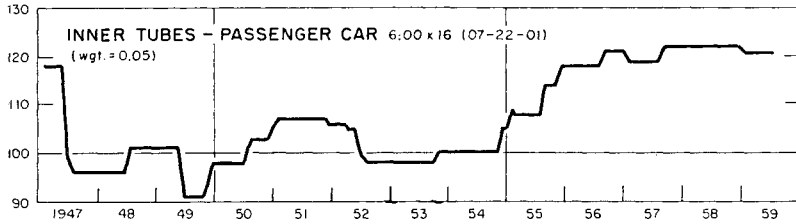


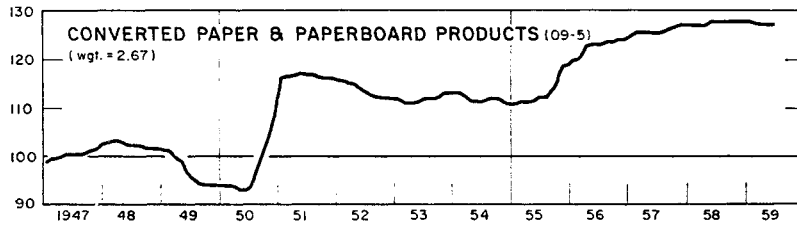
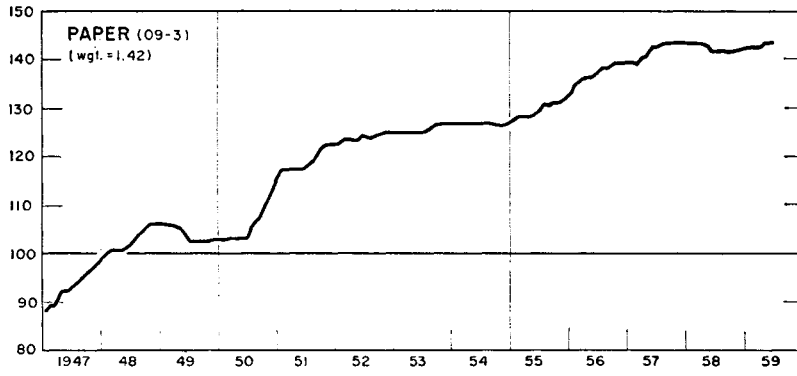
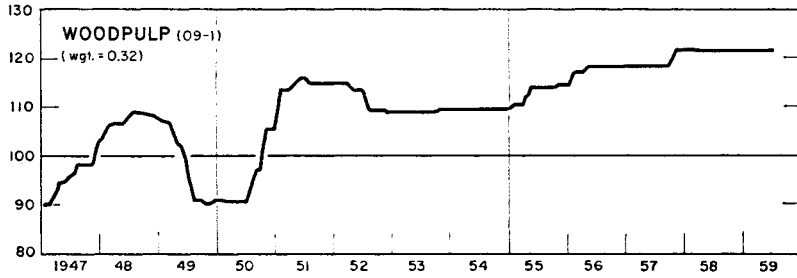
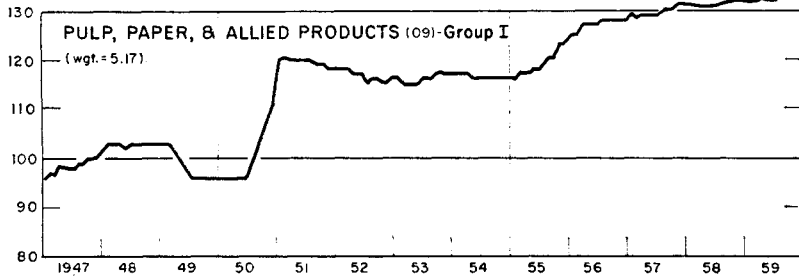




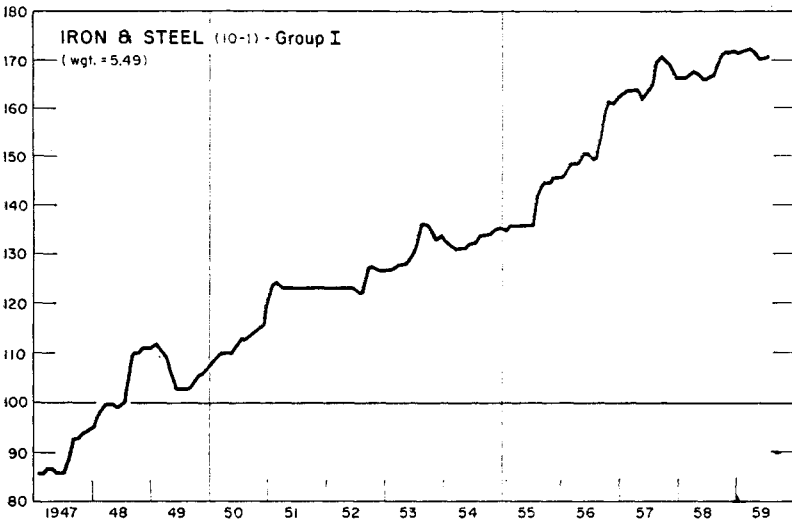
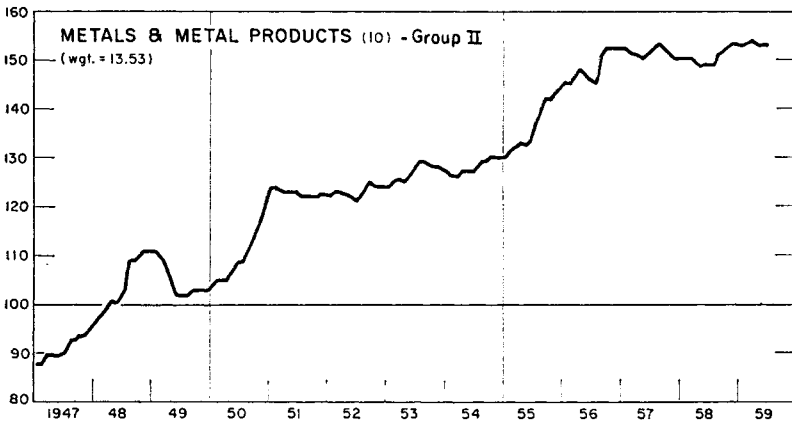
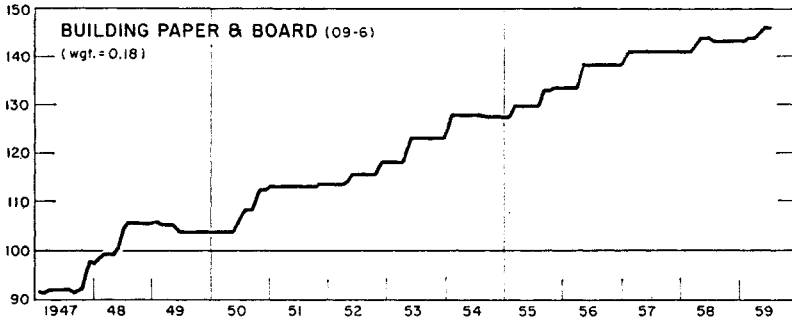


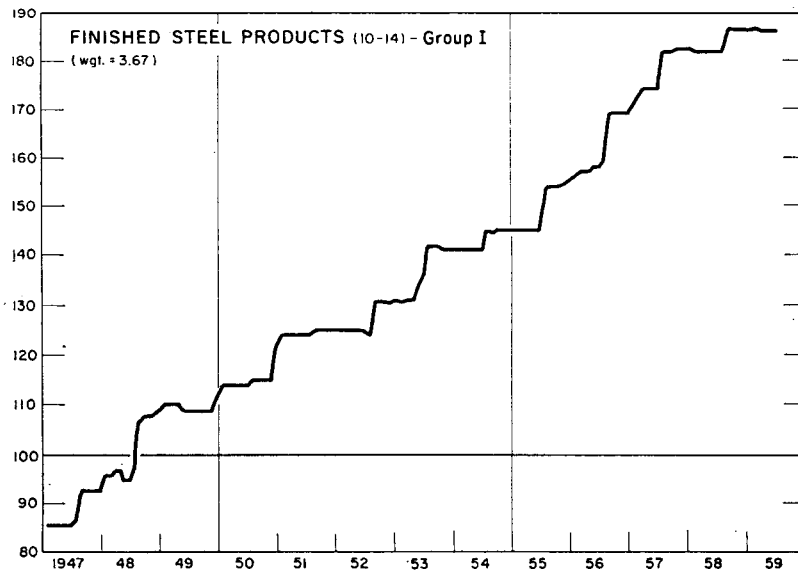
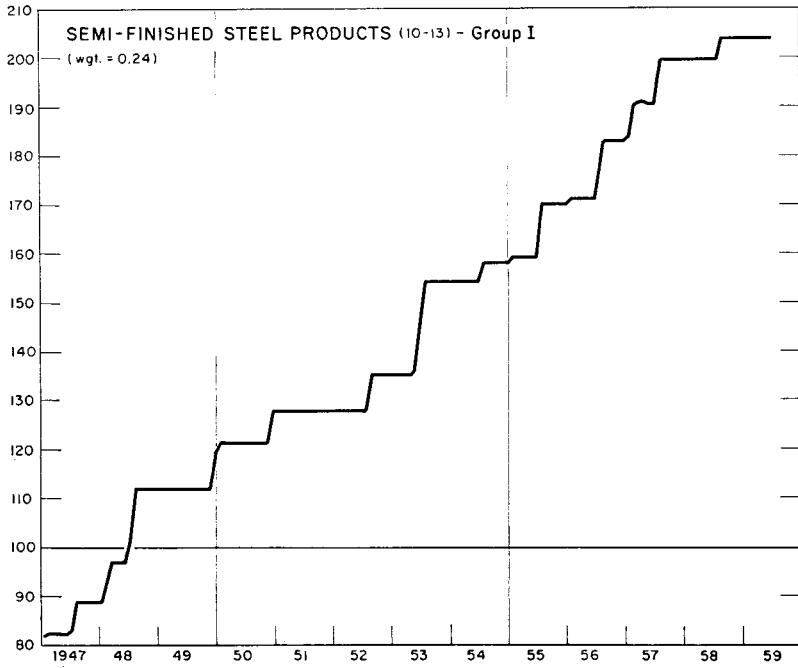


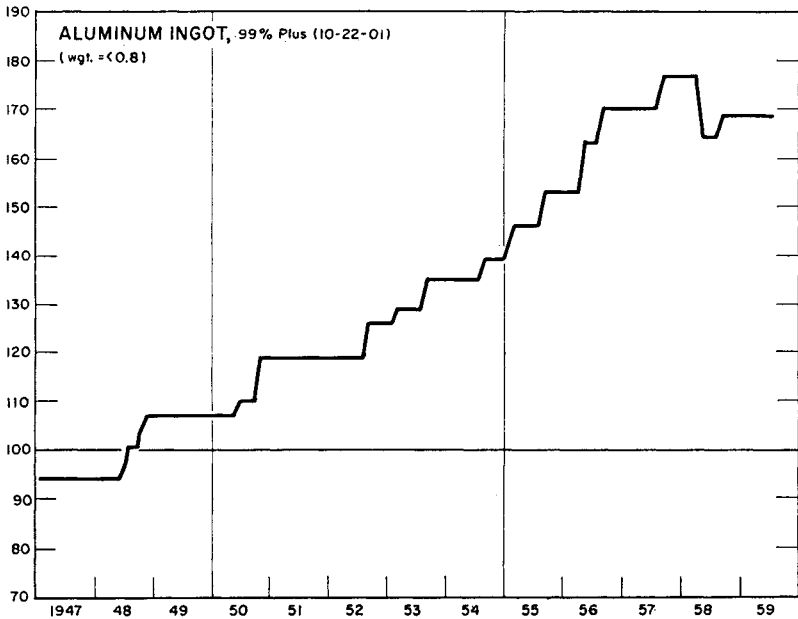
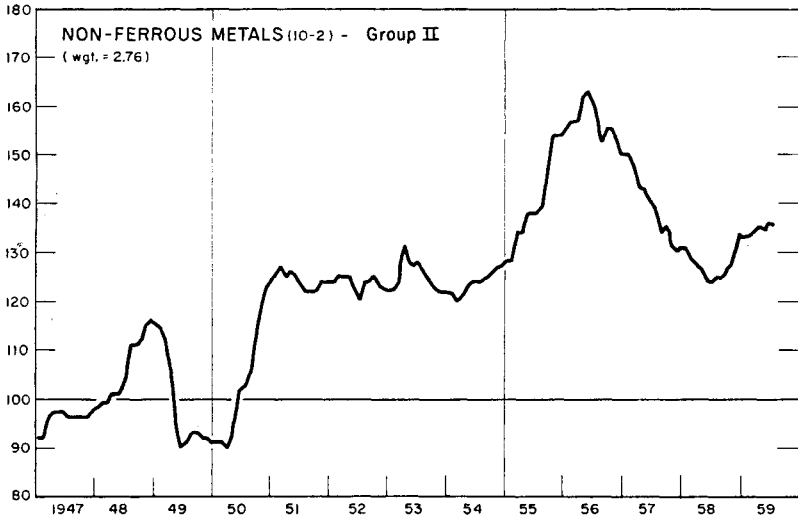


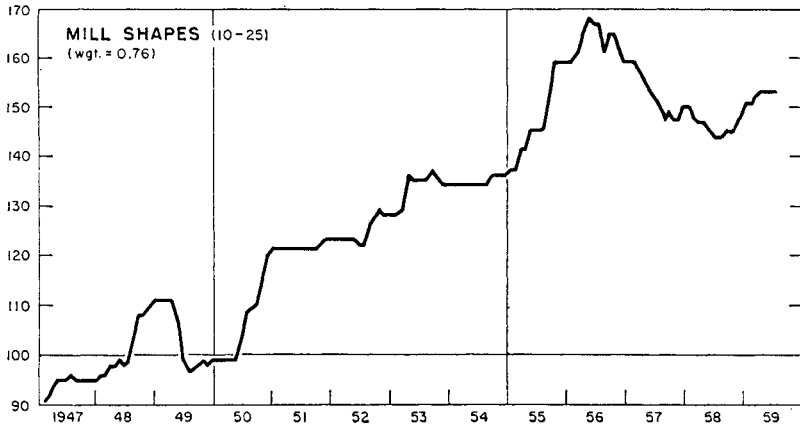
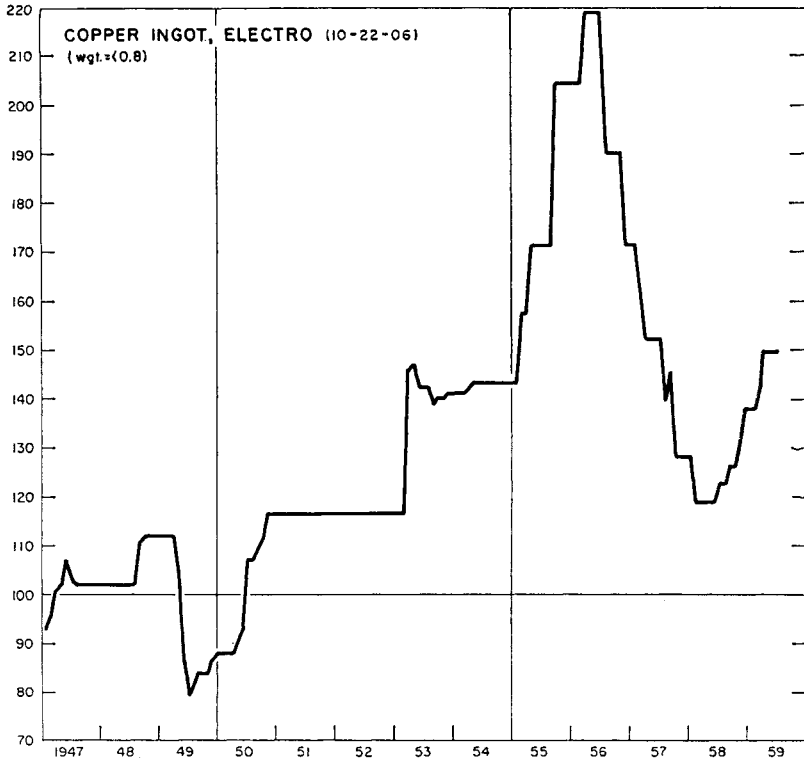


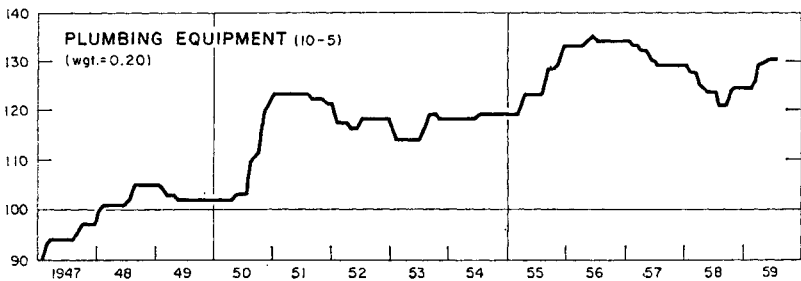
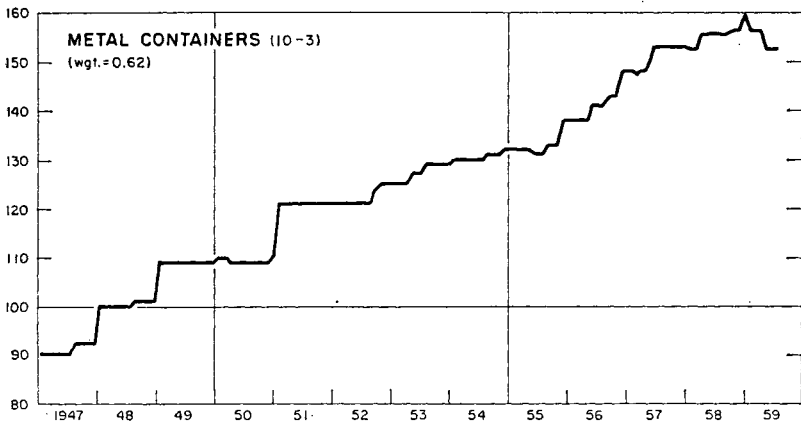
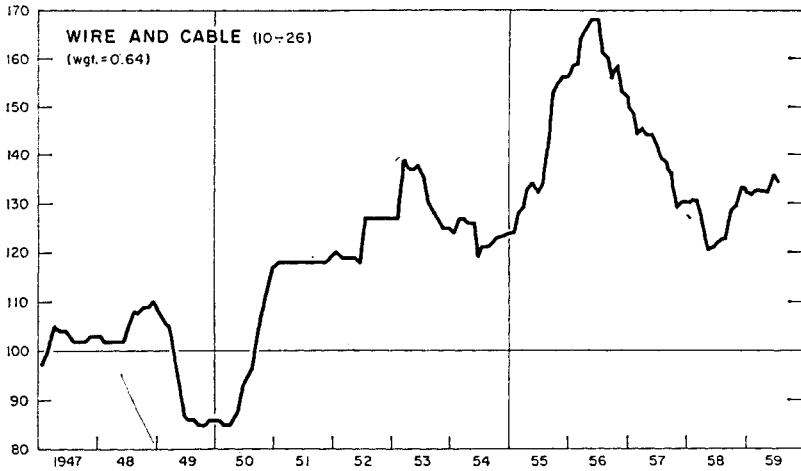


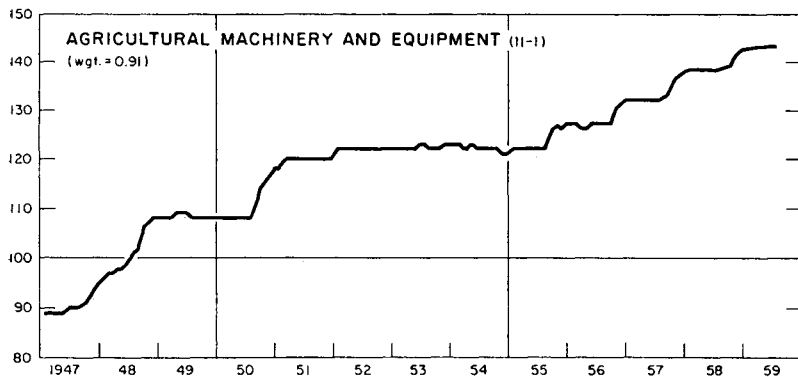
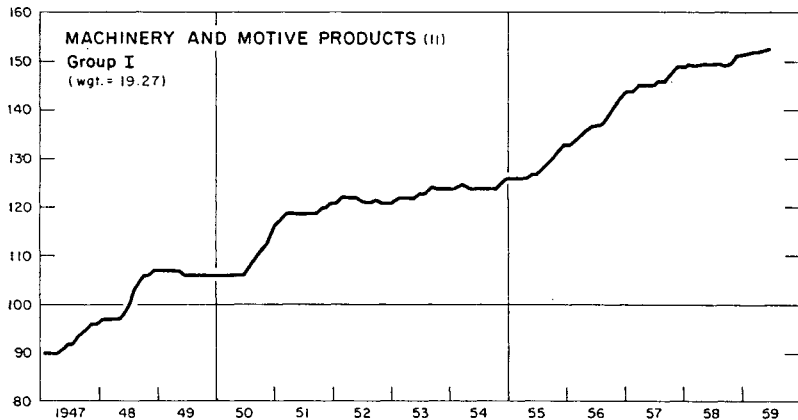
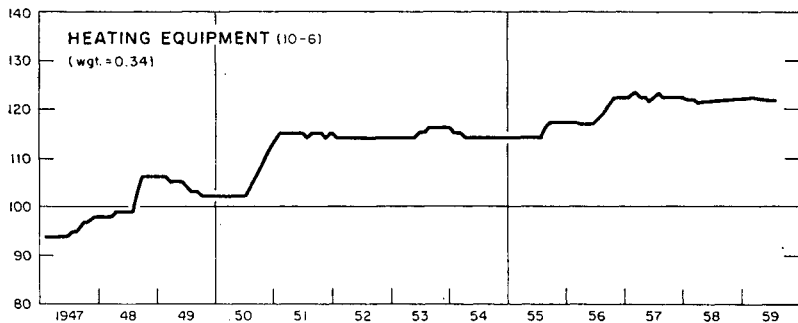


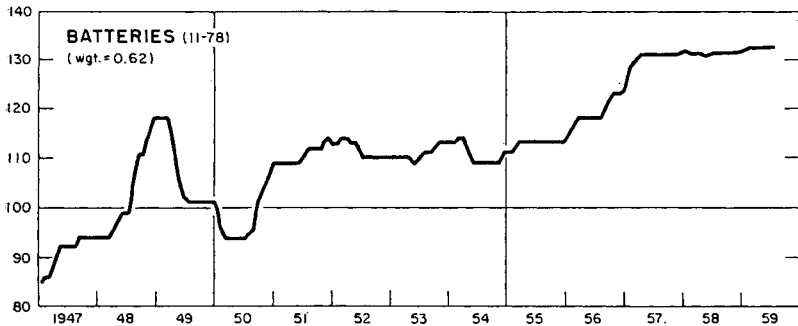
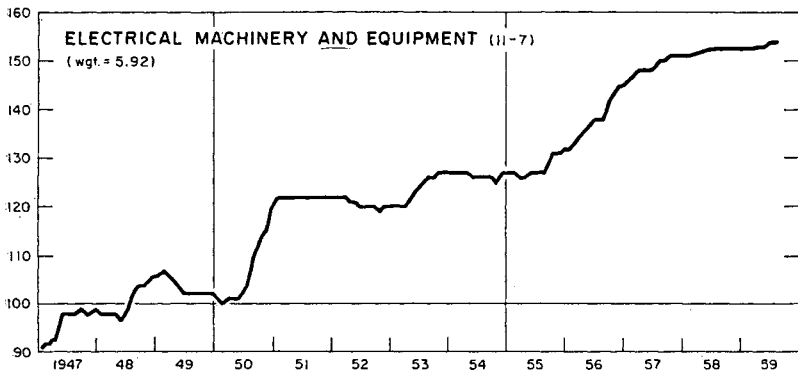
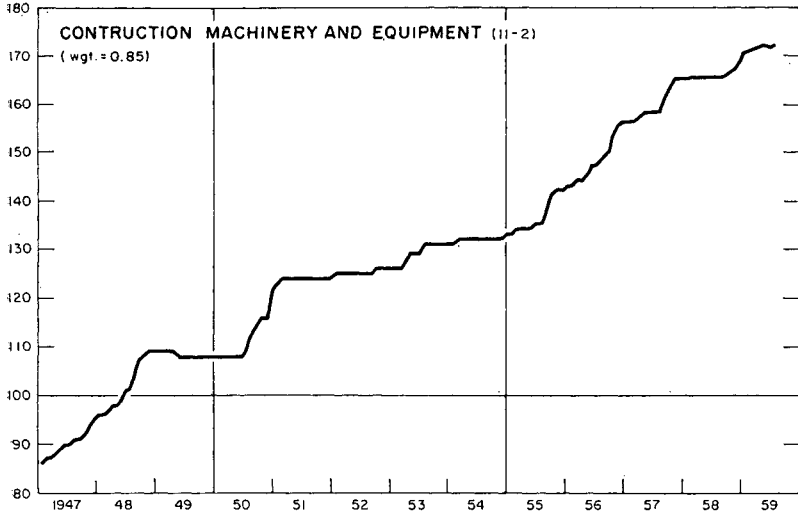


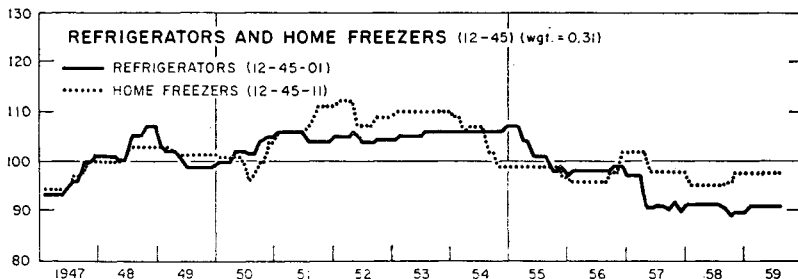
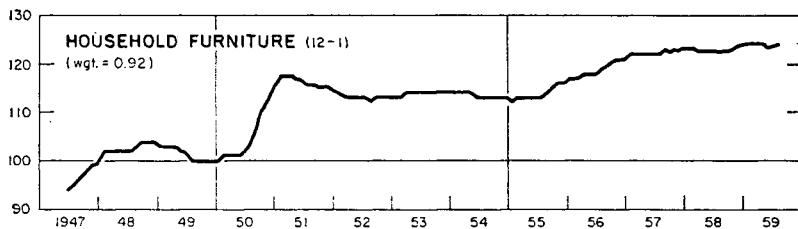
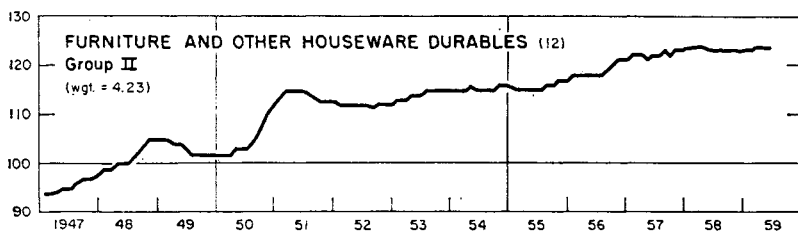
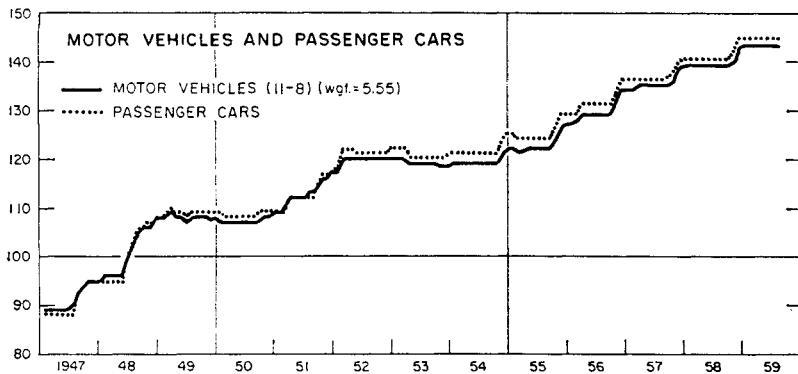




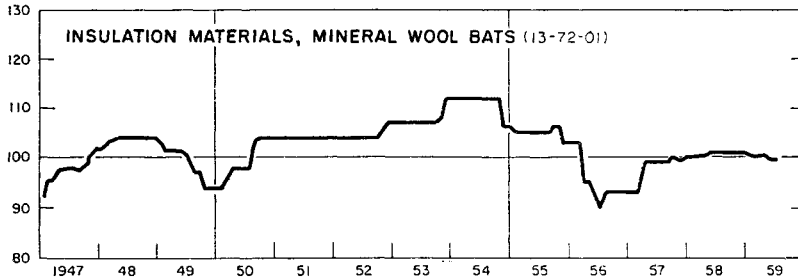
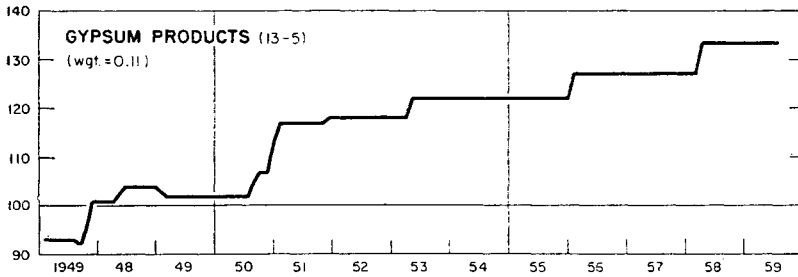
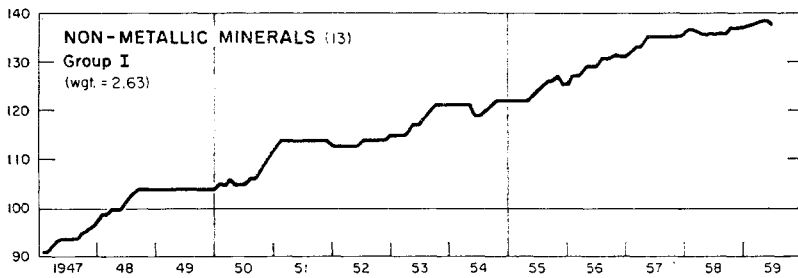
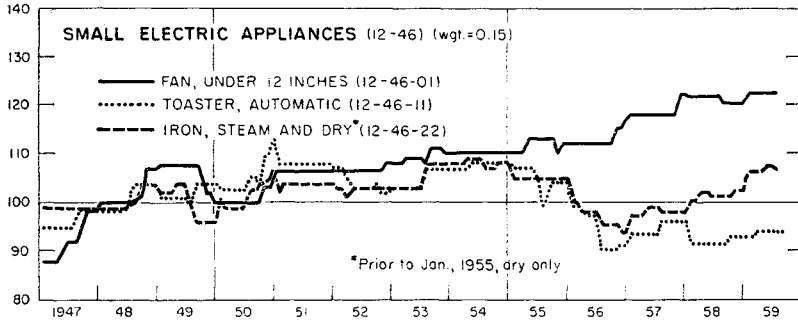


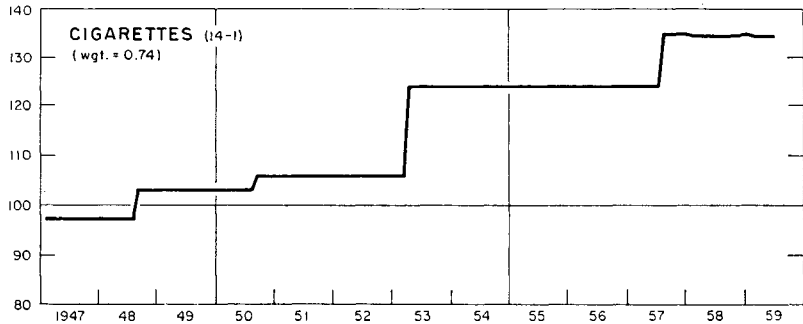
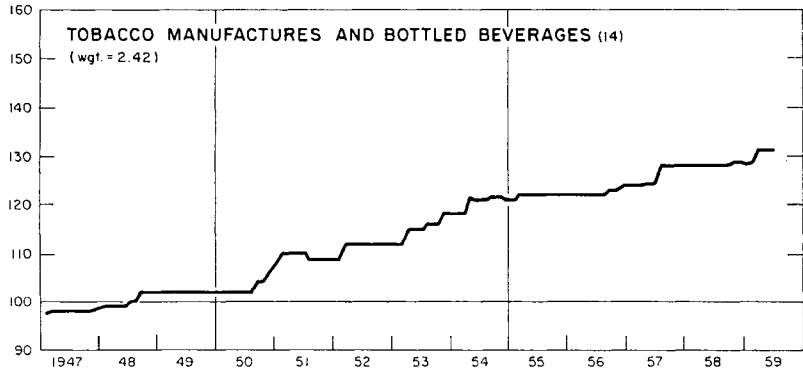
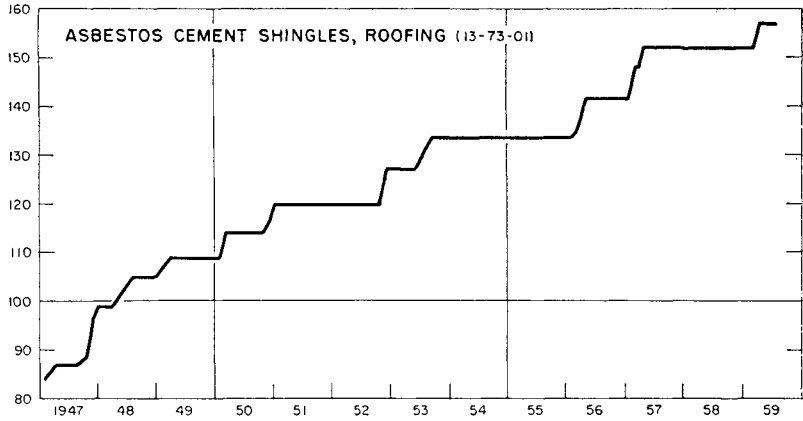


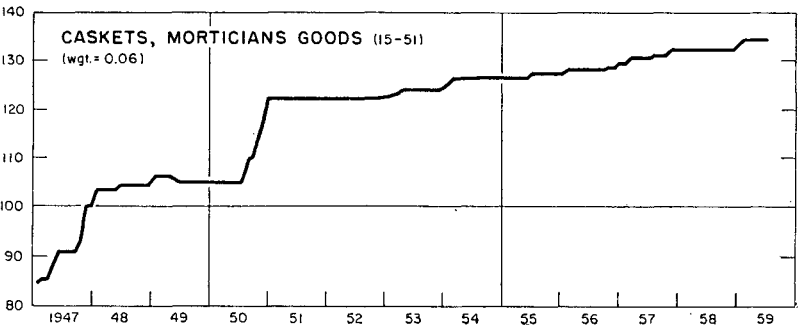
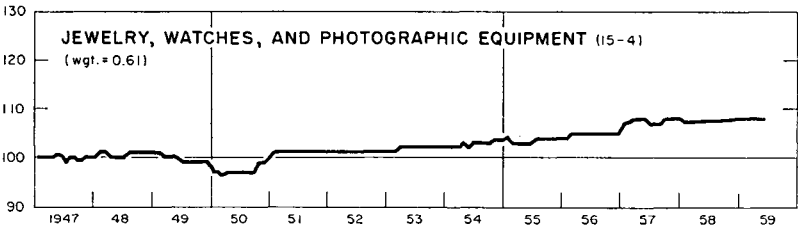
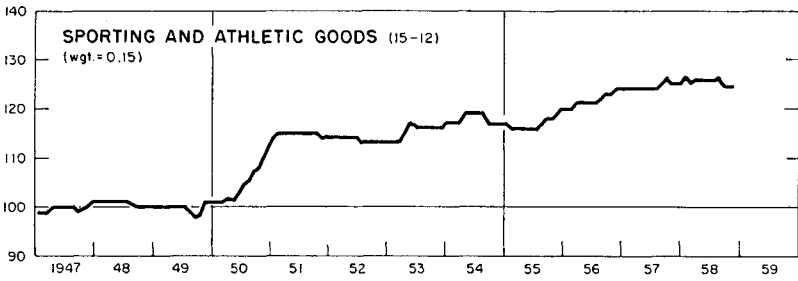












Mr. LANZILOTTI. The rising stair-tread price pattern typical of administered price industries, and the contrasting erratic saw-tooth pattern of other industries, show up very clearly in the charts.

The important aspect of these price movements I would emphasize here is the persistent, uninterrupted upward trend from one tread or plateau to the next. Sporadic off-list pricing occurs in some products from time to time, but these situations are usually short lived and do not disrupt the industry price structure.

Moreover, new price increases ordinarily are stepped up from the last tread, not from the temporary off-list sales which might have taken place. This rising stair-tread pricing pattern thus provides a cumulative and rigid impact on the price structure of the economy.

On the basis my studies of industrial pricing in individual companies, one of the ways in which the process works at the manufacturing level is as follows:

Firms capable of administering industry prices through price leadership conventions prefer what I call a safe price structure, that is, one that:

A. Is high enough to meet with general industry approval, but not so high as to invite undercutting by competitors;

B. That provides the desired profit return to cover expansion objectives; and

C. That can be justified to the public from time to time on the basis of changes in direct costs, and wage costs in particular.

One pricing policy which satisfies these considerations is that based upon securing a predetermined target rate of return on investment at a specified level of production, or standard volume of operations. For a variety of reasons, there is an increasing tendency for large companies to adopt target return types of pricing policies. It does not follow, of course, that all firms will necessarily follow the pricing decisions of the price leader, but economic theory and case studies indicate that in industries such as those mentioned above the typical pattern is conformity on prices.

We can discuss the logic and business incentives behind this behavior later, if the committee wishes.

Target return pricing, by its very nature, leads to sticky or stable prices, and under certain conditions will have an inflationary impact on the price level. First, whenever management decides to raise its target, or whenever the standard volume is lowered at which the given target is to be achieved, an inflationary push is generated. Second, target return pricing will contribute to inflation because of the general belief by industry price setters that customer demand is not very sensitive to price changes, or what economists call price inelastic—this means that if sales are falling off prices ordinarily will be maintained, and oftentimes increased, to attain the company target; of course, any such attempts that entail enlarged markups will be inflationary.

Finally, the profit incentives inherent in target return pricing tend to induce managements to magnify and escalate cost increases in their pricing decisions.

Since prices are normally set for a considerable period of time in advance, usually 1 year, managements impute, in addition to direct cost increases, anticipated indirect cost increases into their price ac-

tions, and the available evidence suggests that those have tended to be overly liberal.

The total effects of target return and other types of formula pricing are too complex to discuss in a short space, but the inflationary aspects should be clear:

In periods of minor economic decline, such as have occurred over the past decade, prices in contracted industries often will rise, and unless offset by declines in other industries, the result will be a rise in the general price level.

I have made no effort in the foregoing to explain the influence of monetary factors in the inflationary trend of the economy. In brief, I take an electric view of the inflationary impact of demand-pull (monetary) factors and cost-push factors.

In particular, I do not wish to minimize the effects of the autonomous upward pressure of wage rates on administered prices. The tendency of firms to bargain in concert has lead over time to a larger and increasingly important kind of covert management-labor "collusion" in certain industries, with unfortunate repercussions on the level of prices.

Administered prices are applied to rising wage costs whose effects are compounded through increases in raw material prices and in the cost of living, which, in turn, calls forth administered increases in wage rates, which then become generalized throughout the entire price structure, including areas where productivity changes very slowly, and so on, in a seemingly endless chain. High and increasing aggregate demand tends to aggravate the general situation, thus speeding the advance of wage demands. While administered prices are not the whole story, therefore, they constitute a crucial link in the inflationary process.

There are many possible directions in which public policy might be developed to cope with the problem of administered prices and inflation. In my view, market structure changes are essential in order to insure that price and output behavior are governed by the objective compulsions of the market.

If public policy has as its objective genuinely competitive prices and output, I would suggest three lines of policy action for consideration:

1. We can attack the problem of market power at its source; that is, at the concentration level via antitrust action.

The objective here is to increase the number of independent firms and hence reduce the relative size and power of leading companies.

A. More specifically, we can take antitrust action against recognized industry price leaders who set the pace for the industry, thus helping to make market structures more fluid and inhibiting the growth of leadership conventions.

B. It now appears that we may have to go even further and apply the conspiracy doctrine more broadly to management-labor relations in certain industries which are implicitly collusive and work harm on the public.

If the antitrust laws are not capable of dealing with these situations, under contemporary judicial interpretations, amending legislation may be necessary.

2. We can restructure industries indirectly by Government assistance to potential new firms, as done with some success in aluminum and synthetic ammonia.

This line of action has many worthwhile features, and should be given serious consideration as a permanent major supplement to anti-trust action.

3. We can try to control and direct market power by persuasive actions; that is, by placing certain basic industries in a quasi-public utility status, and requiring hearings before a congressional committee, or other agency, before price increases can be made. I have some reservations about this approach, as indicated before this committee earlier.

My preference is to move primarily through the antitrust laws, but I freely recognize the limitations inherent in this approach and the low probability of success in realizing necessary market structure changes under present judicial interpretations. In view of the historical pattern of industrial concentration and its relationship to price behavior, I believe we shall find it necessary to move in all of these directions simultaneously, with the various policies serving to supplement and buttress one another.

In conclusion, whatever may be accomplished through the use of monetary and fiscal policies in attacking the problem of administered prices and inflation more reliance will have to be placed upon strengthening the forces of competition.

The CHAIRMAN. Thank you very much, Mr. Lanzillotti.

Mr. Lerner.

#### STATEMENT OF ABBA LERNER, LABOR AND INDUSTRIAL RESEARCH CENTER, MICHIGAN STATE UNIVERSITY

Mr. LERNER. Again, I want to express my pleasure at being here. I will read my statement.

The understanding of the nature of inflation and of its appropriate treatment, cure, and prevention has been badly served by the concentration of economic theory on the analysis of perfect competition.

Economists have had good reason for this concentration, primarily because the study of perfect competition has brought out the ways in which the competitive capitalist or profit-and-loss system can bring about the most efficient production and distribution of what the consumer wants.

But perfect competition has been useful more as a norm by which the efficiency of the economy can be gaged than as an accurate description of its actual operation.

In a perfectly competitive economy, nobody would have any power over any price—or any wage, which is the price of labor.

All prices would be determined only by supply and demand on the market. Whenever there was an excess of supply over demand the price would fall; whenever there was an excess of demand over supply, the price would rise, and conversely a price could rise only when there was an excess demand and could fall only if there was an excess supply.

Inflation, or rising prices in general, could occur only if there was a general excess of demand or of spending, and the natural cure would be simply to cut out the excess demands by restrictive monetary or fiscal measures.

Price stability would be restored as soon as demand was no longer excessive. People would then no longer be trying to buy more than the economy is able to provide.

But as long as prices were not falling, we would know that there is still sufficient overall demand for what the economy is able to produce.

In a perfectly competitive economy every supplier of anything would be able to sell as much as he wanted to at the market price without any effort, and he would not be able to sell any at all at any higher price. There would be no need for or any possibility of applying the art of selling.

With all prices determined by the equation of supply and demand on the market, buyers and sellers would be able to decide only on how much to buy or to sell at this market price. Nobody would ever be free to decide on one price rather than another. There could therefore be no administered prices.

That we are not living in a perfectly competitive economy is thus evident at every turn, and in most other branches of economics this is well taken care of. Economists deal with imperfect competition, monopoly, oligopoly, price leadership, marketing, collective bargaining, and a host of problems that have no place in the perfectly competitive economy.

But in dealing with the problem of the stability of the general price level, economists have tended to assume that we are indeed in a perfectly competitive economy in which all prices are market determined so that a rising or falling price level is a clear indication of excessive or deficient demand. It followed that adjusting the level of demand in the degree necessary to stop such movements would bring about just the right level of demand and cure or prevent both depression and inflation.

Pre-Keynesian economists went one step further and argued that no policy at all was necessary as long as the quantity of money was held relatively stable. Any tendency for prices in general to rise or to fall would cure itself. Rising prices would reduce the real value of the money stock as each dollar lost value. This would induce a decrease in demand as people cut their spending in attempts to restore the real value of the money stock. Since rising prices—in a perfectly competitive economy—could only be caused by excess demand, this would remove the cause and cure the inflation.

Conversely depression would cure itself because the falling prices, which—in a perfectly competitive economy—necessarily result from depression, would increase the real value of the money stock. This would induce more spending and remove the insufficiency of demand which constitutes the depression.

Since Keynes, most economists have considered this automatic cure for depression to be impractical because prices and wages refuse to fall in response to small and temporary deficiencies of demand.

Instead of suffering from long and severe depressions and undermining our long-term rate of growth, while waiting for wages and

prices to fall so as to raise the value of the money stock and thereby increase demand, it is possible and more practical to increase demand painlessly by expansionary monetary or fiscal measures.

But this still leaves intact the identification of deflation with deficient demand or depression and of inflation with excess demand, just as they must be in the perfectly competitive economy.

The Keynesian revolution merely says that the deflation of prices by depression is too little and too late. But the tardiness of wages and prices to fall in response to depression is only a result of their being determined by administrative decisions by businesses, by unions, or by combinations of these, instead of by the equation of supply and demand in perfect markets.

The administrative decisions may not only display a reluctance to reduce prices and wages when there is excess supply, they may also display a propensity to raise wages and prices. The Keynesian analysis considered only the first possibility. What I want to stress now is that the administration which is responsible for that is also responsible for making wages and prices rise even though there is deficient demand.

And just as it may take a long and severe depression to overcome the reluctance to reduce wages and prices, so it may take considerable depression even to overcome the propensity to raise them. This is, in fact, the case, and this constitutes the essence of our problem. The level of demand that divides prosperity from depression is not the same as that which divides inflation from deflation. We need something like 2 percent unemployment to allow for necessary movements from job to job in a changing economy but it seems to take about 7 percent unemployment, which means serious depression, to stop wages from rising faster than is compatible with price level stability.

When unemployment is between these two figures, we suffer from depression and from inflation at the same time. Attempts to cure the inflation by restricting demand have the effect of aggravating the depression. Attempts to cure the depression by increasing demand have the effect of aggravating the inflation.

In this dilemma we seem strangely to be more concerned about the inflation than about the depression, and have been treating the inflation by restricting demand just as if it were a symptom of excess demand, as it would be in a perfectly competitive economy.

But when inflation is found in conjunction with depression—i.e., with more than 2 percent unemployment—it is not due to excess demand, to buyers trying to buy more goods than the economy is able to provide. It is due to sellers of products, or of labor, or both, administratively raising prices and/or wages even while demand is deficient, the induced depression not being sufficiently severe to stop them. It is not a buyers' inflation, but a sellers' inflation, and our frustrations come from treating the latter with the proper specific for the former; namely, restriction of demand.

There are a number of continuing changes in our economy that for some time have been strengthening the tendency of prices to rise even in the face of depression and which seem likely to continue to strengthen this tendency; confidence that the Government will increase demand whenever necessary to prevent severe depressions, continuing



experience of rising prices and expectation of more of the same, continuing experience of increasing real income and expectation of still more from much advertised automation, atomic energy, et cetera, increasing political experience by trade unions and business lobbies, increasingly effective informal and often tacit agreement by businessmen to act in unison, the growing consensus that increased efficiency in a particular firm or industry calls for proportionate wage increases, and even the raising of markups by businessmen who are made to feel, by the induced depression itself, that they cannot count on so much prosperity and must charge more so as to break even at a lower output.

When the nature of sellers' inflation is recognized, treatment may take one of three forms:

The first is to address appeals to business and to labor to exercise restraint in order to save the economy from the evils of inflation—or from the evils of the depression that will result if the authorities resorted to monetary or fiscal restriction.

Such appeals are not likely to be very successful as each price administrator will tend to feel that someone else ought to respond first.

A suggested refinement of this hortatory treatment is to have studies made and publicized of the expected inflationary effects of projected or threatened wage or price increases. This would be a useful thing to do, but still would leave each price administrator with the excuse, in many cases quite sound, that the efficiency of the economy calls for other prices to be reduced rather than for his price to be held down.

The second form of treatment consists of measures like a more active antimonopoly program, removing restrictions on foreign competition, outlawing the extortions called fair trading, revamping those public utility commissions that have been using regulation to establish monopolies to regulate, extending antimonopoly measures to include labor, and other devices for increasing the competitiveness of the economy as a whole.

Such measures are well worthwhile in their own right, but are likely to be of only temporary effectiveness against sellers' inflation.

The price reductions that this will bring about will serve to offset other price and wage increases, but when these price decreases have been fully carried out, the other wage and price increases will continue, for it is certain that even all the reforms together will not establish the perfectly competitive economy, and the reductions may well be swamped by further improvements in the arts of large-scale organization and tacit agreement that are responsible for the administered prices and wages that caused sellers' inflation in the first place.

The third form is unlikely to be adopted until the first two have been tried and found inadequate. This consists of the revolutionary idea of combating sellers' inflation by curbing the inflationary activity of sellers. It calls for regulating the most important administered prices—but only prices, not outputs or services as in the case of public utilities—so that they are made to behave the way competitive prices do. The less important administered prices will then follow suit as they do now.

The regulation would prevent an administered price from being raised if output was less than, say 80 percent of capacity, and would call for a reduction of price if output was less than, say, 70 percent capacity.

Prices would then rise only when capacity was well utilized and would fall when there was much excess capacity, just as they do in a competitive market. Capacity would then be used rather than wasted.

Important administrative wages would be subject to slightly different regulations. Unlike the general price level, which we want to keep stable, average wages must rise with increasing average productivity and with any reductions in the rate of markup which might result from the successful maintenance of price level stability with full employment. But particular wages, like particular prices, must be able to move in response to changes in particular markets.

The regulation would take the form of starting with a normal rate of wage increase, say 1 percent every 4 months, and provide for a larger wage increase, say, 2 percent, where labor was more than twice as scarce, as measured in some established way by unemployment and vacancy figures. Correspondingly there would be no increase where, by the same index, labor was only half as scarce as on the average.

With the most important administered prices and wages thus made to behave like competitive prices, and the less important administered prices and wages generally following suit, inflation would become coincident with excess demand and deflation with depression and deficient demand.

Monetary and fiscal policy would then really be able to prevent both inflation and depression by increasing or decreasing demand, according as the price level is rising or falling.

It is not to be expected that the regulation will quickly become popular enough for application, but it would be most advisable for the details of its operation to be studied and for its compatibility with all essential freedoms to be investigated, so that it could be put into effect when the other approaches have failed, or have been exhausted.

It is also possible that the knowledge that this approach was being seriously considered and worked at would make the other approaches somewhat more effective.

The CHAIRMAN. Thank you very much.

Mr. Ruggles, I know that is a joint statement by you and your wife.

#### STATEMENT OF RICHARD RUGGLES, YALE UNIVERSITY

Mr. RUGGLES. Yes; I regret that my wife cannot be here.

The CHAIRMAN. We regret she is not here, but we are very glad to have you.

Mr. RUGGLES. Thank you very much.

Summary: In the past 4 or 5 years, there has been widespread concern with the problem of rising prices. Earlier in the postwar period the major causes of price increases were rather obvious. Immediately following World War II, when price controls were removed, the excess liquidity of the economy produced a demand inflation. Similarly, at the time of the Korean conflict, defense spending and inventory accumulation combined created another excess demand situation. Since 1953, however, there have been years in which, even though the level of demand relative to capacity has not been excessive, the price indexes have shown substantial rises. It is this situation which has caused grave concern among both economists and public officials.

In measuring the extent of the price rise, there has been a tendency to overlook the basic weaknesses of the measuring devices. Price indexes can be accurate only when products do not change. But in a dynamic economy, the same items are not produced from year to year. Some products change in quality, some completely new products are introduced, and some products disappear. In such a situation, it is not possible to measure what is taking place unambiguously. Price indexes must of necessity reflect only what is happening to those products which do not undergo any change. But the very introduction of new products may, in fact, be evidence that real price declines are occurring. For example, if a new product is introduced that is considerably superior to the product it replaces and at the same time is also cheaper, the old product will go out of existence, and in real terms the consumer will get more for his money because of this change. But no such change will be reflected in the price index measurements. Similarly, technical changes in existing products can constitute an implicit price decline which would be ignored in the actual index price measurements. Over the years much of the improvement in the standard of living in the United States has occurred by the systematic improvement of existing products and the introduction of new products. In the price indexes, however, such improvement is not taken into account.

In the measurement of prices of producers' durables the same problem arises. In terms of the price indexes it would appear that the price of producers' durables has risen 34 percent since 1950. But the price indexes do not reflect technological improvements in producers' durables, and there can be little doubt that the expenditure of producers for equipment in 1959 represents more productive capital than if the same dollar amount had been spent on the capital goods available in 1950.

Finally, in some areas of services, we are making vast strides in productivity that are not taken into account in the price indexes. Perhaps medical care is the most spectacular of these; but even in areas such as Government services the introduction of computers and data-handling equipment allows us to perform tasks at substantially lower money costs.

When all of these factors are taken into account, it does not seem unreasonable to suggest that the implicit price declines which are not reflected in the price indexes may fully offset the explicit price increases which are reflected. In any event, the degree of the price rise would have been considerably qualified and the seriousness of the problem thus somewhat diminished.

In spite of these questions relating to the validity of existing price indexes, however, it is still interesting to ask what the role of enterprise monopoly and labor monopoly may have been in the price developments which were reflected by the price indexes. On the one hand, there have been charges that the existence of monopoly has led to increases in prices greater than were justified, and that the apparent price rise was due to "administered" prices. On the other hand, the charge is made that large labor unions have pushed wages up faster than productivity has risen and the consequent rise in wage costs has resulted in a cost-push inflation. Both of these explanations are oversimplified and do not adequately explain what has taken place.

In the early part of the recovery from the 1954 recession, in 1954 and 1955, there was a considerable increase in productivity due to the expansion of output. In this period wage rates did advance, but the productivity gain was faster, so that as a result wage costs fell. Prices did not increase from 1954 to 1955, but because wage costs fell, the margin between costs and prices widened somewhat.

In 1956 and 1957 the wage rises continued, but productivity did not increase significantly. As a result, wage costs rose. In fact, costs rose somewhat more than prices, so that margins were actually reduced. The continued expansion of output, however, still led to some increase in total profits, although profit per unit of output diminished. When the downturn occurred, the drop in output brought with it falling productivity, but at the same time wages continued to increase. Wage costs, therefore, continued to rise and the margins of producers continued to narrow. It is a little too early for sufficient statistical evidence on this subject to be available for the present recovery, but there are signs that the increase in productivity in many areas may have dampened the rise in wage costs and thus slackened the rate of the apparent price rise.

Industrial monopoly or labor monopoly may, of course, have undesirable effects in many ways, but the evidence does not seem to suggest that they are at the heart of the problem of the rise in the price index. Although there are undoubtedly instances when industrial monopolies have forced prices up faster than costs, or have been insensitive to cost reductions, for the economy as a whole the price indexes would behave approximately as they do even if industrial monopoly were nonexistent. The behavior of price relative to cost—that is, gross margin—in the concentrated industries does not appear to differ significantly from that found in competitive industries; in general, for both types of industries prices move quite closely with costs.

Neither does it appear that labor monopoly is responsible: the prescription that is frequently heard, that wage increases should not exceed the increase in productivity, might succeed in eliminating wages as a factor in the price rise, but only at the expense of condemning the economy to a slow rate of growth by removing one of its more dynamic elements. In the period from 1956 through mid-1958, productivity gains for the economy as a whole were negligible and price indexes rose not so much because of unwarranted wage increases but because there were insufficient productivity gains in the system. The productivity gain over the years might be even less if we were to insist that wage increases never exceed productivity gains, since rising labor costs today constitute one of the most effective spurs to productivity-increasing investment. The introduction of machinery to increase productivity is the major weapon which businessmen have to fight the ever rising labor costs.

In many ways it is unfortunate that so much attention has been focused on the problem of rising prices, especially in view of the inadequacy of the indexes which have to be relied upon for measurement. The redistribution of income to which rising prices lead may have a relatively small effect, in terms of the loss of welfare involved, in comparison with the overall welfare losses caused by the underutilization of our economic potential and our sluggish growth. A

little over a year ago before this committee we suggested that the economy was operating \$100 billion below full capacity. Since that time the economy has made up about \$50 billion of this, but we still have not reached full utilization of our resources. There is considerable danger that we will not reach such a level before we slide into another period of softness and recession, and the emphasis upon the behavior of the price indexes increases this likelihood. Is it going to become a characteristic of the American economy that every 4 or 5 years we almost reach the full employment level? Is it going to be a characteristic that we have one of the slowest rates of growth among either the developed or developing economies?

The heart of the problem is not price behavior; price behavior is only a symptom. It is the behavior of productivity, which is of central importance. If productivity increased fast enough, a satisfactory increase in wage rates would be possible without raising wage cost per unit of output, and the problem of satisfactory price behavior might be solved. But, more important than this, a high rate of productivity increase would lead to an increasing standard of living, thus alleviating poverty in many areas and making it possible to correct many other deficiencies in the economy.

A high rate of productivity increase demands a high and sustained level of investment. To maintain a high rate of productivity increase a larger share of our output would need to be devoted to investment than currently is, perhaps as much as 25 percent of gross national product. Furthermore, such an increase in investment should not take the form of residential housing alone for, although an increase in residential housing may be desirable for a higher standard of living, houses are essentially consumer durables, not capital equipment which increases the level of productivity, at least in the short run. In this connection, it might be useful to develop a concept of productivity-increasing investment which, in addition to producers' durable goods, might include such items as research and development, education, and other forms of investment not necessarily directly embodied in physical goods.

In order to attain a high level of investment, it is necessary to induce producers to make more investment expenditures. Many of the benefits of such expenditures accrue not to the producers themselves, and not even to the workers in the industry, but, rather, to consumers and the economy as a whole. The benefit of investment to the economy exceeds the private benefit of producers making the expenditure, so that if we rely upon private benefit alone to determine the amount of investment we are making investment decisions for the economy on the wrong basis. Thus, some incentive is required to induce producers to invest more than they ordinarily would under present conditions and the current tax system. For instance, devices which would enable producers to charge investment expenditures off as current expense, much as research and development expenditures are, would probably be helpful in raising the level of investment. For this purpose it might be useful to define taxable profits in terms of what is withdrawn from the productive process by producers to hold as nonproductive wealth or to distribute to stockholders. In this way, the share of the value of output going to profits would be defined much in the same way as that going to labor, namely, what they receive as disbursements.

Investments might indeed be sufficiently sensitive to even moderately accelerated depreciation so that more drastic methods would not have to be employed, but we do need a considerable increase in the resources devoted to investment purposes of a productivity increasing nature in order to get the productivity increases and capacity expansion required to maintain growth.

Once we embark upon an expansion of investment, it is obvious that we must use our fiscal and monetary tools to insure full utilization of the resulting expansion of capacity.

If we do not do this, then excess capacity will emerge as it did in 1956 and 1957, and even the strongest incentives for investment will have no effect.

At the present time we are in the paradoxical situation that even a low level of investment creates more new capacity than we can use.

Before analyzing the elements involved in price inflation and the role of monopoly, it will be useful as a first step to examine the meaning of inflation in terms of price indexes.

Most of us certainly do have the impression of rising prices, since we continually find that our money does not seem to go as far as it used to and, in many instances, we can recall prices of specific items which used to be lower than they now are.

But impressionistic indicators of price change are not very reliable, since there is a natural tendency for us to forget or take for granted areas where prices have fallen, and to be particularly conscious of areas where prices have increased.

Examination of official price data will give a better indication of what has taken place in the economy.

#### THE PROBLEM OF THE MEASUREMENT OF PRICES

One of the most comprehensive forms of price data about the economy are the implicit price deflators calculated from the gross national product by the Department of Commerce. In order to show how much of the change in the gross national product is due to changes in price and how much is due to changes in output, the Department of Commerce undertakes a highly detailed deflation of each category of final expenditures. The deflators are based primarily upon price information collected by various Government agencies. This price information cannot always be relied upon to reflect the true behavior of prices, however. Prices are obtained for items of fixed specifications, although new items continually appear on the market and old items change in quality. When improvements in quality cannot be measured, or new products appear which are more desirable than those they replace, price indexes which must leave these factors out of account will show too much price increase.

In pricing consumer goods the Bureau of Labor Statistics does attempt to take into account those improvements in quality which result in increased costs, but improvements in quality may also occur at no increase in cost, so that the consumer gets more value for his money. In such cases no adjustment is made in prices, and the price indexes do not reflect the quality improvements in any way. It is, however, quite obvious that the change in quality in consumer goods has been very considerable. If one were given \$1,000 to spend on consumer

goods, and given the choice of purchasing the goods available in 1950 at the prices of 1950, or the goods presently available at current prices, it is extremely doubtful whether he would, in fact, prefer the 1950 goods. In 1950 many goods which are common today were unavailable. Synthetic fibers were not as common. The introduction of plastics has improved the quality of many other products. There has been considerable development in such household appliances as automatic washers and driers, home freezers, television, and hi-fi. The packaging of frozen foods and the development of semiprepared foods has added to the price of food, but has also substantially reduced the time required for meal preparation. Thus, an individual spending his thousand dollars in 1959 gets more for his money, due to natural technological improvements.

The fact that most people feel, despite the rise in the price index for this category of goods, that they would get more for their money in the present period suggests a flaw in the manner in which we measure prices over time. Conceptually, there are two methods by which a more accurate measurement of real price changes might be made. Omitting from consideration all differences arising from style changes and changes in consumers' taste, it would be interesting to inquire how consumers would value an item produced in 1950 against its 1959 counterpart or successor. Since progress is made over time in the design and function of goods, it is reasonable to presume on average that the 1950 goods will receive a lower valuation than the 1959 goods. If the valuation of the 1959 products—including new items—exceeded the valuation of the 1950 products—including obsolete items—by more than the 20 percent by which the price index has risen, prices must really be lower in 1959 than they were in 1950. As an alternative measure, individuals might be asked what percentage they would require to be added to their present level of expenditures to make them willing to restrict their purchases to the exact goods available in 1950, priced at today's prices. If, on the average, they would require more than 20 percent additional, this would again indicate that prices had actually fallen since 1950.

The difficulties encountered in measuring price changes in consumer goods also exist for consumer services. Generally speaking, in this area the compensation of the person performing the service is taken as a major indicator of price. It is obvious, however, that the quality of services may improve. Thus, for example, medical service is better than it used to be because medical knowledge has increased, but this is not taken into account in measuring the price change in medical service. Similarly, quality changes in such services as housing and education cannot be measured and are not reflected in their prices. It is however, a serious error, as a moment's reflection will indicate, to assume that, if teachers do not improve, education as a product does not improve over the years. We have only to ask ourselves whether we would be content to give children today exactly the same education as was given 50 years ago, using the same books and the same fund of knowledge. Education, like other products, is a combination of factors of production, and should not be assessed only in terms of intuitive judgment about the contribution of any one of these factors of production.

Nor are consumer goods and services the only area that presents pricing problems. For producers' durable goods, it is well recognized that equipment produced today is far more productive than that produced even 5 years ago, but such increases in efficiency are extremely difficult to take into account in price indexes. In terms of the ability of the capital goods to yield productive services, there can be little doubt that the increase from year to year is substantial. But price indexes of producers' durable equipment generally reflect changes in cost of production rather than changes in the performance of the equipment itself.

Residential and commercial construction also pose problems. Again price indexes are constructed by determining what a structure of standard specifications would cost. Improvements in design and cost-reducing changes in specifications are not taken into account in the price comparison, so that the price index tends to have an upward bias.

Finally, the measurement of changes in prices of goods and services purchased by Government is very difficult. For military equipment it is often impossible to determine what happens to prices when design changes radically. Yet few would argue against the proposition that military equipment produced in the past is definitely inferior to present military equipment. For the services of Government employees, like services in general, it is assumed that there is no change in output per man, so that all increases in salary are in effect increases in the price of Government gross product. By this measure the price of Government services has risen by an average of over 5 percent a year since 1946. There is good reason to believe, however, that the productivity of Government workers has increased substantially in this period. For one thing, the introduction of data-handling machines and computers speeds up the operation of many stages of Government work. Statistics in the Government are now in large part handled mechanically rather than by clerks. The mechanization which is so characteristic of current developments in business is also occurring in Government.

There is, thus, an upward bias in the price indexes for almost every category of expenditures. For commodities it exists because quality changes and new products cannot be adequately integrated into the price data. For services it exists because, by and large, the value of services is assumed not to increase, although there is strong evidence that it does. By ignoring the upward bias of the price indexes we are likely to be basing our policy on a mistaken impression. Since we are forced to use inflexible and inadequate assumptions to arrive at a specific price index, we may create indicators which are more the result of our assumptions than of the real world.

#### THE BEHAVIOR OF PRICES, 1947-59

If this upward bias in the price indexes is taken into account, a rather interesting picture emerges. As shown by table 1, line 14, the large price increases of the postwar years 1946-48 and the Korean war year of 1951 stand out. However, up through 1955 the other years, that is, 1949, 1950, 1952, 1953, 1954, 1955, exhibit overall price changes which are probably smaller than overall quality improvement, so that in fact from the end of the postwar in-



flation through 1955 the American economy did not show an overall upward price movement in any period except the Korean boom. For the 6 years involved the average annual price increase was (line 14, table 1) only 1.1 percent; for consumer goods alone it averaged 0.6 percent, and price index changes of these magnitudes were probably considerably less than the actual quality changes taking place.

For the period from 1956 until the present, the picture is somewhat different. The price changes indicated by the indexes averaged about 3 percent, and even when output was declining in 1958 the price index still showed a rise. The importance of this price rise may have been somewhat overstressed, but there can be little doubt that it has been this which has created such grave concern by so many, and the question why the price indexes have behaved the way they did, and what kind of price behavior can we expect in the future, is important.

In the early postwar period, and during the Korean war, the existence of excess demand is sufficient to explain the price movements that occurred. Immediately after the war the combination of long postponed expenditures and accumulated liquid funds resulted in a rapid increase in demand for consumer goods which were still in short supply in an economy that had not fully converted from war production. During the Korean war, expenditures by the Federal Government on national security increased from \$18.5 billion to \$37.3 billion in 1 year alone, thus pumping into the economy almost \$19 billion of additional expenditures. At the same time, the increase in Armed Forces reduced the civilian labor force, so that the normal increment of labor from population growth did not occur. In a period of 2 years the real output of the economy rose by over 17 percent, and employment rose only 4 percent. Under such conditions it is not at all surprising that the increase in real output could take place only with rising prices.

But the absence of a significant price rise, on average, in the other years prior to 1956 did not mean that there were no rising prices anywhere in the economy. During this period agricultural prices were generally falling. These falling agricultural prices were offset in most of these years by rising wages, so that prices on average were quite stable. From 1951 to 1955 there was a decline of almost 19 percent in the wholesale prices of farm products, while average hourly earnings in manufacturing rose by 18 percent. But in the commodity producing industries, wage costs rose more slowly than hourly earnings because productivity increased. In manufacturing as a whole wage costs rose only 2 percent. Thus the pattern of price behavior in these years can be explained in terms of the behavior of agricultural prices, wages, and productivity. The movement of agricultural prices together with the growth in productivity tended to hold down the increase in product prices by keeping both material costs and labor costs below what they otherwise would have been. Wage rates, on the other hand, exerted an upward influence, increasing somewhat more than in proportion to the productivity gain. The net result was comparative price stability. The evidence of the forces at work can be seen, however, in the changing price structure as revealed by the components of the cost-of-living index, or by the implicit price deflators of gross national product. These indexes show that the prices

of durable goods, where productivity increases were greatest, actually declined from the end of the Korean war through 1955. Prices of nondurable goods using agricultural materials, for example, food processing and clothing, were relatively stable; although productivity gains in these industries probably were not as large as in the durable goods industries, agricultural raw material costs fell. In such areas as construction, productivity gains were less pronounced, and material costs, being mainly nonagricultural, did not fall. Prices in this sector, therefore, rose from 1951 to 1955 by 10 to 15 percent, a considerably greater price rise than that exhibited by the other commodity producing sectors. The largest price increases occurred in consumer services and Government services. Here price increases from 1951 to 1955 range from 15 to 27 percent. Services, in fact, accounted for most of the upward price movement that occurred in this period.

Most of the concern of public officials and economists with the inflationary problem arose, however, from price behavior during 1956, 1957, 1958, and even 1959. Raw material costs, which had been falling up to 1955, stabilized, and productivity increases, at least until 1959, were for the most part much smaller than those which had helped offset price increases up to 1955. As shown in table 1, on average, prices for the economy as a whole rose about 3 percent per year over this period, and what seemed most disturbing was the fact that the price increases were not confined to services; during 1956 and 1957 prices of producers' durable equipment rose by more than 6 percent in each year.

In view of these sharp price increases, the question was immediately asked whether in manufacturing in general price increases were in excess of the rise in the costs which producers were facing. The early impetus for the administered price argument came largely from a belief that there were unjustified price increases in the manufacturing sector.

In table 2, data are shown for the manufacturing industry for the years 1956-58. Data for 1959 are not as yet available. It can be seen that in 1956 and 1957 the rise in the wage and salary bill of manufacturing firms greatly exceeded the increase in their production, so that per unit of output there was a substantial increase in labor costs. In 1956 labor cost per unit of output rose by 4.4 percent and in 1957 it rose by 3.1 percent. Even in the year 1958, when the wage and salary bill declined, the index of production declined even faster, so that in this year there was a slight increase in wage and salary cost per unit of output. The price index for materials used in manufacturing behaved quite similarly. By 1958 labor costs had risen 8.8 percent, material costs by 7.6 percent, and wholesale prices by 7.6 percent. Thus, the prices of manufactures did not fully reflect the higher cost of labor.

The price increases shown in this table for all manufacturing do not exhibit the strong price increases reflected in the price of equipment shown in table 1 above. Data are available, however, for the durable goods industries as a whole. This industry includes the durable goods which are furnished to consumers and Government, as well as to producers, and therefore should show somewhat less price increase than that for producers' goods alone given in table 1. For these durable goods industries, much the same pattern exists. The

increases in the wage and salary bills outstripped production considerably, causing labor costs per unit of output to rise 7.7 percent in 1956 and 3.9 percent in 1957, and even 4.7 percent in 1958. Materials costs also rose substantially through 1957. For the period since 1955 as a whole, labor costs rose by 16.5 percent, material prices rose by 10.5 percent, but wholesale prices of durable goods by about 8 percent.

This same phenomenon of costs rising faster than the price indexes is also evidenced by the fact that corporate profits reached their peak in the fourth quarter of 1955. Although in absolute amount profits remained at the same level in 1956 (see table 3) profits dropped sharply in relation to the wage bill; thus, the relative share of profits was squeezed by rising wage costs. During 1957 and 1958 absolute profits declined, showing the effect of rising costs and falling demand. The periods when profits rose in relation to wages were actually the periods of price stability.

It has been argued that the fact that wage increases have outstripped the increases in productivity was also due to demand pressure. This hypothesis suggests that the level of unemployment during 1956 and 1957 was below the frictional level, and that it was the excessive demand for goods which made it possible for labor to get excessive increases in wages. There is a clear implication in this argument that if the economy is working too near to full capacity a wage creep will ensue, and wages are quite likely to rise faster than productivity. There has been considerable discussion about how much unemployment is required to keep wages in line and to maintain price stability. But this analysis leaves out of account the effect which any improvement in economic conditions may have upon wage rates. Few would say that a level of unemployment above 10 percent was required to keep the wage rate in line. Yet, in the recovery from the great depression of the thirties, there were years of substantial increases in average hourly earnings despite the fact that the economy had a level of unemployment which varied from 14 to 20 percent of the labor force, as table 4 below shows. The increases in average hourly earnings in 1934 may be considered to have been due to structural changes, but in 1937 there were also substantial increases despite the fact that unemployment was 14 percent of the labor force. In this connection it is interesting to note that the rise in prices during the recovery from the recession of the thirties was at about the same rate as it has been in recent years.

I would like to suggest, therefore, that focusing on the wage rate as the major culprit in the price rise is as erroneous as focusing on the prices charged by manufacturers. The striking thing shown in table 4 is that from 1956 onward output per full-time worker has not increased significantly. Thus, if wage increases were not on balance to exceed productivity increases, it would have been necessary that no wage increases be permitted during the last 3 years. Thus, by this dubious reasoning the increases in pay given Government workers and university professors either should not have been given or else should have been offset by equivalent wage declines elsewhere in the economy.

The crux of the matter is that the economy should be able to afford wage increases; productivity should rise. Wage increases are healthy because they spur producers to introduce labor-saving devices which

in turn raise productivity. Unfortunately, however, labor's argument that increased wages provide additional spending power must be qualified if prices must be raised to cover these increased costs and the total expenditures resulting from the pay increases are not sufficient to buy the output at the new higher prices. The reason for this is that our built-in stabilizers tend to siphon off a considerable portion of wage increases in taxes and savings, so that producers do not get back in the form of increased expenditures an amount sufficient to meet the increased wage costs. Given rising costs and prices, the capacity we create for additional output outstrips our ability to purchase that output. The consequence of this divergence between the rate of increase of capacity and the rate of increase in purchasing output is excess capacity, and we get a recession such as we had in 1958 with the paradox of rising prices and falling output.

In pursuing price stability as measured by price indexes, we may be in danger of trying to achieve the impossible. If the wage rate depends not upon the actual level of unemployment, but on the change in economic conditions, increases in the wage rate may only be curtailed when the economy is going into a decline. In these same periods, productivity increases will also be dampened so that even if increases in the wage rate are slowed, wage rates may still outstrip productivity increases. I do not believe that an economy which would provide the proper conditions for wage stability would be a healthy one. Deterioration of the economy may even be the only effective way to obtain the proper restraining influence on wages. As the history of the thirties shows, even partial recovery from a deep depression normally and properly brings with it price increases.

Finally, the general character of the increases in the price indexes and its relationship to monopolistic elements in the economy can be examined in the context of the more detailed components of the Consumer Price Index. It is this set of prices which in the last analysis is important for welfare consideration. Table 5 shows that there has been an increase in the cost of living of about 11½ percent since 1951. The behavior of different components of this price index, however, indicates that perhaps not all the blame for the inflation is to be laid at the door of wage increases exceeding productivity increases. The component which increased most from 1951 to 1958 was medical care. As has already been suggested, it would be erroneous to count all of this increase in the price of medical care as

a true increase, since improvements in medical science are not truly reflected in the price index, and, per dollar of expenditure, a person today may be getting better medical care than he was in 1951. Public transportation has also increased greatly in price. While this is partly due to increased wages, it also reflects other increased costs, such as the increased traffic problem in large cities, and, in some instances, better transportation services in new suburban communities. The increases in rent and household operation reflect either direct services or price decisions completely outside of the wage change context.

The cost-of-living components also reflect the relative price shifts that have been taking place. As the economy grows, the one element which becomes more and more costly is, of course, personal service. The changing price structure reveals this. The prices of service have risen relatively to other prices in the economy. To prevent such relative price rises would indeed be to frustrate the allocative aspect of the price system. Rising prices serve a dual function. On the one hand they encourage people to enter this area by giving them a higher rate of remuneration. On the other hand, they discourage the use of these services by people who are at the margin. Whether the price system is equitable or not may be a matter for debate, but this is the basic principle on which it operates. It may be too much to require also from the price system that in achieving a reallocation of resources in producing goods and determining who consumes the goods it also achieve an exact balance between prices in the economy necessary to effect such a reallocation and price declines in other parts. There is no natural mechanism which would tend to make the change in the price index come out to be zero. It is rare, in fact, that the wage rate in declining industries actually declines. What happens instead is that the wage rate is maintained, and there is unemployment in those sectors of the economy. The relative inflexibility of the wage rate downward is something that we must cope with; reallocation of labor is not achieved by lowering its remuneration, but, rather, by causing unemployment. The people who lose their jobs must then find other occupations. Given such a system of prices, it would be natural that any period of change will on balance cause rising prices. The attempt to achieve price stability must, therefore, be at the cost of either preventing the reallocation from taking place or forcing wage and price declines in specific sectors of the economy.

(The tables referred to are as follows:)

TABLE 1.—*Implicit price deflators for gross natural product, 1946-59*

[Year to year percentage changes]

Line	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959
1 Consumer goods.....	7.7	10.6	5.8	-0.9	1.3	6.8	2.1	1.0	1.0	0.4	1.8	2.9	2.4	0.7
2 Durable.....	-1.0	7.8	4.5	1.2	1.2	6.9	1.1	-2.7	.6	.1	1.2	3.4	.8	1.7
3 Nondurable.....	9.1	12.5	6.0	-1	.5	8.3	1.1	-3	.3	-.5	1.4	3.1	2.2	-4
4 Services.....	5.9	8.0	6.4	2.3	2.7	4.5	4.2	4.4	2.4	1.7	2.5	2.8	3.0	1.6
5 Producer goods:														
6 Residential construction.....	8.8	20.0	13.0	-3.1	5.8	7.3	2.9	1.0	-1.3	3.0	5.0	1.9	.9	2.4
7 Other construction.....	10.0	19.5	11.1	-.6	3.0	9.4	3.6	2.5	1.1	3.2	6.4	5.2	2.9	3.0
8 Equipment.....	11.1	15.1	8.2	4.7	2.3	8.8	.7	1.5	1.0	2.6	6.2	6.2	2.6	2.8
9 Government:														
10 Federal.....	14.2	10.7	4.4	4.3	1.8	10.1	.5	-.6	1.4	4.1	4.5	6.3	2.0	1.2
11 State and local.....	9.7	13.5	10.9	3.0	2.4	7.8	5.1	2.8	2.6	2.2	4.9	4.9	2.9	2.2
12 Exports.....	7.3	15.6	5.6	-6.0	-2.6	14.4	-.3	1.9	-1.0	.7	2.7	3.2	-1.6	-----
13 Imports.....	14.1	21.6	8.3	-5.0	7.1	17.1	0	-4.5	1.8	-.1	2.0	.9	-3.7	-----
14 Gross national product, total.....	9.7	11.2	6.6	-.3	1.5	7.5	2.0	.9	1.0	1.2	3.0	3.8	2.3	1.4
15 Consumer Price Index.....	8.4	14.5	7.6	-1.0	1.0	8.0	2.3	.8	.4	-.3	1.5	3.4	2.8	.5
16 Gross Government product price index.....	12.4	5.4	4.2	6.3	3.6	5.5	5.5	3.4	3.4	5.4	5.0	5.2	2.3	-----
17 Gross national product in constant 1954 prices.....	-10.0	0	3.9	-.1	8.7	7.5	3.5	4.4	-1.6	8.2	2.5	1.2	-2.3	8.2

<sup>1</sup> 1959 2d quarter annual rate compared with year 1958.

Source. 1946-58, Economic Report of the President, January 1959, tables D-5, D-38, and D-2. 1959 obtained from "Survey of Current Business," August 1959, tables I-3, and I-5, p. 6.

TABLE 2.—*Behavior of costs and prices, 1956-58*

[Percentage change from preceding year]

	1956	1957	1958	1955-58
All manufacturing:				
1. Wages and salaries.....	7.6	3.8	-5.3	5.6
2. Index of production.....	2.8	.6	-6.3	-2.9
3. Wage and salary cost per unit of output.....	4.4	3.1	.9	8.8
4. Price index of materials used.....	4.4	2.5	.2	7.6
5. Wholesale price index of manufactured goods.....	3.3	2.9	1.4	7.6
Durable goods industries:				
6. Wages and salaries.....	10.5	4.6	-7.5	6.7
7. Index of production.....	2.5	.6	-12.6	-8.6
8. Wage and salary cost per unit of output.....	7.7	3.9	4.7	16.5
9. Price index of materials used.....	6.3	3.2	.1	10.5
10. Implicit price index of durable goods.....	3.0	3.9	1.0	8.0

Sources: Department of Commerce, "Survey of Current Business," and Council of Economic Advisers, "Economic Indicators."

TABLE 3.—*Wages and salaries paid by corporations and corporate profits, 1955-58*

[Seasonally adjusted totals at annual rates]

	Wages and salaries	Corporate profits before tax	Corporate profits as a percent of wages and salaries
1955—1st quarter.....	126.7	41.4	32.7
2d quarter.....	131.2	42.8	32.6
3d quarter.....	134.3	46.6	34.7
4th quarter.....	137.7	48.6	35.3
1956—1st quarter.....	139.5	46.2	33.1
2d quarter.....	142.9	44.8	31.4
3d quarter.....	143.6	44.3	30.8
4th quarter.....	147.3	46.7	31.7
1957—1st quarter.....	148.9	46.1	31.0
2d quarter.....	150.6	43.5	28.9
3d quarter.....	151.4	44.2	29.1
4th quarter.....	149.2	39.9	26.7
1958—1st quarter.....	145.0	31.7	21.9
2d quarter.....	143.7	32.0	22.3
3d quarter.....	146.4	37.9	25.9
4th quarter.....	148.5	45.2	30.4

Sources: Department of Commerce, "Survey of Current Business," and Council of Economic Advisers, "Economic Indicators."

TABLE 4.—*Average hourly earnings, output per full-time equivalent employee, and the implicit deflator of the gross national product, 1934-37 and 1955-58*

[Percentage changes from preceding year]

	Average hourly earnings	Output per full-time equivalent employee	Implicit deflator of the gross national product
1934.....	+20.3	-1.8	+5.9
1935.....	+3.4	+5.5	+1.0
1936.....	+1.0	+2.9	+1.6
1937.....	+12.2	+1.8	+3.8
Average.....	+9.2	+2.1	+2.8
1955.....	+3.9	+5.2	+1.2
1956.....	+5.3	-1.1	+3.0
1957.....	+4.5	+1.5	+3.8
1958.....	+2.9	0	+2.3
Average.....	+4.2	+1.4	+2.6

Sources: Council of Economic Advisers, "Economic Indicators," and Department of Commerce, "Survey of Current Business."

TABLE 5.—*Components of the cost of living index*

[1947-49=100]

	1951	December 1958	Change
All items.....	111.0	123.7	11.4
Food.....	112.6	118.7	10.5
Apparel.....	106.9	107.5	.5
Housing.....	112.4	128.2	14.0
Rent.....	113.1	138.7	22.6
Gas and electricity.....	103.1	118.2	14.6
Fuels.....	116.4	137.0	17.7
House furnishings.....	111.2	103.6	-6.8
Household operation.....	109.0	132.8	21.8
Transportation.....	118.4	144.3	21.9
Private.....	116.6	133.3	14.3
Public.....	131.0	191.8	46.4
Medical care.....	111.1	147.3	32.6
Personal care.....	110.5	129.0	16.7
Reading and recreation.....	106.5	116.9	9.8
Other.....	109.7	127.3	16.0

Source: Board of Governors of the Federal Reserve System, Federal Reserve Bulletin.

(The following was subsequently submitted for the record:)

## INDUSTRIAL INTEGRATION, PRICES AND OUTPUT

Richard and Nancy Ruggles

Traditional value theory is concerned with the determination of price and output levels under different cost and demand conditions. Generally speaking, the principle of profit maximization is accepted in these analyses, and considerable attention is devoted to the effect of industrial organization upon price and output behavior.

One of the major conclusions of traditional value theory analysis is that for any given industry monopolies will generally have higher prices and lower outputs than would exist under conditions of pure competition. This conclusion often is not stated explicitly, partly because of the difficulties encountered in the definition of monopoly and thus in the comparison of a monopoly situation and a competitive situation. Many of the same difficulties are encountered in the problem of defining industry. The antitrust laws of the United States and the history of their application give ample evidence of the practical difficulties in developing any objective criteria for these concepts. Regardless of how monopoly is defined, however, it would generally be agreed that an industry is composed of a large number of independent producers. And it still remains true that horizontal integration or even vertical integration tends to centralize the decisionmaking process and thus from the economists' point of view results in less competition than if the decisionmaking process remained in the hands of a large number of independent producers.

The following discussion will examine these conclusions by analyzing the effect of horizontal and vertical integration upon the price and output of an industry. In this analysis it will be assumed that alterations in the degree of horizontal and vertical integration will (1) leave unaffected the demand curve of the purchasers of the output of this industry, and (2) leave unaffected the technological production functions and the opportunity costs of obtaining resources for use in this industry. In other words, it is assumed that the consumers, the technology and the supply of factors of production are independent of the form of industrial organization.

## HORIZONTAL INTEGRATION

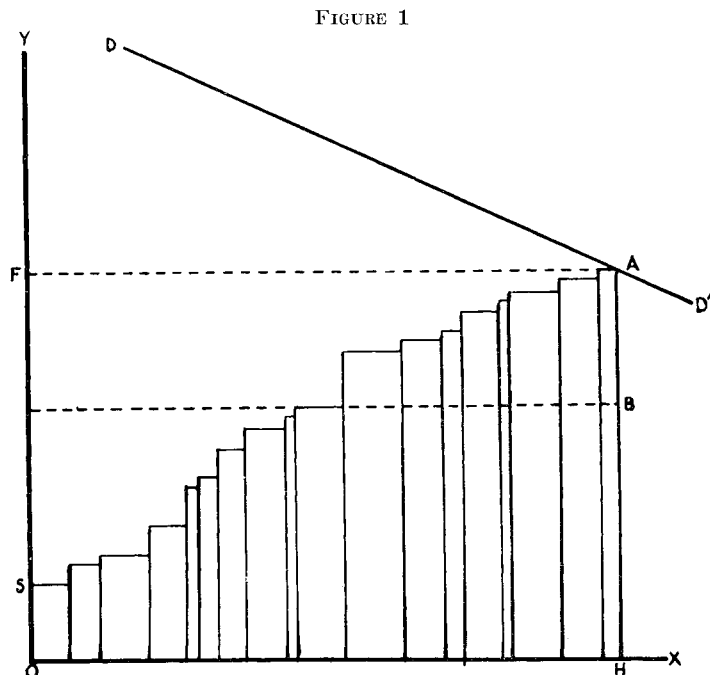
The examination of the effect of horizontal integration upon the price and output of an industry will be simplified by a division of the analysis into three parts. The first part will consider the theory of rent as it applies to unintegrated and to horizontally integrated industries. The second part will consider the effect of a change in the total output of an industry upon the costs and rents of different producers in that industry. The final part will compare the equi-



librium points for integrated producers and for horizontally integrated producers with (a) constant costs, (b) increasing costs, and (c) decreasing costs.

*The theory of rent and horizontal integration*

In an unintegrated industry made up of many independent producers, each producer would operate at the point where his marginal cost equaled the current market price in the industry, since the demand curve for the individual producer would be horizontal. It will be useful for this analysis to define and isolate the competitive rent arising in such a situation. The particular



expense curve of Marshallian analysis is pertinent to this exercise.<sup>1</sup> Marshall's curve is shown in figure 1.

As Marshall points out, this curve "is not a true supply curve adapted to the conditions of the world in which we live; but it has properties which are often erroneously contributed to such a curve." The quantity of the commodity is measured along OX and the price of the commodity along OY. The amount of the commodity currently being produced is indicated by OH and the individual blocks from point S to point A show the gradation from low-cost to high-cost producers. For convenience of presentation, producers possessing differential advantages are arranged in descending order from left to right so that the particular expenses of different producers rise as one moves from left to right.

Taussig used the same concept of particular expenses for analyzing the relative cost positions of different plants.<sup>2</sup> In examining the conditions found in a number of different industries it was his observation that "the same phenomena commanded attention; namely, that of marked differences in cost for different producers—a gradual shading from low-cost producers at one extreme to high-cost producers at the other".

<sup>1</sup> Alfred Marshall, "Principles of Economics," 8th ed., app. H, par. 4, p. 810, footnote 2. The particular expenses curve shown by Marshall's fig. 39 is somewhat inconsistent with Marshall's own definition. In fig. 39 the particular expenses curve SS' is drawn in the same manner as a supply curve, crossing the demand curve and extending beyond point H. Since the particular expenses curve represents an array of costs of producing an amount H only, it cannot logically extend beyond point H.

<sup>2</sup> F. W. Taussig, "Price Fixing as Seen by a Price Fixer," Quarterly Journal of Economics, vol. 33, February 1919, p. 218.

Figure 1 is relevant only when the industry as a whole is operating at the level of output OH. The particular expenses curve cannot be used to calculate the amount of output which would be produced at different prices; this is the function of an ordinary supply curve. An ordinary supply curve, on the other hand, does not reveal the cost structure of the industry at any given level of output.

Marshall uses the particular expenses curve to derive a measure of producers' surplus and rent. If the industry is operating at the level of output OH the demand curve DD' must pass through point A. Price will be OF, and Marshall considered the aggregate rent in the industry to be shown by the area SAF. This area is of course the sum of the individual producers' surpluses, which Marshall defined as synonymous with entrepreneurial rent.

It is somewhat difficult to understand the exact meaning of this producers' surplus or aggregate rent as defined by Marshall unless certain modifications are made. For any given producer the cost indicated by his position on the particular expenses curve represents the average per unit cost which that producer has to pay to achieve his chosen level of output. A question can be raised as to why any particular producer's costs should be lower than the marginal producer's cost. Marshall's only answer is that the producer in question may own some of the factors which yield the differential advantage. In the traditional theory of rent, producers will bid competitively for the factors of production in such a way that every factor possessing a differential advantage will receive a rent equal to this differential advantage, and the particular expenses curve would be horizontal with the average unit costs of all producers identical. Marshall obtained his particular expenses curve by assuming that some of the factors of production are owned or controlled by the producers so that the rent which normally would accrue to the factors would accrue to the producers instead. The magnitude of this producers' rent figure obviously would depend under these circumstances upon the proportion of the factors of production owned by the producers, so that the aggregate producers' rent would be determined solely by the system of ownership and control. If all the factors of production pass through the market where producers would have to bid competitively for them, aggregate producers' rent would be zero.

To develop a definition of rent which will be related to the operation of a particular industry and yet be independent of the structure of ownership of the factors of production, it is necessary to consider a somewhat different concept of production costs. From the point of view of the industry as a whole, the cost of production which is relevant is the cost of attracting factors into the industry, or in elementary economics terms, the opportunity cost which must be met to attract factors into this particular industry. Any factor receiving a payment in excess of its opportunity cost in other industries is in fact receiving intraindustry rent caused by the bidding up of the factor price by the competition of producers within this specific industry. Relating this concept to the particular expenses curve in figure 1, it would be necessary to determine

for each plant how much the factors employed by that plant would have to be paid to prevent them from being bid away by other industries. A curve drawn on this basis might well be lower than Marshall's curve; this would mean that the amounts which would have to be paid to the factors to keep them in the industry were less than those shown by the curve SA, and intraindustry rent accruing to the factors of production would be greater than the aggregate rent described by Marshall. On the other hand, it is also possible that the amounts which would have to be paid to the factors would be in excess of those amounts shown by the curve SA, so that Marshallian rent received by the producers would contain not only intraindustry rent but also some inter-industry rent.<sup>3</sup> In the following analysis, the particular expenses curve will be employed in the sense of the curve describing the amounts necessary to attract the factors of production into this industry. The amounts received by the factors or producers in excess of this will be termed intraindustry rent. Aggregate intraindustry rent would then be equal to the area SAF in figure 1.

Making use of this concept of the particular expenses curve, it is now possible to compare the costs applicable for a group of unintegrated plants with those which a horizontally integrated industry would face. The traditional theory of pure competition states that all rent will accrue to the factors of production, so that if there is competition among producers for the factors of production all producers will have to pay identical costs. The average cost of each of them will be equal to the cost of producing the marginal unit of output of the industry, that is, HA in figure 1. In a horizontally integrated industry, however, there will be no competitive bidding for the factors of production within the industry. It will only be necessary to pay the factors of production enough to attract them away from other industries. The factors of production in an integrated industry will thus not receive the intraindustry rent, and the average cost of hiring these factors of production for the whole industry would be HB in figure 1, rather than HA. In other words, if there are a large number of independent producers in an industry they will bid competitively against each other for the factors of production with the result that what they will pay for the factors will include intraindustry rent, whereas in an integrated industry no such competitive bidding will take place.

#### *The effect of output changes on costs and rents*

The second part of this analysis involves the consideration of how the costs and rents of unintegrated and horizontally integrated plants will compare with each other when there are changes in the scale of output of the industry. Using the particular expenses curve, it is impossible to analyze both the differential cost of producing the marginal units, and the effects of the change in the scale of output on the costs of producing premarginal units of output. Three possibilities are illustrated in figure 2.

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<sup>3</sup> Interindustry rent would exist whenever a factor of production was receiving more than was necessary to call it into use. The bidding of different industries for the use of the factor could create a payment in excess of the factor's supply price.

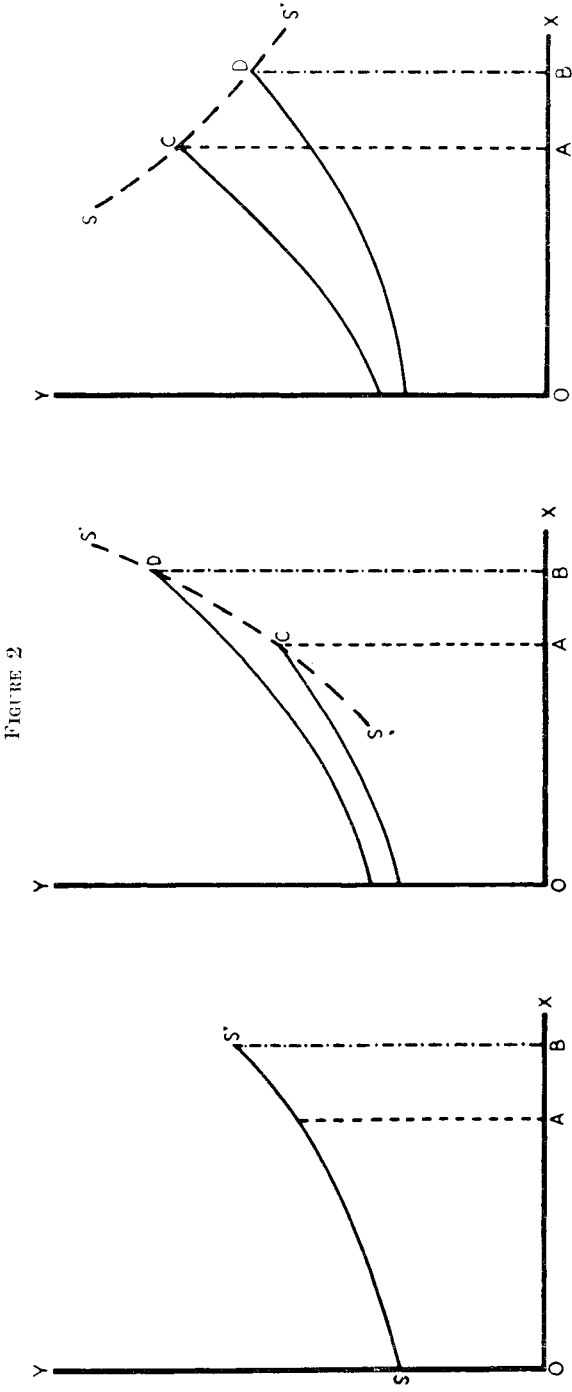


FIGURE 2

Figure 2a shows a case in which the increase in output from OA to OB has resulted in an increased cost for producing the additional increment of output AB, but has left unchanged the costs of the plants which would be producing if total output were OA. No economies of scale for the industry as a whole have resulted from the increased output, nor has the price of the factors used in producing OA been bid up by this industry competing with other industries for additional factors of production. Under such conditions, the supply curve for the unintegrated industry and the marginal cost curve for the horizontally integrated industry will both coincide with the particular expenses curve.

Figure 2b shows a case in which the increase in output from OA to OB increases the costs of the plants which would be producing if total output were OA. This can occur when the increased use of certain factors by this industry requires bidding up their price in order to attract them away from other industries. For the unintegrated plants in this case, the conventional supply curve will pass through points C and D. For the horizontally integrated plants, however, marginal cost will lie above the path traced by the conventional supply curve. The supply curve for an industry made up of individual producers will be lower than the marginal cost curve which is taken into account by an integrated set of plants, since each decentralized producer will consider only the direct marginal costs of production and will omit from his calculations the effect with the increase in output will have upon the costs of other firms in producing the preceding units of output.

Figure 2c, finally, shows a case in which the increase in output from OA to OB results in lower costs for the plants which would be producing if total output were OA. This can occur as a result of economies of scale. From the point of view of this industry, these economies are external. The conventional supply curve for an unintegrated industry will again pass through points C and D, but this time the marginal cost curve for a horizontally integrated industry will lie below the conventional supply curve. Such a situation could occur if components or parts used by this industry are produced under conditions of decreasing costs. In the unintegrated case an individual producer's marginal cost will reflect the inputs valued at their market prices. In the case of horizontally integrated plants marginal cost will reflect the inputs in terms of their marginal cost to the industry.

#### *The effect of horizontal integration on prices and output*

The final part of this analysis involves examining the effect of these considerations upon the relative price and output equilibrium points which will be reached with unintegrated and with horizontally integrated groups of plants. To cover all possibilities it is again necessary to consider the cases of constant, increasing, and decreasing costs.

Constant costs with changes in the scale of output can result from two different types of situation. In the first place, they will result when there is no difference in the relative efficiency of plants and no increase in any costs with changes in the scale of output. This case is shown in figure 3a. An unintegrated industry, in this case, would produce at point A, with price  $P_a$ , and a horizontally integrated industry would produce at a lower output, B, with a corresponding higher price,  $P_b$ . This is basically the case upon which the traditional value theory result is based. In the second place, constant costs for an industry may result from the exact balancing of external economies of scale and increased costs of marginal units. Such a situation is shown in figure 3b. An unintegrated industry would produce at point A with price  $P_a$ , and a horizontally integrated industry would produce at point B with price  $P_b$ . Whether or not horizontal integration would result in the greater output and lower price shown here would depend upon the elasticity of demand and the importance of the external economies.

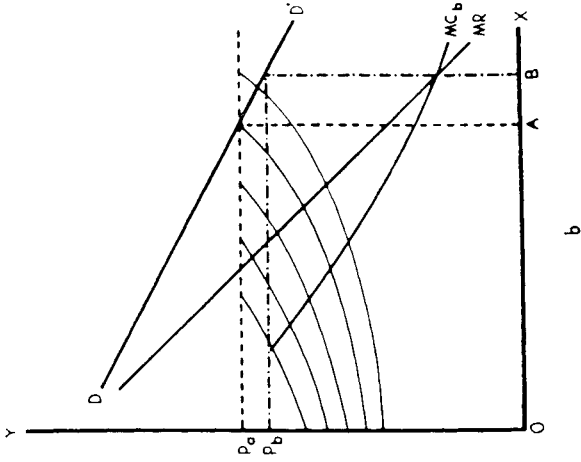
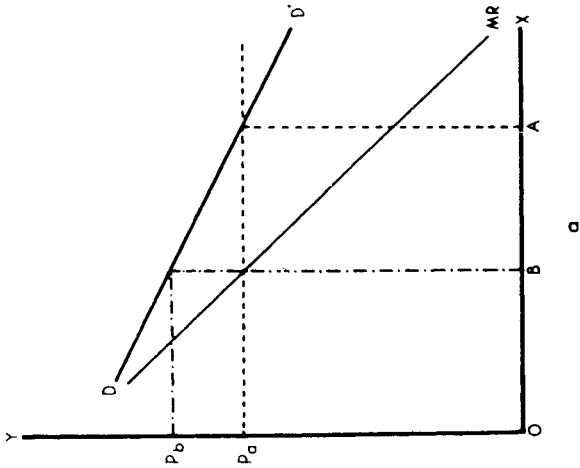
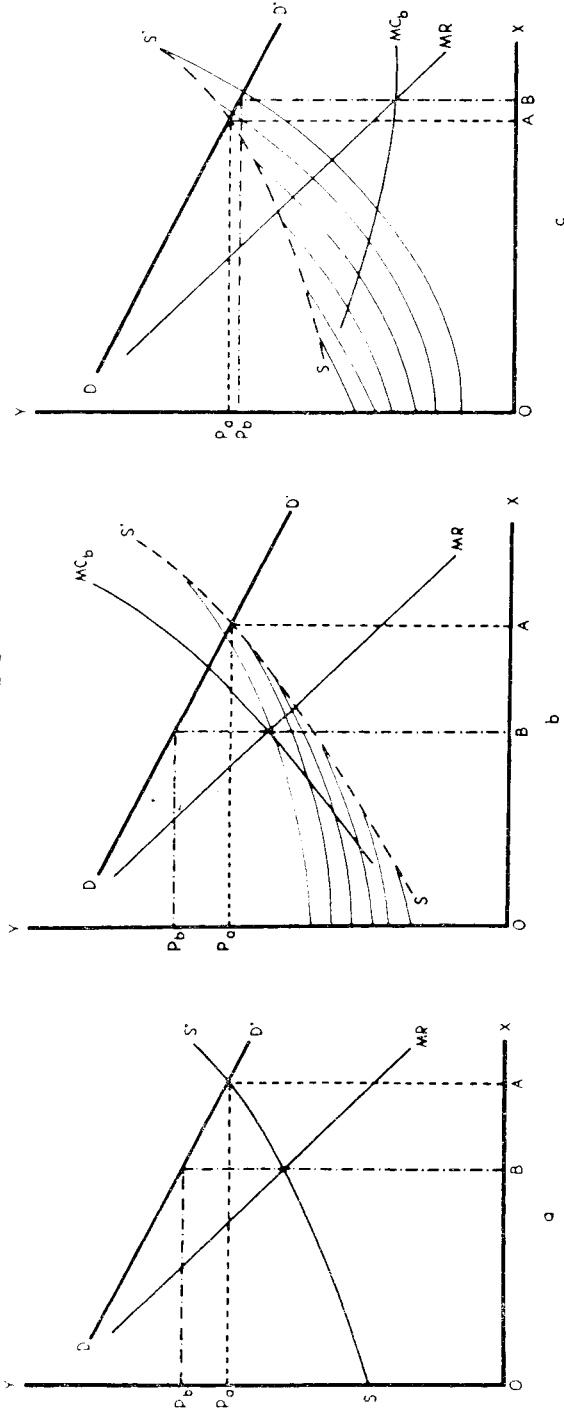


FIGURE 3



Increasing costs with changes in the scale of output can result from three different types of situation. These are shown in figure 4. In the first place (fig. 4a), increasing cost occurs simply as a result of the increased cost of producing the marginal units of output. The scale of output does not affect the cost of producing the premarginal units of output. The equilibrium output of an unintegrated industry in this case will be at point A, with price  $P_a$ . For the horizontally integrated industry, equilibrium output will be lower, at point B, with corresponding higher price  $P_b$ . Secondly (fig. 4b), increasing costs may result not only from the increased cost of the marginal units, but also because the prices of the factors of production going into the premarginal units of production are bid up as the scale of output is increased. In this case the gap between the equilibrium outputs of unintegrated and horizontally integrated industries is increased. The horizontally integrated industry should take into account in its computation of marginal cost the increased prices of the factors of production which will occur with an increase in output. Thirdly (fig. 4c), it is possible that an increasing supply curve for an unintegrated group of plants would correspond to a declining marginal cost curve for the same group of plants if they were horizontally integrated. Such a situation would arise when external economies of scale more than offset the effect of the increased cost of the marginal units of production. The horizontally integrated industry might then have an equilibrium output larger than that of the unintegrated industry, with a lower price.

FIGURE 4





Decreasing costs with increases in the scale of output arise when the external economies of scale more than outweigh the increased costs of incremental production. Figure 5 shows this situation. Figure 5a relates to the case where all producers have uniform costs and there is no intraindustry rent. In this case, the horizontally integrated industry will produce at a lower output and higher price than will the unintegrated industry as long as the demand curve is above the curve  $SS'$ . If the demand curve is tangent to the curve  $SS'$ , the same point would be reached under unintegrated or integrated control. Figure 5b relates to the case in which there are differences in costs among producers, but the external economies of scale are such that the whole particular expenses curve moves downward. In this case, in which intraindustry rent would exist with unintegrated control, the result is somewhat different. It is quite possible that a horizontally integrated industry will produce more at a lower price, as in the illustration given here. The intraindustry rent that would arise in the unintegrated situation may be less than the producers' surplus earned in the horizontally integrated situation. Finally, figure 5c illustrates a situation in which an unintegrated industry could not produce at all, yet the horizontally integrated group not only could produce, but would obtain a substantial producers' surplus.

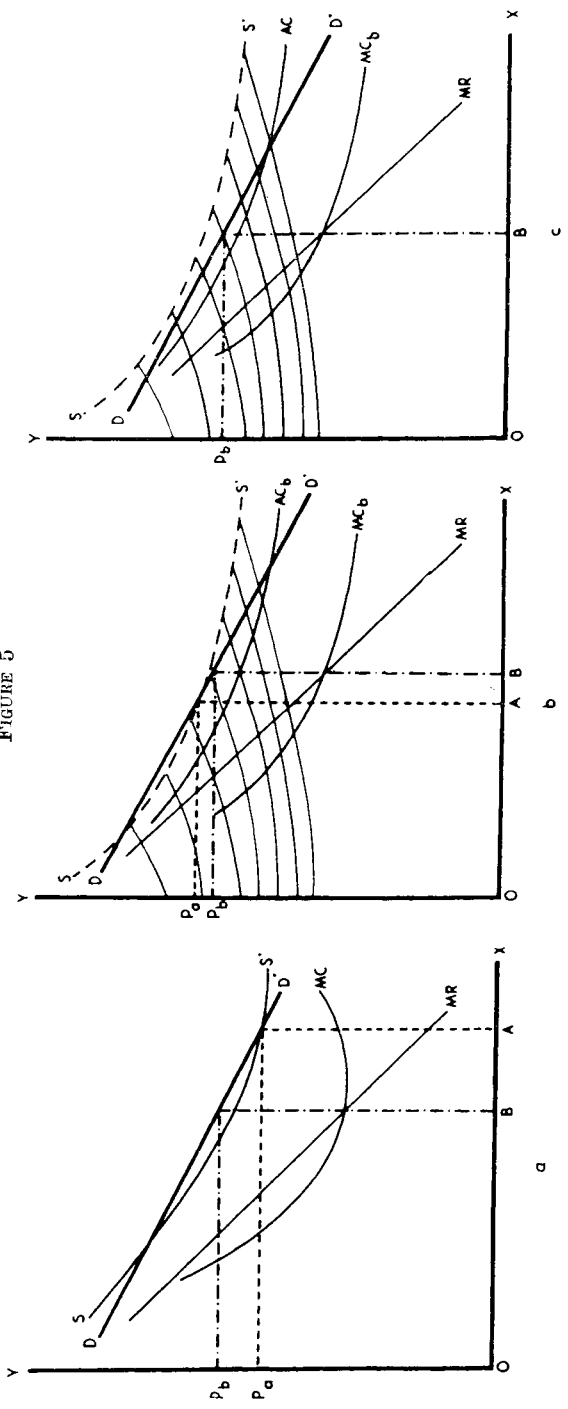
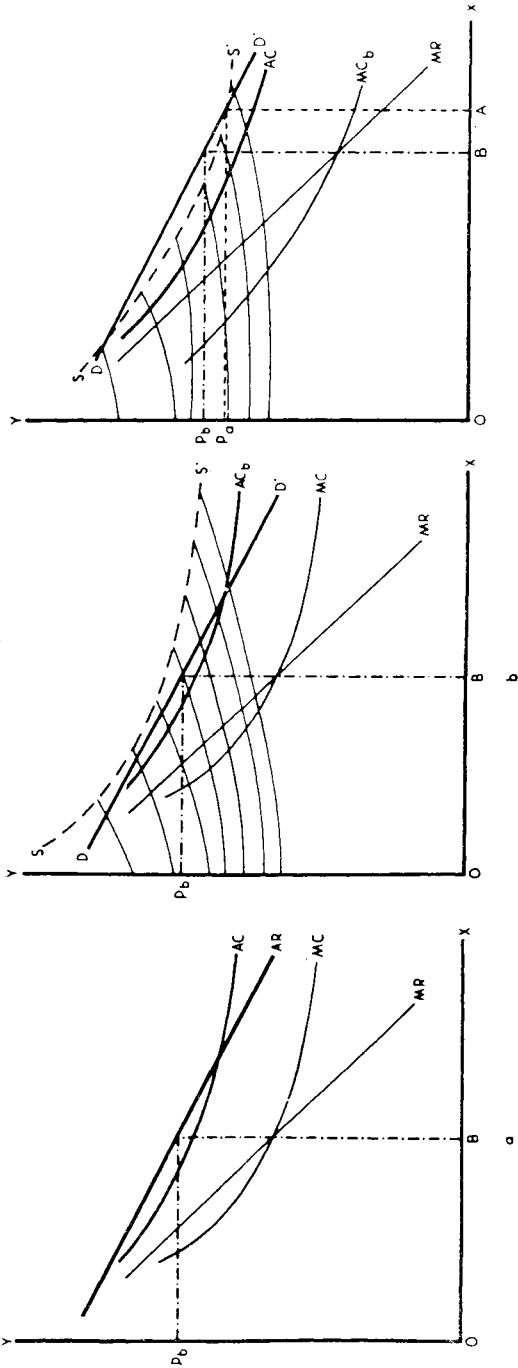


FIGURE 5

The traditional analysis of the effects of integration, as it appears on the textbook level, has usually been based on the special cases shown in figures 3a and 4a. The conclusion drawn from these special cases, however, tends to be generalized as an economic principle applicable to all situations. This generalization is all the more paradoxical since the same textbooks usually present a theory of the firm which accepts as characteristic of many sectors of the economy the long-run envelope curve with declining average cost, coupled with U-shaped short-run average-cost curves, and for these cost conditions the traditional conclusion about horizontal integration is not correct. This inherent contradiction can best be illustrated by investigating the effect of decentralizing a single firm into many independently controlled units, starting from the cost curves conventionally used to portray the individual monopolistic firm.

Figure 6a shows the traditional long-run cost curve and the point of equilibrium for a product being produced under a single control. The question to be answered is what the output of this particular product would be if it were produced with decentralized control and competitive organization. Under the assumptions made at the beginning of this article (i.e., that the demand for the product will not

FIGURE 6



change and that the average long-run costs shown in figure 6a represent the average cost of attracting the factors into this industry and they will not change) it is possible to show what the necessary result of the decentralizing process would be. Figure 6b shows a set of particular expenses curves which might exist if the cost conditions shown in figure 6a are translated into those which would result in a horizontally unintegrated industry. What before were the costs for the single producer now become the basis of the costs for the whole unintegrated industry. The particular expenses curves will cross the average cost curve, and the curve  $SS'$  will be the supply curve for the unintegrated industry. Wherever any intraindustry rent arises, the curve  $SS'$  will be above the long-run average-cost curve of the individual firm. In the special case where there is no intraindustry rent, the two curves would coincide. The curve  $SS'$  could never lie below the integrated firm's long-run average-cost curve. It is even quite possible that the curve  $SS'$  would lie above the demand curve, as shown in figure 6b, indicating that the costs of the unintegrated industry would be such that they would require a price higher than consumers would be willing to pay for any output at all. In this case the integrated industry could produce profitably, but the unintegrated industry could not. Thus it is necessary to show that a cost situation such as that shown in figure 6c exists before it can be argued that breaking the industry up into unintegrated units would result in increased output at a lower price. Wherever producers' surplus is less than intraindustry rent with an unintegrated organization, a single integrated firm will produce at a price lower than that which an unintegrated group of plants could reach. It is even possible that the single firm may produce at a lower price even though its producer's surplus is greater than the intraindustry rent of the unintegrated producers. This situation has already been discussed on page 13.

#### VERTICAL INTEGRATION

Although value theory has generally confined itself to considering the problems of horizontal integration, antitrust policy and Government regulation have also had to be concerned with problems of vertical integration. One producer may be said to be vertically related to a second producer if he provides products which are used as inputs by the second producer; or conversely, if he buys products from the second producer, which he uses as inputs in his own production process. An industry as a whole, for the purpose of examining the effect of vertical integration, can be conceived of as one large productive undertaking which purchases raw materials from some other industries, processes these materials in a number of plants at various stages of production, and finally turns out a product which is sold by the plant at the last stage of production. The product of the industry as a whole thus becomes embodied in the output of the plant at the final stage, and the price charged and the amount produced by this plant can be considered to be the price and output for the product produced by the industry as a whole. In examining the effect of vertical integration upon such a group of plants, therefore, it will be necessary to compare the price and output of this final product under conditions of (a) many individually controlled plants and (b) the same plants under a single control. Since demand for the industry is assumed to be unrelated to the form of industrial organization, the marginal revenue curve of the integrated industry and of the final plant of the unintegrated industry will be identical. It is, therefore, necessary to consider only the marginal cost curves which would result in the two cases.

For the unintegrated case, the costs of the final stage plant are dependent upon the selling prices of the plants at the previous stages of production. The selling price of output produced by any lower stage of production becomes the cost of the input of goods and materials purchased by the next higher stage of production. The marginal cost of the final plant will be a function of the selling prices of each of the previous stages plus the marginal cost of additional factors used in the final stage of production. In contrast, all plants in the industry were integrated into a single decisionmaking unit, the marginal cost of production would equal the marginal cost of factors used by each stage in production.<sup>4</sup> Marginal cost for the integrated industry would thus equal marginal cost of the final stage of the unintegrated industry only if in the unintegrated case every plant at each stage of production were to sell its output at a price equal to its

<sup>4</sup> It is assumed here that integration takes the form of rational costing within the firm, and that there is no decentralization of decisionmaking such as occurs when "market costing" (prices above marginal cost) is in use to establish transfer prices between plants.

marginal cost. If any plant prior to the final stage charged a price higher than marginal cost for its output, the marginal cost of the final plant would of necessity be higher than it would be with vertical integration. Such a higher marginal cost curve will intersect the marginal revenue curve at a point further to the left, and the resulting output will be lower and the price higher than would result from an integrated operation.

A group of vertically related but independent plants would operate at the point where their prices equaled marginal cost only in the situation where the demand curve facing each plant was horizontal. In this case vertical integration of the industry would not affect either the price or the output of the industry. If any plant in any stage of production other than the final stage faced a sloped demand curve, the selling price of this stage would exceed marginal cost<sup>5</sup> and vertical integration would result in a lower marginal cost with consequent lower price and greater output, and also more profit.

Thus vertical integration will never result in a higher price and lower output than would occur with an unintegrated organization of the industry. Where all producers at lower stages of production have horizontal demand curves or are practicing perfect price discrimination, the price and output levels for vertically integrated and unintegrated industries will be identical. For all other situations a vertically integrated industry will operate at a lower price and greater output than an unintegrated industry.

#### *Conclusion*

With regard to horizontal integration, the question which has been investigated is whether a given product can be produced at lower cost with an industrial organization involving a single producer or many producers. The answer in any particular case will depend upon the demand and cost conditions attaching to that particular case. But in any event it should be borne in mind that the average cost curves drawn for a single firm industry are in reality the industry average cost curves, without taking into account any intraindustry rent. To arrive at a valid comparison of the single-firm organization with the many-firm organization, it is therefore necessary to consider the amount of intraindustry rent which would arise as a consequence of the decentralization of control in the industry. In practice some intraindustry rent would exist in a decentralize industry. Therefore, a single-firm industry operating at the point of tangency of its average cost and average revenue curves will always be producing at a lower selling price than could be achieved with decentralization.

With regard to vertical integration, investigation of the same question shows that under the assumptions of similar demand and cost conditions, a vertically integrated industry will never arrive at higher prices and lower output than an unintegrated industry. Whenever plants which have a vertical relation to each other are not all selling at their marginal costs of production, vertical integration would yield lower prices and greater output than those prevailing with decentralization.

The CHAIRMAN. Thank you very much.  
Mr. Weston.

#### STATEMENT OF J. FREDERICK WESTON, UNIVERSITY OF CALIFORNIA, LOS ANGELES, CALIF.

Mr. WESTON. Since my views differ from those which have just been expressed in varying degrees, I am going to depart from my prepared paper and begin by addressing my remarks directly to those which have just now been expressed.

I want to emphasize that I have a very high regard for my three colleagues and am disagreeing with their ideas, and not with them personally.

<sup>5</sup> If the individual plants in the unintegrated case should practice price discrimination in such a manner that they would all reach a point where the price of the marginal unit sold was equal to marginal cost (regardless of the prices of the premarginal units) it would be possible for the marginal cost of the final stage plant to be exactly equal to that which would result from vertical integration.

With regard to the theory of administered prices at the theoretical level, it rests on two bases:

One, the theory of spontaneous collusion—that is, a small number of producers recognize that actions of one will be known to the others and therefore prices are not reduced because they know that price cuts will be matched.

The second part of the theory of administered pricing is that because firms have target prices, obviously they must have control over the marketplace.

With regard to spontaneous collusion, I think that the consequence of this is that you have nonprice competition rather than price competition. You have quality competition, service competition. You have competition in all areas other than price because price competition can so easily be matched.

This is one of the reasons why the price indexes overstate the degree or price rise, because the emphasis in oligopolistic industries is on quality competition rather than price competition.

With regard to the argument that target pricing is evidence of market control, I think this theory has to confront a certain number of facts. We may take as our facts the data developed by Mr. Lanzillotti himself and presented in the compendium of papers on relationship of prices to economic stability and growth before this committee, March 31, 1948, page 445.

For example, among the list of firms for which he has presented profit targets, General Electric Co. is said to have a profit target of 20 percent after taxes for the period 1947–55.

Senator BUSH. What is that 20 percent of? Twenty percent of sales or 20 percent return on investment?

Mr. WESTON. Return on investment.

United States Steel, by contrast, had a profit target of 8 percent return on investment, which is substantially equivalent to net worth, after taxes.

If the market power of these explains their target pricing, why is it that one decides on a target of 20 percent and another decides on a target of 8 percent?

Furthermore, the results are different. General Electric experienced a 21.4 percent average return, according to this data, and United States Steel a 10.3 percent return on investment during this period under discussion.

It is interesting to note further, that of the companies listed, the one that seemed to have the lowest profit target was in the industry in which, according to the chart on page 7 of Mr. Lanzillotti's testimony of today, was responsible for the highest price increase over the period 1953–59.

In other words, what I am saying is that we find different targets. If the implication that the degree of control explains the degree of price rise, why is it that firms in the industries with lowest targets were the industries in which the largest price rises took place?

Actually, when you talk to even small- and medium-sized firms about the pricemaking process superficially it appears that even the small firm has control over prices because they have target pricing just as the firms in concentrated industries do. But when you analyze

the process, it doesn't really represent control so much as a system of reasoning that goes something like this:

They look at the price as set by market forces. They look at the product market that is open to them. Then they are confronted with the question, Can we produce at costs and with investment commitments such that the margin between prices, as given by market forces, and costs, reflecting the way we run our businesses, will give us a satisfactory return on investment? If we can't get a satisfactory return on investment in certain product lines, then we try to find product lines where we can get this kind of return on investment.

In small firms, if they find they can't find any product lines that give satisfactory returns on investment, these fellows then go to work for somebody else and cease to be entrepreneurs.

What I am suggesting is that target rate of return pricing reflects the operation of competitive market forces. When you look at the data of price rises and then relates these price rises to one variable, the existence of a certain minimum level of concentration—notice this distinction, not a positive correlation between the degree of concentration in industries and the amount of price rises—in certain industries grouped as concentrated industry's price rises over a certain period of time were relatively higher than in industries with less concentration.

What you have here is a statistical analysis in which only two variables are considered. There are a large number of other variables that are involved.

In addition to price changes and concentration, you have variables such as wage increases, you have the demand situations in terms of general level of demand, but also specific in certain industries, and also whether demand increases were sharp or whether they were slow and gradual. You have productivity factors and you have profit margins. All of these are other variables.

It turns out when you examine the data that you can equally well explain the degree of price rise by changes in output and productivity that were taking place at the same time. In this connection, the point that I want to emphasize is that the reason for increases in prices in his period, among certain industries such as steel, for example, reflect the difference in the growth prospects in this industry in this period compared to the thirties.

In the thirties the steel industry was operating far below capacity. They were operating at losses. The steel industry in their pricing expectations which led to certain investment decisions did not raise their sights with regard to demand prospects fast enough so that the demand supply pressure made for higher prices in the postwar period, whether they had administered pricing or not.

The danger of cutting off price increases in an industry such as this is the danger of removing incentives for stimulating capacity increases when needed because demand prospects and growth prospects in the industry change. So the danger of this kind of emphasis is that by your action you cut off growth in these industries, which is just exactly the kind of thinking that you are trying to avoid.

Two more points briefly and then I will close. Mr. Lerner stated, in emphasizing aggregate demand that we fail to observe that competitive conditions didn't really exist in industry. I think his analysis



fails to take into account that even in competitive industries you do have different elasticities of demand and supply at the industry level.

Furthermore, in explaining the behavior of concentrated industries, there is a failure to recognize that there are differences in price elasticities, but more important, and this is strange when the emphasis is shifted to aggregate demand, a failure to recognize that there are differences in income elasticities or income sensitivity in these different industries.

So in terms of what makes sense even on the part of someone who is administering prices in these industries, given that income sensitivity in the durable goods industries is high, to attempt to deal with cyclical fluctuations in demand by price changes, when price elasticities are relatively low and income sensitivities are relatively high, just doesn't make sense.

Mr. LERNER. I wonder if you could amplify. I didn't get the point you were making.

Mr. WESTON. My point is this: Given the existence of industries in which you have a high degree of concentration and in which you have price policies, when you have an incipient decline in demand in these industries, it doesn't make sense to attempt to meet this by lowering price when price elasticity is relatively low and income sensitivity is very high. That is, to attempt to offset, for United States Steel let us say, the decline in the profits by lowering prices would have just resulted in larger losses, because the only remedy is a restoration of demand in the industry.

Let us say with a 10-percent incipient decline in the gross national product or disposable personal income, the incipient decline of demand for goods like steel is likely to be greater than 10 percent.

Mr. LERNER. You are saying it didn't pay the steel people to lower their price?

Mr. WESTON. Yes.

Mr. LERNER. Did I say it did?

You are saying that the United States Steel didn't reduce their price because it didn't pay them to. They wouldn't sell enough to make it worth their while. I don't know how this affects what I say.

Mr. WESTON. In a situation like this, capacity in an industry would be far above sales and in circumstances of this kind your rule would call for a price decrease.

Mr. LERNER. Exactly.

I am saying we need this regulation because it doesn't pay United States Steel to behave, that is desirable for the society that it should behave. If we have excess capacity and people could use steel, it doesn't pay, I agree with you, United States Steel to reduce their price because they wouldn't sell enough more to make it worth their while. The demand is inelastic. They don't do it. I don't blame them. I would also not do it.

I would say it is, therefore, necessary to have regulations to make them do it in the way they would do it if they were in a competitive situation. This is why you need the regulation.

Mr. WESTON. My answer to this would be that since their problem is a deficiency of aggregate demand, the appropriate policy on the part of Government is from the aggregate demand side. The consequence of your rule simply would be that since you are in essence

confiscating investment in the steel industry, their response would be the following: Since your rule would provide that they can get price increases when their sales are greater than 80 percent of capacity, then their policy should be always to increase capacity very slowly so that always they will be in the realm where they can justify price increases.

It would only be a very great decline in aggregate demand that would result in sales falling below 80 percent of capacity. As a consequence of your rule, therefore, it would be self-defeating because, recognizing your rule, investment behavior in the steel industry would adjust to it, and I think the failure of the rule would be a consequence of the fact that you are trying to deal with income sensitivity problems, with aggregate demand problems, through specific pricing policies. This is the fundamental weakness of it.

MR. LERNER. I would disagree with your explanation of what would happen and its social relevance, but I now see your point. I don't know whether you would like me to argue on this point now or leave it to later.

The CHAIRMAN. Have you finished, Mr. Weston?

MR. WESTON. I was going to make the final point by way of emphasis. In the realm of policy prescription, even if you attempted to make less concentrated the concentrated industries, I don't think this would have very much effect on longrun price behavior.

When you look at industry, you find some industries are relatively high degrees of concentration and others less. This raises the question, Why?

Why is it in the industrial machinery industry you rarely find firms with sales greater than \$100 million? You find a large number of firms in the industrial machinery industry, a very large number, and no firm accounts for a high percentage of industry output.

Why is it that you find industries with high degrees of concentration?

Again I submit that there are fundamental industry characteristics in terms of economies of scale, primarily at the research and finance and general corporate levels, that explain differences in the degree of concentration among industries.

If we attempt to deal with this price problem through the concentration route, although there are good reasons for attempting to minimize increases of concentration in industry for other reasons. If you attempt to deal with the problem as Mr. Lerner suggests, I think there is real danger that you cut off incentives for achieving the kind of growth that we want for our economy.

This suggests to me that the real danger of the Russians passing us is not so much in output, but in passing us in the use of price incentives as we go in the direction of retreat from the use of price incentives. This is the route, it seems to me, by which they would surpass us rather than surpass us otherwise.

Senator BRUSH. You mean in world markets?

MR. WESTON. Both the world markets and internal efficiency of the economy. That is, as we retreat from the use of the automatic price system, I think we are giving up one of the most effective forces in our economy.

The CHAIRMAN. This discussion between the group represented by Mr. Lanzilotti and the group represented by Mr. Weston as to whether

there is any significance in the fact that industries in group 1 show much larger price increase than industries in group 3 reminds me of the dispute going on in the field of cancer research.

Dr. Graham, of St. Louis, and others produced evidence to indicate that the incidence of lung cancer was much greater amongst chain smokers than amongst those who were not chain smokers.

I admit I formed a little society known as Chain Smokers Anonymous. But the tobacco industry has protested that this is a mere statistical coincidence; that there is no casual connection that has been established. I think it is true that a casual connection between smoking a large number of cigarettes and lung cancer has not been immediately established.

But I wonder what you would say about the evidence that Mr. Lanzilotti produces in his tables 1 and 2, Mr. Weston, which certainly seem to me that the industries which have high concentration have had appreciable increases in prices, and this is particularly true from 1955 to 1957. Have these been industries where production has increased by more than the average?

Mr. WESTON. I would like to comment on that.

In the first place, you will note that one of the industries in which prices declined was the textiles industry. The textile industry is one in which you have had an increase in concentration during this period through mergers.

The CHAIRMAN. But you start from a highly competitive situation.

As I remember, roughly, there were a thousand textile mills originally, and it was an industry with a high degree of competition. Granted that there have been mergers, has this affected really the fundamentally competitive nature of the industry?

Mr. WESTON. No; but much more important than the number of firms in the industry has been the fact that the textile industry has been depressed because of the rise of synthetics.

If you had only one firm in the textile business or two firms in the textile business, you would have had price weakness in the textile business because of the depressed conditions in the industry as a whole. Interestingly enough in this connection also is that while wages increased in the textile industry they didn't increase to the degree that they did in other industries, again reflecting not competitive conditions in the textile industry so much as the depressed conditions in the textile industry. So that the textile industry, farm products, have been industries in which demand conditions have been relatively depressed.

Furthermore, in a table which I presented in the previous compendium for the period 1949-56, I did analyze industries, taking the average level of concentration of employment, as well as percent increase in production, percent increase in hourly earnings, percent increases in prices, and percent increases in net profits to sales.

It is true that the industries in which the largest price increases took place were the industries in which demand increases were relatively large.

The CHAIRMAN. Is this true of the period from 1955 to 1959.

Mr. WESTON. In preparation for my testimony today, I developed the data for the period 1949-58. I get substantially the same results. The results are not 100-percent consistent because there are a number

of variables operating here. The best explanatory factor really goes back to a relatively simple demand-supply curve analysis.

When you get a demand shift that is large, you tend to get a price increase that is relatively large unless you get a large increase in productivity, which in technical analysis would mean that the supply curve did not remain in the same place, but shifted downward.

Economic theory would say in those circumstances that the price increase would be somewhat smaller. Conceivably you could get a productivity increase large enough or other reductions in cost large enough so you would get a large enough downward shift in supply functions so that the price increase would be moderate or not at all. But the data as I analyze them pretty much are consistent with pretty fundamental demand and supply curve analysis.

The CHAIRMAN. Mr. Lanzillotti.

Mr. LANZILLOTTI. I would like, if I may, reply to some of the comments that Professor Weston has made on my own analysis.

I would also like to say that these are comments on Mr. Weston's analysis and not Mr. Weston personally, who is also a good friend of mine.

By way of introduction, I think all of the panel members have made quite clear that there is not any single cause for increases in the wholesale price index or the retail price index. There is an unevenness in the pace of price advances in different industries at different times. Demand influences may be offsetting cost influences at some times and they may be aggravating them at other times, as I mentioned in my paper. It is particularly when high increasing demand is applied to the administered price that we get an even greater increase in prices.

But let me reply to specific criticisms which Professor Weston has raised.

I gather he has three main criticisms of my paper. I did not catch the third one clearly, but I will try to answer them in turn, Mr. Chairman.

(1) First, Mr. Weston stated that target return pricing must meet facts, Mr. Chairman, as presented in these tables. In particular, Mr. Weston raises a question about the profit target of United States Steel as against that of General Electric. Why did one company decide on a target of 8 percent and the other one on 20 percent?

To begin with, this is a profit target and not a price target. The target profit is the "index number," if I might use that term, for the price structure of the company. Of course, there will be considerations in different divisions of the companies regarding individual prices (that is, wage costs, desire to promote use of products, and so forth), as management people have themselves indicated to me.

In some branches of a company, profit targets as high as 100 percent of the investment will be set to recover in a single year, while in other branches of the company, the profits targets might be quite low because competitive factors do not permit it, or for other reasons. But why does United States Steel take 8 percent and General Electric take 20 percent?

Principally because, given these other considerations, they can do it. One can take 8 percent, one can take 20 percent.

I would also say, by way of United States Steel's target, that there has been a tendency, if you look at the actual profit figures in recent years, for the company to increase its target.

(2) The second question was why United States Steel was responsible for the largest price rises that took place, even though the company had the lowest profit target.

I think, Professor Weston, you are confusing the profit target with price changes. It was precisely because of the reduction in production that United States Steel, I believe, increased their prices proportionately more in order that they could achieve the desired target.

What you are confusing here, is the profit target and the price changes which were decided upon in order to achieve the desired target.

In this same connection, I might add that I think there has been some confusion regarding the sensitivity of demand. I think there is clearly a tendency on the part of firms to move their prices upward, to the range of demand, where demand is "elastic," since that is the "most profitable."

We may disagree that the sensitivity of demand at any given moment of time and given price is low or that it is high. We could argue about that. The point is that producers believe price sensitivity of demand is low. They believe that price changes will not induce much change in customer purchases. They believe this is the case and they act on the basis of their beliefs. These beliefs may be incorrect. Nonetheless, there is a tendency on the part of firms, because of the backward shifts in demand curve—which I believe the panel would agree occur in recession—make the demand sensitivity at the prevailing price less elastic, or less sensitive, than it was before, and this impels them to raise their prices even further to attain the target.

I think one could develop some evidence to substantiate this.

(3) A third point that Professor Weston has raised is that he can explain the price rise in terms of changes in output and productivity. I am not sure of the nature of his criticism here, but as I followed the comment he indicated that price changes in steel reflect growth factors.

My own analysis on the basis of the acquaintance I have with the pricing in the industries and firms mentioned is that there is a tendency for wage levels to be determined by the industries where the profit prospects are the most favorable. I think that here is where one could bring in the demand influences. That is, demand becomes crucial in helping to set the standards for wage increases because they aggravate the price increase even further.

Moreover, in response to the comment that Professor Weston made about this, I would say that the firms, in fact, do justify their price increases on the basis of expansion needs and costs. I think it is rare when the United States Steel Corp. does not explain its price adjustments in terms of the increased wage costs plus the needs of expansion.

You oftentimes hear statements by the president indicating that current prices are based on investment costs of \$100 a ton, whereas today these costs are said to be \$300 a ton; because of this, the companies include in the price decisions the anticipated costs for expansion of steel facilities.

I have taken too much time, Mr. Chairman, but these are some remarks I would make in reply to Professor Weston.

The CHAIRMAN. Congressman Curtis.

Representative CURTIS. I didn't believe that there was much difference of opinion between Mr. Weston's and Mr. Ruggles' presentation, although when Mr. Weston started I thought that it would be otherwise.

Am I in error about that?

I thought your points of view pretty generally coincided.

MR. WESTON. Our diagnoses are quite similar. The point of departure would be in his recommendation for Government special incentives for increasing the flow of investments. I would prefer to have the Government's role be at the aggregate level.

Senator BUSH. What does that mean? Would you explain that?

MR. WESTON. With appropriate monetary and fiscal policy rather than in specific industries, and not attempt to provide special incentives for investment as such through something like accelerated depreciation, because this leads to distortions.

Representative CURTIS. Then I think you and I and Mr. Ruggles can best answer.

I noted he added a little phrase when he was discussing that, and I wrote it down, on this incentive "and present tax system" where he said:

Thus some incentive is required to induce producers to invest under present conditions—

and then added:

and present tax system.

I don't believe that is the kind of special incentive you were thinking of. Quite the contrary, it would mean that the Government would get out of the business of interfering and it would apply to any investment setup, as I understand it.

MR. WESTON. What I was referring to was his statement at the bottom of that page, about three lines from where you were reading:

Investment might indeed be sufficiently sensitive to even moderately accelerated depreciation so that more drastic methods would not have to be employed.

There the implication is that a special incentive such as accelerated depreciation, and then the previous sentence on defining taxable profits.

Representative CURTIS. I might say this: In regard to depreciation I have long felt that the Government has been messing around too much in economic decisions in this area. We would do well if we more or less left it up to business to set up their depreciation schedules in accordance with what the economic facts are rather than these arbitrary setups; rather than a further interference of Government, there should be a reduction here.

MR. RUGGLES. I think what Mr. Weston may be referring to is the idea that steel at one time was given accelerated depreciation in preference to some others. This had not been my intention, that any group would be singled out. As a matter of fact, if we look at our laws on taxes, you find that we have gone a long way toward accelerated depreciation in a great many areas.

Research and development, for example, is written off as a current expense, and in technical jargon you could say this is accelerated.

Representative CURTIS. I now understand you. I could not agree more. As a matter of fact, I might even say this: The more we liberalize depreciation, the more we eliminate the danger and damage done by accelerated depreciation and certificates of necessity which allow the Government to select where it wants the investment to go. I think that this has been one of the most dangerous things that the Federal Government has ever done.

I don't think they know enough to know whether we should channel capital into this field or that. Maybe in an emergency crash program we might want to do it. I would rather do it the other way.

If I may turn now to the difference that I think exists in these papers.

Professor Lerner, the thing I don't understand is this perfectly competitive economy that you describe in the first paragraph on page 2. It seems to me that the real difference is in the definition of what is competition. I think your conception of competition is quite limited, as if it occurs just between companies that are selling, say, steel. I notice that a great deal of the competition in our system today is between products. I would like to give an illustration.

I remember about 3 years ago making a speech before my local housing industry, and I told them I thought they had better start advertising and competing with automobile salesmen. There was the area where they could best do their work. Incidentally, they did this, and in our area they made some real inroads. So the competition can be between houses and automobiles.

I would say the steel industry has to watch out for competition from substitutes and they have to watch out for competition from abroad.

Mr. LERNER. I could not agree more.

Representative CURTIS. How do you figure in a perfectly competitive economy any supplier of anything would be able to sell as much as he wanted at the market price without any effort while he would not be able to sell any at all at any higher price?

The reason I don't think that this is a perfectly competitive economy is because if you have real competition, producers are going to be competing for the consumer's dollar. Some people don't like boats. I am not interested in buying a boat and I am not in the market for one. Maybe, by doing a little selling boatmakers might persuade me that I ought to buy a boat.

It seems to me the consumer is a very important factor in our economy today, more so than ever before, because we are approaching what some might refer to as "an economy of plenty" where the consumer does not have to buy many of the things available. He can convert his consuming dollar to an investment dollar instead.

Mr. LERNER. I agree with you on this about 200 percent.

Representative CURTIS. How have I misconstrued your meaning?

Mr. LERNER. I will tell you why I say 200 and not 100 percent. I am going further in exactly the same direction in which you are going.

I will start out by saying we ought not to distinguish between commodities at all. In fact, anything else which can charm a dollar out of your pocket should be considered as the same commodity, which is the same idea you were expressing, and I am in absolute agreement with that.

What I meant by perfect competition is something which seems you have not been contaminated by while I am trying to cure people from it.

Representative CURTIS. I come from a private enterprise system. I have had a lot of personal experience in it.

Mr. LERNER. Pure competition is that which you find in all economics textbooks, which you have not been suffering from as other people. This is a situation in which you don't have to distinguish between different commodities. You are not limiting yourself the way you thought I was to one perfect commodity, but in which there are so many competitors, both in your particular trade and with all sorts of other things which are competing with you, that you are in the same kind of position in which an American farmer is.

He produces a commodity and there is a market price. So many other people are using the same thing or other things which people would buy instead. There is just one price; he can sell as much as he is able to provide. He doesn't have to think about the price. All he can do is to produce more or less and sell it without having any effect on the price.

Representative CURTIS. Take soya beans and the price supports.

Mr. LERNER. Yes. There are several ways in which this can happen.

The way in which the economists are mostly concerned with is that of an imaginary perfectly competitive economy in which there were so many people competing that you could not hope to sell at all if you didn't sell at the going price. This, of course, is an abstraction. It does not occur over a large part of the economy.

Economists have always had trouble in getting this idea across, partly because it was supposed to refer to the whole economy. Its abstractness was not recognized.

Representative CURTIS. Professor, yesterday on the panel discussion, I had occasion to point out that I thought in a perfectly working competitive economy you are going to have a lot of economic deaths. There will be a number of business failures. Isn't that normal and healthy? If you ever had a situation where there were not such failures, would there not be something wrong?

Mr. LERNER. I agree entirely. It is remarkable how I agree.

I want to point out this point.

Representative CURTIS. I emphasized business death. I should also point out the similar importance of birth of new entrants into the business world.

Mr. LERNER. Certainly. That is an essential part of the model of perfect competition. Why I bring it up here is because it seems to me that a great deal of what is being said about our problem of inflation is one which is the result of this kind of writing economics textbooks, which has made many people think about the subject as if you only had perfect competition.

If you had only perfect competition, then the only way in which you can make prices go up is to increase total spending by monetary and fiscal policy, and the moment there was insufficient total spending, prices would go down as they do in farm products. So that insufficient attention having been paid until very recently to the effect on prices by sellers being able to decide what to do has led to the belief



that you need not do anything except increase or decrease money demand and that will cure it.

What I am saying, and Mr. Lanzillotti is spelling out in more detail, is that this is not sufficient. You do not have the conditions which you do have under perfect competition and which I think you can re-establish by the regulations which I really have briefly hinted at here, which would then make it possible for monetary and fiscal policy to do the job of maintaining prosperity without inflation.

Representative CURRIS. I see now where our difference lies, or the difference I have in mind.

I think you have been concentrating on the lack of competition, as I see it, in the area of steel company against steel company, instead of the broader competition that can exist elsewhere. It seems to me there is a tremendous amount of competition in almost all of our economic structure. That doesn't mean that I don't think, as I pointed out yesterday, that there is a great need for further progress in the antitrust field.

In fact, when I was asking about the definition of this term "administered prices," which to me is begging the question almost all the time that it is used, and Senator Douglas gave a definition, why then the Assistant Attorney General on the stand said that such behavior would be a violation of our present laws of antitrust. That I can understand.

I do think there is such a thing as administered price that would violate our laws. But, I cannot quite follow the way the economists have been using the term, because it is almost as if we had no laws to combat it although it was in an area that needed further attention.

Your recommendations indicate that it needs attention beyond that of more adequate antitrust enforcement.

Mr. LERNER. I would say that. I would be sorry to give the impression that I didn't think anything competed with steel other than other steel producers. In fact, I think the limitations, the point Mr. Lanzillotti just made, apply.

Representative CURTIS. I don't know how he conceives that a businessman set up a target price in the first place. In my judgment that is the result of economic factors. It is a result of conditions in the marketplace and their evaluation of it; which means what the competition is in that area.

Mr. LANZILLOTTI. Could I indicate what I mean by the target?

These targets are not some imagination of my own, but rather based on actual case studies of companies.

Representative CURTIS. No, we agree on that.

But you have given me the impression that they sort of make it out of whole cloth and on whatever basis they want. I am saying that they are very carefully considered that they are considered on the basis of evaluations of a lot of economic factors in the marketplace. That is what sets them.

Mr. LANZILLOTTI. Let me see if I can make the definition or the nature of the target somewhat more clear.

Certainly the history of an industry, the growth of concentration, has helped mold the target return. The latter factor particularly has exerted a very definite influence on the targets which these firms set for pricing purposes.

There are a lot of other things that help influence it, also. There is the desire to meet a certain payout on their stock. There is a desire to have a certain amount of liquid capital in order to undertake expansion needs. There is the desire to maintain or increase market share. The companies themselves, if you will note this point, are deciding on the specific target with some consideration given to these other factors.

Representative CURTIS. You say the companies themselves. What are they deciding on the basis of? The competition for investment capital?

Mr. LANZILLOTTI. May I finish, please?

Representative CURTIS. That is the point I want you to elaborate, if you will. I am trying to see where we differ.

Mr. LANZILLOTTI. I will try to elaborate.

These pricing decisions are not made, as I, an economist, would like to see them made, that is, on the basis of impersonal, objective compulsions of the market. These are targets which govern the internal relationships of the company, that is, the various prices and returns which will be expected from different divisions of a company in realizing the general corporate profit target.

Representative CURTIS. Just so I can follow, you say you believe that these decisions are not made on the basis of competition for investment capital, for example, but on just the internal setup of the company. That is where we disagree then.

Mr. LANZILLOTTI. No.

I am saying that the targets that they set are affected by a lot of things, but primarily they are determined by what the company feels it needs and can get.

The point I am emphasizing is that they have good assurance that they can realize the target objective.

Representative CURTIS. It is based on market evaluation, is it not?

Mr. LANZILLOTTI. It is based on something more than that.

Representative CURTIS. What is it?

Mr. LANZILLOTTI. It is based on their experience of being able to attain over time a given amount of return on investment.

Representative CURTIS. That goes back to the marketplace?

Mr. LANZILLOTTI. That reflects, in my opinion and on the basis of the facts, market power, very largely.

Representative CURTIS. But there are important factors other than market power over which they do not have this control. They have to evaluate the investment market. Their competition for investment capital is significant.

Mr. LANZILLOTTI. No, I think there I would disagree with you, sir.

Representative CURTIS. That is what I am trying to find out.

Mr. LANZILLOTTI. These firms of which I am speaking expand largely out of retained earnings.

Representative CURTIS. Even there you are under pressure from stockholders. Having had to sit on the other side of the table to try to figure out prices, I just can't understand this assumption that some of you seem to make that you can make a price up out of whole cloth.

Mr. LANZILLOTTI. I will try the one more time.

As Mr. Lerner has indicated, under a price system where the price system works, the profits will be a residual factor to the firms. I am emphasizing that in the firms under consideration the profits targets are themselves a determination of prices. From the information I have on these firms, costs end up, as a result of pricing rather than cost determining pricing.

This is illustrative of the ability of these companies to administer profits in their own favor.

Mr. WESTON. I would comment on that in this way: In explaining the target previously, Mr. Lanzillotti said there is not a necessary relationship between price and profit here because internally on some products a firm may seek 100 percent return and on other products they may accept a 5 percent return.

This leads me to emphasize precisely the point you have been making, Mr. Curtis, that the determination of whether the company set a 100-percent return or a 5-percent return is fundamentally a reflection of their assessment of market conditions. The reason why a firm like General Electric might have a target of an average 20-percent rate of return on net worth after taxes is that it is in an industry in which there has been a tremendous amount of product innovation and GE has determined to develop new products and to attempt to develop new areas really to reflect Schumpeter's description of economic development.

To be the innovator, to come along with new ideas, gives them a protected market in the sense that they are the innovator and they are protected for a limited period of time. This doesn't give them a monopoly position because the process of creative destruction goes forth, and unless they come along breeding continuously new ideas and new products, their target would never be achieved.

One additional sentence in this regard.

Mr. Lerner misstates the model of a competitive economy. He says: The producer without any effort produces up to the prevailing price and this determines what a situation is. Even in the truly competitive model there is room for a lot of hard work for the producer. He may take the competitive price as given and then his profit return. He, too, may have a target in terms of the return on his investment, because in the disequilibrium situation—and this is really the relevant thing for the individual firm making decisions in the competitive economy—he is attempting to produce at costs that are low enough to give him a favorable return on his investment.

Sure, at some point equilibrium might be reached, but the equilibrium condition for the competitive industry is a tendency toward which the industry moves if people are not coming along continuously, really redefining the nature of that industry.

I would say I would agree with Mr. Lerner 300 percent in this regard because I would go further and say not only do you have competition between existing products but you have competition between products that are in process of being created and products that are continuously in process of being redefined—and redefined both in terms of characteristics and cost conditions under which they are being produced. So you have this tremendously dynamic set of conditions operating in all of these dimensions.

Representative CURTIS. Thank you.

Mr. Chairman, I have more than used my time.

The CHAIRMAN. Senator Bush.

Senator BUSH. Mr. Chairman, I was going to first address some questions to Mr. Lerner, referring to his paper. He says, addressing himself to the nature of sellers' inflation, "treatment may take one of three forms." He speaks first of a sort of an appeal to business to exercise restraint. This has been made recently in the last 2 or 3 years.

It is hard to measure exactly what the effect of it has been. I would be inclined to guess that there has been some response to that.

Do you feel that or not?

Mr. LERNER. Some, but not very much.

Senator BUSH. Hard to measure?

Mr. LERNER. It is hard to measure. It is not only hard to measure; I would also say I do not think it is liable to be effective for very long.

Senator BUSH. I would be inclined to agree with that.

Mr. LANZILLOTTI. Or in the right places.

Mr. LERNER. Yes.

Senator BUSH. You speak of the second form of treatment, consisting of more drastic measures. You speak of outlawing the so-called fair trade practices.

Mr. LERNER. Yes.

Senator BUSH. You don't favor the fair trade laws?

Mr. LERNER. No; I don't think there is any social excuse for them. If people are willing to provide the services for less, the consumer should be permitted to enjoy it.

Senator BUSH. We are getting some very interesting testimony on this fair trade business in the last few days.

Do you other gentlemen have a comment on the so-called fair trade laws?

Does anyone dissent from that view? Do you think it is a desirable form of legislation?

I take it you are in general agreement on that.

Mr. LANZILLOTTI. Very definitely.

The CHAIRMAN. May I say for the sake of the record that when the McGuire bill was up in 1952 that I was either the only Member of the Senate to speak against it or one of the very few and one of a handful of the Members of the Senate to vote against it.

Senator BUSH. Hurrah for you, Mr. Chairman.

Representative CURTIS. There is no dissent up here either.

Senator BUSH. Then you speak of extending in this same drastic form of treatment, antimonopoly measures to include labor.

Just what do you have in mind there? How would you go about that?

That is a subject that has come up here before. I think it is one we will hear something about in the next few years, extending anti-monopoly measures to include labor.

You mean revising the Sherman Act or existing legislation, or do you have in mind the desirability of a new body of law that would deal specifically with crushing the monopoly characteristics of organized labor?

Mr. LERNER. I must confess I have not gone into this matter very deeply. Mostly I believe I would favor the extension of the existing law to remove the exceptions which exist in it for labor.

Senator BUSH. You do feel with the very large international unions that we have seen grow up here, like the Teamsters Union, there are evidences of rather dangerous monopolistic powers there.

Mr. LERNER. I think there is.

Where they have the same effects in interfering with the competitive nature of the economy, it is just as desirable to stop that activity if it is done in the name of labor as though it is done by anybody else.

Senator BUSH. You speak of the third form. You say it is unlikely to be adopted until the first two have been tried and found inadequate. Nevertheless, you outline it here.

It is a very interesting suggestion. You speak of calling for regulation of the most important administered prices so that they are made to behave the way that competitive prices do.

How would you visualize that kind of regulation might be provided? In the first place, is it Federal legislation that you suggest?

Mr. LERNER. Yes.

Senator BUSH. Something in the form of the OPA, or how do you visualize it might work?

Mr. LERNER. It would involve having groups of economists and others examining these important crises and providing information of the kind which is currently being studied by the Council of Economic Advisers and others. When studies are being made, for example, about the effects of increasing particular prices of steel and things like that.

What we would have to have is the establishment of a measure of capacity which would be more or less acceptable. This is a difficult thing to do. Fortunately it does not have to be too accurate and therefore I would say 80 percent. If we could learn to measure more accurately, I might push the figure up to 90 percent. But this is because of the difficulties of measuring it accurately.

Then there arises the question as to what kind of sanctions should be applied. Some economists who have been thinking about this kind of thing have suggested that only a kind of moral pressure be applied, and this becomes related to the first form of appeals, but it is more specific because it then indicates where it is applicable and where it is not.

Instead of saying that any price increase contributes to inflation, this would indicate where a particular price increase is appropriate for the general interest and where it is not.

Senator BUSH. Could we call this a form of selective price control, then—price control legislation.

Mr. LERNER. I am sorry to appear to be splitting hairs.

Senator BUSH. I do not want to split hairs. I just want to generalize.

Mr. LERNER. I am afraid you might think I am splitting hairs, because I want to object to these words because they have implications which are misleading in this connection.

May I try to explain what I mean?

The word "selective" suggests that there is some arbitrary decision. Some bureaucrat will decide I will do it here and I will not do it there. This I would want to avoid at all costs.

Therefore, I would want to have specific rules which would indicate where it is to be applied and where not. When you have such rules, there will be some places where it does apply and some places where it doesn't. In that sense it would be selective. It would permit prices to rise under some conditions and not rise under others.

Those are the conditions which I indicate here by speaking of the output as a percentage of capacity, and these are an approximation to what in fact happens in those industries where we do have a very high degree of competition; namely, the prices rise where there is a shortage.

I would never try to stop prices rising where there is a shortage. The purpose here is to stop prices rising where there is no shortage, where there is plenty of capacity and therefore the price ought to stay put or to fall.

Senator BUSH. You have gone on to say that important administrative wages would be subject to slightly different regulation.

By administrative wages, I presume you mean wages in industries that have administered prices. Is that what you mean?

Mr. LERNER. No; not necessarily. It is where the wage itself is decided for a large number of people by maybe collective bargaining or some other way, but is made as an administrative decision and not by individual bargaining or for smaller groups where it would not be worthwhile to apply this.

Senator BUSH. This suggestion, then, a measure of wage control should be placed somewhere in some agency; is that right?

Mr. LERNER. It is. I prefer to use the word "regulation."

Senator BUSH. Control or regulation. I think they have very much the same connotation.

You would lodge that in a Federal agency, too?

Mr. LERNER. Yes; I would.

Senator BUSH. Would that be in the same Federal agency that you lodge the price administration?

Mr. LERNER. I would think so, although I have not given too much thought to that. They have the same objectives, and the principles are very similar.

Senator BUSH. You have not thought very much about the details of this. This is pure theory?

Mr. LERNER. No; I have only been thinking of what this organization would have to bring about. I have not gone into the question of the administrative organization in which I am not particularly competent.

Senator BUSH. I suggest that is quite a venture you are proposing here.

After all, it is your third choice. Maybe we can make one of the other two choices work better.

Now I would like to go back to the question that Mr. Curtis raised here with Mr. Ruggles on the question of attaining a high level.

In your statement, in order to attain a high-level investment, it is necessary to induce producers to make more investment expenditures. Then you say:

Some incentive is required to induce producers to invest more than they ordinarily would under present conditions.

For instance, devices which would enable producers to charge investment expenditures off as current expense, such as research and development expenditures are, would probably be helpful in raising the level of investment.

This does raise the question of depreciation, and that is what you specifically had in mind, I imagine.

Mr. RUGGLES. Either depreciation or the absence of depreciation. Yes, this would involve allowing producers to charge capital outlays off as current expense.

Senator BUSH. Capital outlays?

Mr. RUGGLES. Capital outlays for producers' goods.

Senator BUSH. If a company bought a million dollars worth of machinery, that would be involved?

Mr. RUGGLES. That would offset his profit, and then he would pay a tax on the difference between his costs, counting this expenditure, and the remaining profit. This was done in Sweden.

Senator BUSH. In other words, capital investments of that nature would be treated as expense rather than capital investment?

Mr. RUGGLES. That is right.

Senator BUSH. He would have the choice of doing that?

Mr. RUGGLES. That is right.

Senator BUSH. I think it is a very interesting suggestion. Of course, it raises the difficult political question of selective tax relief, which is always a difficult one.

I agree with what Mr. Curtis said a while ago, that our companies would be much better off and the whole country would be much better off if there was less dictation of depreciation rates and a great deal more freedom allowed to the manufacturer or the operator, whatever he may be, because in the long run, over a period of 20 years, the Government is going to come out just as well one way or the other.

Mr. RUGGLES. Precisely.

Senator BUSH. That is the important thing to remember?

Mr. RUGGLES. Yes.

Senator BUSH. In a sense that does separate this type of relief, which is where it would be attacked politically as a tax windfall.

In the long run the Government would be no worse off, if not better off, if it was separated from other forms of selective tax relief.

Mr. RUGGLES. Even in the short run, if you got as much as 50 or 60 billion dollar increase in total output, the increase in the tax receipts would not be minor.

Senator BUSH. Theoretically, I suppose you could presume that this would stimulate the gross national product which would increase our income substantially and thus the income taxes might make up what you might lose on the tax advantage given for depreciation?

Mr. RUGGLES. That is right.

Senator BUSH. What you lose on the peanut, you make up on the banana?

Mr. RUGGLES. Precisely.

Senator BUSH. Mr. Chairman, I think this has been a very interesting morning. I don't know of any more questions.

Representative CURTIS. Mr. Chairman, I have just one question that is really collateral.

On the other hand, Professor Lerner, you gave a figure of about 2 percent unemployed as the amount of unemployment we should have.

Does that not depend upon the rapidity of our growth and the rate of growth?

In other words, if we increased our rate of growth that unemployment figure would tend to go up, would it not? There would be more frictional unemployment?

Mr. LERNER. I shouldn't think it would make any significant difference.

Representative CURTIS. You do not think the growth and frictional unemployment are related?

Mr. LERNER. No. I think there are changes going on all the time.

Representative CURTIS. But the changes are more rapid. That is the point.

I am talking about rates. For instance, in one of the comparisons I have heard, Britain has had a lower rate of unemployment than we have. One of the explanations I have heard is that our economy is more dynamic. It would seem to me almost an axiom that the more rapid the growth going on, the more frictional unemployment you are going to have.

Mr. LERNER. I would say it is a function of the degree of change between the different industries. Shifting from steel to paper.

Representative CURTIS. Isn't that a result of economic growth, though?

Mr. LERNER. I don't think economic growth consists of such great changes. It means making dividends of steel with the steel instead of the ones we were making before to a great extent.

Representative CURTIS. Take, for example, the tremendous economic growth in agricultural productivity with the use of machines and so on. That is the kind of thing that has created considerable what I call frictional unemployment. It is the very rapidity of that growth that has created this unemployment.

Mr. LERNER. I would say it would depend upon the differential rate of growth. If there were equal growth everywhere, it would have no effect. There would not be equal growth everywhere. It is not comparable to the importance of the growth.

I do not think it would make a very large difference.

Representative CURTIS. It seems to me most growth occurs under circumstances such as where a buggy manufacturer went out of existence because automobiles came in; that this is the kind of product exchange that creates the bulk of your frictional unemployment.

Mr. LERNER. I would say this, too: I would expect a larger increase in frictional unemployment, not because of continuing growth, but by a sudden beginning of growth. That would mean a change in the situation. If you were not growing and then suddenly you start growing, that means you are really shifting from food to steel or something like that.

This is a changeover like the changeover from peace to war or from war to peace, in which case you get a lot of frictional movement. But if you are continuously growing, I do not think it would be very different.

Representative CURTIS. I won't dwell much further on this, but take the shift from rail to air. My people in St. Louis are asking railroad labor to take a cut in wages.



Of course, a man training to be a railroader is not going to be able to find a job very easily in the expanding aviation field.

It seems to me the more growth we have, the more frictional unemployment. I may be wrong, but it just seems to me that your figure of 2 percent must be related to economic growth, and you do not have as much anticipation of economic growth as I would like to see.

I think it would be better if we tried to get a more rapid rate.

Mr. LERNER. I do think we ought to have a much more rapid growth than we have. I think a very important purpose of my suggestion here is that it would enable us to have a higher level of output which would make possible a greater rate of growth. I do not think it would require a much larger unemployment. I would say this 2 percent is due to growth. If there were no growth, if there was no switching from one industry to another, you wouldn't have any of this.

Representative CURTIS. Then I can't see why the growth rate would not often be reflected in the percentage of unemployment too. It seems to me it is almost bound to be.

Thank you, Mr. Chairman.

The CHAIRMAN. It has sometimes seemed to me that we make the question as to whether oligopoly is responsible for higher than competitive prices much more difficult than it need be. I think Mr. Lerner has in the main correctly stated the assumptions of a perfectly competitive economic order.

I suppose that in the old days farming more or less complied with these conditions, namely, that each enterprise produced such an infinitesimal fraction of the total supply so that the price was made for it by the market and alterations in the output of the individual farm had no effect whatsoever on the price of the product. That has been the competitive assumption as applying to all industries.

As a matter of fact, we know that in a great many industries production is confined to a relatively few firms and a given firm will produce an appreciable fraction of the total supply. Under these conditions, as it expands its output there will be some effect upon price. Price per unit will fall. It will fall not merely on the additional unit, but on the total units produced by the firm.

Therefore, the increase in revenue to the firm, or what was called marginal revenue, will be less than the price.

Mrs. Robinson developed this very acutely 25 years ago, showing that the curve of marginal revenue falls more rapidly than the price curve to the individual enterprise.

The individual enterprise, in seeking to maximize its returns, will not in a short run carry production beyond the point where the added cost of the last unit is equal to the added revenue from the last unit. This is at a point below price.

Therefore, you will have equilibrium at a point of lower output and larger profits than you will have under competition and higher prices than would prevail under perfect competition.

You may say this is a shortrun factor that might be removed by higher profit rates leading to increased flow of capital into these industries. But whether there is a sufficient flow of capital to offset this is, I think, very dubious.

So it has always seemed to me that on theoretical grounds the more imperfect the competition, namely, the greater the proportion of output which given firms have, the higher the price will be in comparison with a competitive price and the smaller the output will be in comparison with competitive output. I have yet to see any economists satisfactorily refute this reasoning.

If I am wrong on this point, I would like to hear about it.

Mr. WESTON. I would like to comment on that.

Your last statement was, if I quote you correctly—if I don't, correct me—that the more concentrated the industry—

The CHAIRMAN. The larger the proportion of the total output which is turned out by a given firm, the greater the effect changes in the output of that firm will have upon price, the sharper in fall in marginal revenue.

Therefore, the greater the difference between competitive price—perfectly competitive price—and actual price and the greater the difference between the actual output and what output would be under conditions of perfect competition.

Senator BUSH. Would the Senator yield for a question there?

The CHAIRMAN. Yes.

Senator BUSH. When you say "the larger the firm," you mean percentage of the industry?

The CHAIRMAN. That is right.

Mr. WESTON. What you are doing is equating degree of concentration with the shape and position of the demand curve.

The CHAIRMAN. For any given demand curve. You can take the demand curve that you want, then the greater the proportion of total output which a given firm produces, the greater the departure from competitive conditions, with price being higher and output being less than it would be under conditions of perfect competition. There may be individual limiting cases to that, but isn't this true as a general proposition?

Mr. LERNER. I would say—when you started speaking about this I thought I was again back in my classes learning economics—when you ask me for my opinion, the situations were reversed and I wanted to give you an A.

I think it is absolutely right what you are saying. In only very exceptional cases could you get deviation from it by confusing this with the situation in different industries.

There is one thing which I would like to add. You have another case which Mrs. Robinson developed and that was where you did get entry, more people coming in, and then you need not have large profits, but you would still get the prices higher in relation to cost even though the profits had been eliminated by additional competition.

The CHAIRMAN. I am glad to be marked so high by some competent authority.

Mr. LERNER. If I may, I would like to say this: I would like to make a point here which is connected with the apparent dispute between Mr. Curtis and Mr. Lanzillotti. I say "apparent" because it seems to me that Mr. Curtis was saying that the firms do not have infinite power because they are limited by the market, and Mr. Lanzillotti was saying the firms do not have power because they have some influence

on the market. Between those two there is plenty of room for agreement.

Representative CURTIS. Yes.

The CHAIRMAN. Before we get off into an aside with Mr. Curtis, I would like to find out whether these other gentlemen agree that my statement is correct.

Do not feel you are bound to say it is correct.

Mr. LANZILLOTTI?

Mr. LANZILLOTTI. I certainly agree with that analysis.

In agreeing, I would also like to raise a question for Mr. Weston. I think it would be fair to raise one of him since he raised three basic ones regarding my analysis.

I find it quite difficult to accept what I believe was his general conclusion that a reduction in concentration in industries—specific industries, I take it—would not increase competition. I find this quite difficult to accept in view of the economic theory which you have expounded so well, Mr. Chairman, as well as the case studies which have been done on various industries.

I am tempted to ask a question which may be unfair, if I have misunderstood Mr. Weston.

Would you say, Mr. Weston, that if we increased concentration that we would increase competition?

This is probably not a symmetrical relationship, but I can't see how the logic of your conclusion follows, Mr. Weston.

Mr. WESTON. This is a very good question and, of course, goes right at the heart of the point you are making, Senator Douglas.

Given an industry demand curve, defining industry in some arbitrary way because we have gone through various stages of hundreds of percents of agreement that the concept of industry, even commodities becomes a very nebulous one when you look at product substitutability in all of the dimensions in which you have to view it.

The CHAIRMAN. Just say it is negatively inclined.

Mr. WESTON. An industry demand curve is going to be negatively inclined whether there are a million firms in the industry or 50. The industry demand curve is unchanged.

The crucial question is: What is the shape and position of the individual firm's demand curve or sales curve in this industry, depending upon whether there is, let us say, 50 firms or a hundred firms?

Will the shape and position of the individual firm's sales curve be different depending upon the number of firms.

The CHAIRMAN. Assume that it is a homogeneous product, does it not follow that the fewer the firms the more inelastic the demand curve for the output of the individual firm will be because it will be producing a larger proportion of the total supply and will therefore have a sharper downward effect upon price per unit.

Hence the marginal revenue or the curve of first differences will be still more sharply inclined.

Mr. WESTON. Then it seems to me that the theory is not as simple as you stated initially because when you get to that point you have to take some behavior characteristics into account, namely, that the theory of oligopoly curve, which says that if he lowers his price the others will match him. So you are on the industry curve.

If he raises his price, the others will let him kill himself and they won't follow him. So you would be on a very elastic segment of a demand curve.

That raises two questions:

One, is it realistic under the theory of the kink demand curve to conceive of the individual producer in this situation of raising his price when he knows that the others will not follow him, which means that the segment of the curve is really a phantom curve?

Second, would the position of that phantom segment be any different if there were 50 or 100 firms, and doesn't this lead you to the point that you are right back on the industry curve from a pricing policy standpoint?

Mr. LANZILLOTTI. This kinked demand analysis is a rather esoteric topic.

You raise a question, Mr. Weston, about, realistically, what does the evidence show.

I think the evidence shows that the firms will take a given market share at the prevailing price, and whether you can explain how they got there, the point that I believe the chairman is raising is that prices are at a certain level. Once there, there will be a certain proportion of industry demand which they will recognize as a company's rightful, reasonable, or justified share.

These shares will tend to be perpetuated.

Mr. WESTON. I would disagree with that categorically because there is a great deal of dynamism in industry's share of the market. United States Steel had 60 percent of the market when it was formed in 1900. It now has 30 percent.

Look at the can industry, where American Can had virtually 100 percent of the market; today much less than 50.

Agricultural implements, which is now a splintered market.

There is a tremendous amount of dynamism in market shares.

Look at the automobile industry.

Mr. LANZILLOTTI. Let us look at that industry.

The shares are surprisingly stable in the automobile industry with the largest firms increasing their absolute shares over time.

Mr. WESTON. This is wrong, too.

Ford had 55 percent of the market in 1920. Today it has under 30 percent.

GM didn't have 50 percent of the market until the postwar period, and there is no assurance that it will continue.

The CHAIRMAN. If you will forgive me, I think this present discussion is largely beside the point, if I may say so.

The question which comes in my mind, Is it not a truism that the higher the concentration the greater the departure from competitive conditions, both in the form of higher prices and reduced output? There may be some esoteric demand curves on which this will not be true. But it seems to me it follows from the very geometry of the difference between the price curve and the marginal revenue curve that these consequences follow.

Mr. Ruggles, I know my colleagues are impatient to get away, but I deferred my questioning until the end. I would like, if I can, to have this point cleared up.

Representative CURTIS. May I say to the chairman, not at all. I am very anxious to hear it. In fact, I would like to comment on it later.

Mr. RUGGLES. This is a point purely in the mechanics and theory that I think, in a sense, I would like to make sure I understand, too.

In economics we have what is called Lerner's degree of monopoly, which is a measure of monopoly based upon the elasticity of the demand curve. Price minus marginal cost over price, I believe, is the measure, with due respect to my colleague here. He was the inventor of it, and we have used it a great deal. I think the point to which you were referring was that, as Joan Robinson and the others have shown, the difference between price and marginal cost in monopoly will be greater than in competition. But it is a serious error to assume that merely because this is true at a given moment in time the changes in prices in a monopoly situation will be greater than the changes in prices in a competitive situation.

The CHAIRMAN. I was not arguing that.

Mr. RUGGLES. We are interested here in the price behavior of recent years.

The CHAIRMAN. Pardon me, Mr. Ruggles; I was not arguing that at all.

If I was to draw a policy conclusion from it, it would be that if we could get a greater degree of competition and a greater approach toward perfect competition we would have lower prices.

Mr. RUGGLES. All right. May I continue a moment?

The CHAIRMAN. Of course.

Mr. RUGGLES. The price behavior of recent years could be attributed to industrial concentration only if the degree of industrial concentration or Lerner's measure had increased. I think Scitovsky has shown in an article in the Review of Economic Studies, that given the same degree of industrial concentration in the system, a competitive system and monopolistic system would behave the same way.

Now to get back to the other point, that competition gives a lower price than monopoly, I think there has been a serious theoretical error here, because in competition we draw our supply curve without considering industry rent. If we go back to Marshall, he used the concept of the particular expenses curve. The particular expenses curve is defined without interindustry rent, but the supply curve of pure competition includes a lot of producers that are making rent.

The CHAIRMAN. What is the word?

Mr. RUGGLES. "Rent."

The CHAIRMAN. R-e-n-t?

Mr. RUGGLES. Yes. This rent is excluded from our cost curves for monopoly. So what appears to be monopoly profit may very often be competitive rent. Therefore, our cost curves for monopoly and for pure competition are not defined the same way, and we may be in serious error if we pretend they are.

Mr. LERNER. I don't think I would agree with that at all as a general proposition.

There may be some cases in which the monopolist has been able to exploit not only the buyer, but also the seller. In which case he would be extorting rents from them just as he would be extorting consumers' dollars, which is the corresponding thing of rents belonging to a con-

sumer. This does not change the relationship between price and marginal cost.

In the marginal cost there is no rent. So this does not affect it. This is a thing which can only affect who gets the rent. Instead of the consumer enjoying it, it is transferred to the monopolist. Instead of a producer sometimes enjoying it, it is maybe transferred to a monopolist. But it does not affect the proposition that the price will be higher in relation to marginal cost because the marginal cost by its nature does not have any rent in it, and therefore does not affect the proposition made by Senator Douglas.

Mr. WESTON. I would take the thing back to the demand side and emphasize that you say it follows from the simple geometry of the situation. You have to identify what the position of the individual firm's sales curve will be. Also, the cost—or supply—functions are different.

The CHAIRMAN. I am assuming a homogeneous product. I am not talking about variation. I am assuming a homogeneous product, like cement, steel, rails.

Mr. WESTON. I think the relevant sales curve for the individual firm here is highly elastic so that from the simple geometry of it, any difference between what you would get in the competitive model and what you get in the imperfect competition model is negligible and far offset by the dynamic qualities that Schumpater emphasized.

The CHAIRMAN. Under perfect competition, the sales curve for the individual enterprise has infinite elasticity. It can sell any quantity at the given price.

Granting that there may be only a slight negative inclination in the price curve relative to the output of the individual firm when you have imperfect competition, the point is that this will have still a greater influence on marginal revenue.

Mr. LERNER. I would like to say that you need not limit yourself to the case of homogeneous commodities. You can put the same idea in a more general form.

Take the case of the complication of the kink demand curve, when it is important to a firm how his companions will react. I think what you would then say, in the light of what you were saying before, is that if he is one of a very large number of people in the industry it is not very likely that the others are going to cut their price when he cuts his and let him kill himself when he raises his price. But the smaller the number, the more conspicuous his behavior becomes, and the more likely it is that it will come into play.

This is the application to this case of the same principle of the greater interference with competition from there being a smaller number of firms.

The CHAIRMAN. Mr. Ruggles.

Mr. RUGGLES. If I may just answer the point that Mr. Lerner made about marginal costs.

Marginal costs in monopoly and in pure competition are only identical where there is no interdependence among the costs of the firms involved. If I may give this a further point, for example, if you had a group of independent retail stores selling a product, each store would have to cover its marginal costs, which would include the purchase of the goods, including transport. If these were formed into

a chain, the decision of the monopoly as to whether a given store was worth operating or making a profit would be based upon its marginal cost added to the total costs of the system. If this store was located between other stores, it might be profitable for the chain to operate even if it could not cover the full transportation costs that it would have to pay under a purely competitive system.

So as long as you have economies that are external to the individual establishment within the industry—or in other words, if you have a falling industry cost curve—the pure competition marginal cost curve would be above the monopoly marginal cost curve.

That was the point I was trying to make originally.

Mr. LERNER. Then I didn't get your point. I am sorry.

I think it is perfectly possible that the price under monopoly would be lower than under competition because of the greater efficiency of the monopoly. This is perhaps the most important reason why we have monopolies.

Mr. RUGGLES. Yes, but this is due to the industrial organization, I would like to point out. The production functions in both cases I stated were identical. Technically, efficiency is identical in the two systems. They are different forms of industrial organization. In the one system the monopoly can cost-discriminate. In other words, he can allocate his cost according to marginal costing principles.

In the other form of industrial organization, the product of one of the producers is sold at its average cost to another producer and you do not have marginal cost pricing in the truest sense of the word.

Mr. LERNER. I think I must withdraw what I said. I still don't get the point.

Mr. WESTON. I would like to raise a question in connection with the comment that Senator Douglas made near the conclusion of our exchange, when he said, if the sales curve for the individual firm does approach—in an imperfectly competitive industry—perfect elasticity—

The CHAIRMAN. It may approach it, but there would be a negative inclination.

Mr. WESTON. Yes. The effect on marginal revenue would be greater and therefore the price effect would be greater. This would seem to imply that the closer you got to the competitive sales curve, the higher the price.

The CHAIRMAN. No; that is not what I meant.

I simply meant that even though there might be only a slight negative inclination to the responsiveness of price, of changes of output in imperfectly competing fields, the fall in the marginal revenue curve would be greater than the fall in price.

Mrs. Robinson's geometry is correct. I went through the formula. The fall would be twice as great as the fall in the price curve.

Mr. WESTON. That is right.

The net effect on price when the sales curve is highly elastic, the average level by which prices under this kind of imperfectly competitive market would be higher than in the theoretical model of a competitive market, the difference even under these static conditions would be negligible and likely to be swamped by dynamic considerations. So that in Schumpeter's view your description of this, that prices are obviously higher under imperfect competition because of

the simple geometry of the case, you would not get an A in Schumpeter's class even if you got one in Lerner's class.

The CHAIRMAN. We cannot continue this forever.

I would merely say if you have one firm producing 50 percent of the output, obviously it will have quite an appreciable effect on price and the marginal revenue curve will be still more below the price curve.

I am afraid we ought to call this off unless Mr. Curtis is itching to get in.

Representative CURTIS. I would simply like to get back to your basic question and answer it this way, trying to put myself in the position of the person.

The CHAIRMAN. I will buy you a copy of Joan Robinson's economics of imperfect competition and we will each do the first three chapters and submit the answers to the panel.

Representative CURTIS. I think I will have to write my own book.

Answering this from the standpoint of a person who is in this position that you described, it seems to me the larger number that are in competition with you, the more you can predict what they are going to do in the aggregate. That is, the more you can predict that curve.

The fewer that are in there, the less you can predict what they might do, assuming independence, and the more careful you have to be in evaluating the economic forces at play.

The CHAIRMAN. That is contradictory to what I was saying.

Representative CURTIS. It is, and for this reason: I think some people have a conception that business makes up its mind out of thin air. I am concerned about how much attention they pay to the economic forces at play.

The CHAIRMAN. That is contradictory to what I was saying.

Representative CURTIS. It is, and for this reason: I think some people have a conception that business makes up its mind out of thin air. I am concerned about how much attention they pay to the economic forces at play.

The CHAIRMAN. I would say they pay perfect attention.

Representative CURTIS. The larger the number in competition, I think the more you can possibly afford to make a few mistakes. The fewer that are in there, the more you have to pay attention and evaluate possible reactions.

Now, the reason I don't agree with what has been said about the control in the case of a few firms is because of the new entrant situation. With him it is easier to get in. But you don't allow for the effect on your curve that the new entrants make.

The CHAIRMAN. That is shifting from shortrun to the longrun process. That is another question and it depends upon the degree of entrance.

My analysis was in terms of a short run, assuming a supply of capital.

Mr. WESTON. Even in the short run you have the competition of other products. So your original statement, here is a firm with 50 percent of the market, what market is the point?

Representative CURTIS. If I may conclude this one observation, even when you have just a few firms—take the automobile industry, which is a beautiful example—where they do carefully try to analyze what



the economic forces are and therefore try to sell on the basis of their evaluation, if all of them make a mistake in their evaluation, as they did, and there was a resultant new entrant into the market, foreign cars, you can have new entry.

I will grant it is much harder the fewer there are. But nonetheless, even their new entrants are going to influence the industry. The net result of what I am trying to say is that it does seem to me that the larger number you have, probably the less you have to accurately estimate the economic forces. The fewer firms there are, and if there is real competition, you have to estimate them more accurately. Therefore, the economic forces are the ones that make the decision, not the individual companies.

The CHAIRMAN. I always thought that Euclid was not ideological, that the laws of geometry were no respecters of politics or economic ideology or anything of the kind. I was simply bringing out the geometry of imperfect competition.

If I had a blackboard here, we could work out the differences between the price curves and the marginal revenue curves and point out that, in the section of "Marginal cost" under "Imperfect" competition would be a quantity less than it would be under perfect competition with a resultant higher price.

The only answer to this that I see is for us to get more copies of Mrs. Robinson's book, and I hereby promise the secretary of the committee that I will personally pay for copies of Mrs. Robinson's book for every member of this committee if they will promise to read and pass an examination upon the first three chapters.

Mr. RUGGLES. That is rough.

Mr. WESTON. If you had your blackboard, we would have a great deal of argument as to how you drew those curves. This is like religion, Senator Douglas; once you draw the curves there is no argument, but we will argue every bit of the way while you are drawing the curves. This is where the argument is.

Mr. LANZILLOTTI. As one hurried postmortem, since you want to close, Mr. Chairman—for those present who are concerned about the impact of administered prices in this world, I really can't hold out much hope for you in the next.

If you look at the price movements in the very last chart—caskets and morticians' goods—while not exactly the archetype of administered prices, behave like the others in the administered group.

The CHAIRMAN. There is one final shot and, Mr. Ruggles—if I may put this question—you probably do not have time to reply to it.

You urge an increase in the rate of investment. The present approximate rate of investment, including residential constructions, were one-sixth of gross national product. Eliminating residential construction, it is about one-tenth.

Do you propose an increase up to 25 percent?

Mr. RUGGLES. Yes.

The CHAIRMAN. But then you have a final sentence:

At the present time we are in the paradoxical situation that even a lower rate of investment creates more new capacity than we can use.

Mr. RUGGLES. That is right.

The CHAIRMAN. If you increase the level of investment, are you certain that you are going to increase the percentage of utilization?

Mr. RUGGLES. The reason I put that in was because I think it is nonsensical at the present time that we do not utilize our capacity.

The CHAIRMAN. It is nonsensical?

Mr. RUGGLES. Yes.

We could, if we went about it with that intention.

The CHAIRMAN. How would you do it?

Mr. RUGGLES. Let me explain the problem of growth here.

When the economy grows, the amount of income that is created, that is made available to consumers, is insufficient to remove the amount of consumer goods that are produced.

The CHAIRMAN. At the prices charged?

Mr. RUGGLES. In a sense almost at any price.

The CHAIRMAN. You go much further than I do now with overproduction.

I would say you can have overproduction at a given level of prices.

Mr. RUGGLES. Let me explain what I mean here.

We are now getting to the place where most producers have a large percentage of salaried workers, and wage earners also are frequently kept on when output declines. So with fluctuations in output there is not very much fluctuation in consumer income. But income has to increase in order to absorb the additional output which is produced. If you had a fixed labor force and you paid them a fixed amount, the additional output could not be absorbed.

The CHAIRMAN. Unless prices were reduced?

Mr. RUGGLES. That is correct. For that price reduction to be possible, you would need to have a productivity gain, and if you do not have the productivity gain you are in the position that the stabilization works in the upward direction just like it works in the downward direction.

We pride ourselves that our system has a great deal of built-in stability and that we cannot go into a serious recession, because of all the factors supporting the level of income. In the same way, these same factors work in reverse in the upward direction. There are many things keeping down the level of expenditures in the system so that they cannot absorb our economic potential.

The CHAIRMAN. What are they?

Mr. RUGGLES. Let us look at it this way.

Suppose we had tomorrow \$100 billion increase in the gross national product. Where would this money go?

Of this \$100 billion, about \$70 billion, or \$65 to \$70 billion would go to consumers as payments by producers. Of the other \$35 billion, about \$15 to \$20 billion would go to the Government—about \$20 billion, I guess—as sales taxes and corporate profit taxes, and the rest would be retained by producers.

Of this \$65 to \$70 billion that would go to consumers, another \$12 billion will be taken away in taxes, so they will be left with about \$52 or \$53 billion to dispose of, out of the original \$100 billion increase in total output. Of this \$52 or \$53 billion, they may save \$4 or \$5 billion, leaving the increased amount that they can spend or will spend about \$50 billion.

This means that half of the total growth would be absorbed by consumer expenditures.

Supposing the Government decides that it is going to keep the same level of expenditures. This means that investment expenditures would have to increase to the tune of \$50 billion, or by an amount equal to the increase in consumer expenditures. But, in view of the size of the increase in the consumer expenditures, there is no reason why producers should desire to expend capacity so much.

Now, you may say it is unrealistic that the Government in such a situation would not expand its expenditures; or that, faced with a surplus, they would reduce taxes. But I would like to point out that unless the money is spent or the tax reduction made before the fact, the volume of expenditures to make the fact possible will never occur.

So we are in a situation in which our economic growth is being frustrated. When we move up we are going to move up slowly against barriers just like those we hit when we move down. We have an economy with economic stability, and stability means no growth.

What we are stabilizing is the money level of the GNP. If the money level of the GNP has to rise in order for growth to take place, then it can rise only slowly under the existing systems of stabilizers that we have.

The CHAIRMAN. That would be the Federal Reserve Board's idea of stability of keeping the constant GNP. It is not my idea of stability. My idea of stability would be substantial and full employment.

Mr. RUGGLES. Yes, but that is not what we are stabilizing. We are stabilizing income in the system.

The CHAIRMAN. That may be Mr. Martin's theory. That may be Secretary Anderson's theory. But it is certainly not mine.

I admit they are much more influential in determining policy than I am.

Mr. LERNER. I would like to jump in here and say I agree with a great deal that Mr. Ruggles has just said, that we do have insufficient total demand. But I do not think it is just an automatic result of somebody's idea that we ought to keep money constant when we need a larger money income to absorb our greater productivity.

I think there is a general understanding even in the Federal Reserve that it would be desirable to increase total expenditure to go with the increasing productivity in the economy. But what is bringing about this is just the point which brought us together here today; namely, the fear of inflation.

Mr. Ruggles has been playing down the rise in prices, and I think this is why maybe he is not used to bringing in another explanation of why we get it. It seems to me the reason why we don't have enough demand is because the Federal Reserve is eager not to stabilize money income, but to prevent inflation and thinks it can do so by a restrictive money policy. It will continue to do that as long as it is concerned, and it should be concerned, about inflation, until we develop other means of preventing the rise in prices.

This is where we came in.

The CHAIRMAN. I do not want to continue this forever. I will merely say that whenever we propose any other means, we generally find the Federal Reserve dampening down our efforts.

Mr. RUGGLES. I would like to go on record on one thing. I don't want to accuse Federal Reserve instead of big unions and big business. I do not feel they are the major element in this.

I think this is a built-in institutional problem, and that it is not necessarily bad economic policy that has created it.

Mr. LERNER. They have neither the credit nor the blame.

Mr. RUGGLES. That is right.

The CHAIRMAN. Thank you very much.

We will meet again at 2:30.

(Thereupon, at 12:55 p.m., the committee recessed, to reconvene at 2:30 p.m., same day.)

#### AFTERNOON SESSION

The CHAIRMAN. The committee will be in order.

We appreciate very much your coming to be with us, gentlemen. The session this afternoon will deal with the subject of market power, price policies, and growth, with special attention to longrun implications.

Mr. Duesenberry, will you lead off, please?

#### STATEMENT OF JAMES S. DUESENBERY, HARVARD UNIVERSITY

Mr. DUESENBERY. Thank you, Mr. Chairman.

The committee has asked us to discuss the effects of market power on economic growth and price stability. Each of these is in itself a very large subject so that in a short paper one can do no more than sketch some of the more important considerations.

In discussing the growth problem, I shall confine myself to some observations on the effects of market power on investment incentives and on the effects of market power on costs and returns in research and innovational activity.

In this connection I shall put the emphasis on the effect of size of firm on investment and research.

Market power is not the same thing as size, but it is generally true that large firms do have market power. There are many other ways of acquiring market power, but I cannot discuss them in a short paper.

In discussing price stability, I shall try to bring out differences in the reaction of industries with different competitive structures to changes in demand and to union-generated wage pressures.

#### CONCENTRATION AND INVESTMENT INCENTIVES

Competition is supposed to provide business concerns with especially strong incentives to investment in new equipment in order to reduce costs, improve old products, or introduce new ones.

Even without competition, managements are prepared to invest capital to reduce costs or improve products in order to widen profit margins or expand their sales.

But a firm faced with competition has stronger investment incentives. If it reduces costs or improves product it cannot only expand

the market for its products but it can take business from its rivals. Moreover, even if a concern's management were content with its profit position it would have an incentive to reduce costs and improve product to avoid losing its markets to its rivals, or being forced to accept low profit margins to maintain its sales.

In principle, even a very small number of rivals may provide one another with strong incentives for cost reduction, product improvement, and development of new products.

In practice, it is easy to observe many industries dominated by a small number of large firms who are engaged in intense rivalry in terms of cost cutting and product improvement.

However, the tendency for oligopolies to generate competitive cost cutting may be frustrated in a number of ways. Formal or informal market-sharing agreements obviously weaken the drive for cost cutting.

Cost reporting and standardization of cost accounting reduce the chances of concealing cost reductions and, therefore, the risk that a rival is stealing a march. Any firm which controls key patents or resources can protect itself against price cutting by rivals by withholding licenses or resources. Its fear of aggressive action is reduced, and the possible gains from aggressive action are reduced for the others.

Industries dominated by a small number of large firms may be as progressive as others, but that is not necessarily the case.

We noted above that the incentive for cost reduction in such industries depends in part on each firm's fear that its rivals will gain a cost advantage and force it to choose between low—or even negative—profit margins and a loss of market share.

In industries with very few firms the resources of each firm are generally large. Firms which wish to pursue a conservative investment policy are in a position to refuse to take the risks involved in investing for relatively low payoffs. If their rivals should gain a cost advantage, their resources are large enough to permit them to take losses or low margins for a time and still catch up.

It is possible that all the firms in the industry would take the same conservative attitude, with the result that the industry would make relatively slow progress in cost reduction. That possibility is reinforced by the fact that market-sharing agreements are more easily maintained when only a few firms are involved.

The possibility that all firms will be prepared to accept a conservative investment policy and an attitude of mutual nonaggression becomes smaller as the number of firms grows larger. Even when a few large firms produce a high proportion of the output in an industry the presence of a number of aggressive small firms prevents the large firms from resting on their laurels.

Thus, the small and medium sized firms may make a much more important indirect contribution to progress than their size or direct contribution to development of new techniques would indicate.

The role played by Sylvania in speeding up the development of the fluorescent lamp and the role of several small companies in the introduction of small radios are only two of a number of examples of the contribution of small firms.

But even when they do not succeed in taking business from the large firms the small firms provide incentives to the large ones by trying to increase their market shares.

It is important to note, however, that fringe competitors contribute to progress in that way only when they are strong competitors. They will not be effective unless their scale of operations is large enough for reasonable efficiency and unless their financial resources are adequate to permit them to take some risks.

#### RESEARCH AND INNOVATION

Our economy's capacity to produce goods and services at any one moment depends on the amount of resources and the technical knowledge available and the efficiency with which those resources and techniques are utilized.

But the rate of increase in our capacity to produce depends on the rate at which we accumulate resources and on the rate of development and application of new techniques of production.

The rate at which new techniques are developed and applied depends on many factors, but it can be influenced to an important degree by the size distribution of business firms.

In this section we shall consider the influence of firm size on the ability of firms to undertake research activities and to apply the results in practice.

It appears to be the case that large firms are in a distinctly better position to support systematic research activities than small firms. That is true for a number of reasons.

The strongest of these reasons is the effect of size on the pooling of risks. There are many calls on the financial resources of firms to justify the allocation of additional funds to research, and the management must suppose that the prospective returns from additional research will be greater than those available from other types of investment.

As the proportion of resources devoted to research increases, the return required to justify additional research expenditures will increase.

Even if there were no risks, small firms would not find it profitable to spend a much larger proportion of investable resources on research than large firms. If a large firm and a small firm both spend the same proportion of resources, on research, the large firm can support more projects than the small firm.

Since results of research are very uncertain, the small firm with a small absolute research budget takes a greater risk about the outcome of research than a large firm with a large budget.

When a sufficient number of projects can be undertaken, some are bound to succeed and pay off enough to compensate for the failures; when only a few projects are underway, there is a chance that the firm will get nothing for its efforts.

Of course, some firms with small budgets will be successful and obtain a very high return on their investment since the success is not affected by failures in other projects, but most firms have an aversion to making long-shot investments. As a result, small firms are likely to hold down their research budgets because investment in research

is too risky. In addition, most small firms are in a riskier position than large firms on other grounds. In general, they have lower profits and less access to outside funds. Moreover, they are more dependent on demand in particular localities or for a small number of products than large firms operating over a wider range of locations and products.

The general risk position of small firms makes them still less able to gamble on research. A second factor working against small firms is the existence of economies of scale in research itself. Laboratories require complex equipment which will not be fully utilized unless large numbers of research workers share its use.

In addition, there is an interaction between research workers in different fields or in different projects which cannot be exploited in a small laboratory. This is not to suggest, of course, that much useful work cannot be done in small laboratories, but there are some reasons for thinking that large laboratories have an advantage over small ones. These disadvantages can be overcome to a considerable extent by contracting out research to universities or to firms specializing in research work.

A third advantage for large firms arises from the diffuse nature of the benefits of research. The outcome of scientific research is, in the nature of the case, unpredictable. Investigations aimed at the improvement of a particular product or process may produce results with applications to quite different areas. A large firm with a diversified line of products can view that situation with equanimity. It has a good chance of finding an application for whatever turns up. A small one can use only a small part of the knowledge gained from research. This advantage is, of course, of much greater importance in basic research than in engineering work with a narrow focus.

The advantage of large firms in research activities are reflected in the results of the 1953-54 study of industrial research and development activities. The survey showed that the percentage of companies conducting research and development programs rose steadily with company size. Only 8 percent of manufacturing firms with less than 100 employees had them while 94 percent of those with over 5,000 employees had research and development programs. Manufacturing companies with other 5,000 employees paid for 66 percent of research and development work but employed only 40 percent of the workers in manufacturing.

In contrast, firms with less than 500 employees accounted for only 14 percent of the research and development cost, though they employed 35 percent of all workers in manufacturing.

Government-financed research is even more highly concentrated among the large firms.

It is clear enough that large firms have a distinct advantage in carrying out industrial research and development, but that is not the whole story. Industry does relatively little basic research. To a large extent, industrial research exploits scientific principles developed elsewhere.

The existing stocks of scientific knowledge at any one moment contains an enormous reservoir of potential industrial applications. Any single research organization works on a limited number of these possibilities, the chosen ones depending on the interests and vision of the firm's management and research directors.

Certain possibilities will be ruled out by a particular firm as impractical, outside the range of the firm's interests, as having insufficient potential markets.

In pursuing a given line of research and development, any one individual or any small group is likely to make very serious errors in judgment as to the practicality or market potential of a given research proposal.

Large research organizations may be more efficient than small ones but, from another point of view, a good deal may be lost by having a heavy concentration of research and development activity in the hands of a relatively small number of firms. Of course, it is possible for a large firm to decentralize its research and development activities and allow a great deal of independence to research directors, and even to encourage internal competition, but that is not always done.

The research activities of small- and medium-size firms may make an important contribution to our total resources by insuring that the development possibilities overlooked or neglected by larger organizations are tried out and exploited.

Finally, it is important to note that much progress in industry takes place without formal research. Many useful developments in technology are worked out by production personnel with relatively little formal research expenditure.

Similarly, new applications of existing knowledge may sometimes be made without much formal research. In some cases foreign patents may be applied in this country with relatively little further work.

Finally, minor modifications in products may make them cheaper and open out new market possibilities.

In all these cases the very large firms have relatively little advantage over small- or medium-size firms provided that resources are adequate for the necessary investment.

#### MARKET POWER AND PRICE STABILITY

In analyzing the effects of market power it is necessary to draw a distinction between price movements induced by changes in aggregate demand—relative to industrial capacity and labor supply—and those induced by increase in wage costs resulting from trade union action and other forces affecting costs.

Such a distinction is somewhat artificial. The extent of the influence of trade unions on wages is influenced by the level of unemployment and capacity utilization in the economy.

We cannot ordinarily say whether any particular price increase is due to cost push or demand pull. In most cases we have to suppress that actual price increases are due to the interaction of both factors. Nonetheless, the two factors are distinct from one another and different sectors of the economy react differently to the movements of demand and the pressures on wages exerted by trade unions.

Let us first compare the effect of changes in demand on price movements in industries with many small firms with the effect of demand changes on prices in highly concentrated industries.

It seems fairly safe to say that prices of goods produced in industries in which many small firms compete in the same market, for



example, textiles and apparel, are more volatile than the prices of goods in more highly concentrated industries.

At any one moment the producers in a competitive industry are producing as much as is profitable, in view of their costs at the existing price. If demand remains unchanged any producer can sell more by increasing output and shading his price a relatively small amount.

When an increase in demand occurs, price will be marked up because no additional output is available at the existing price. Price will have to rise until demand and supply are once again in balance—either through contraction of sales as a result of the price increase, or because the higher price induces firms to increase output by working overtime, or using obsolete plant.

When demand declines, prices will move downward, but initially most firms will find that they are selling less than they are willing to supply. Further shading of prices has to continue until supply and demand are once more balanced by increases in sales or reduction in output.

When there are many small firms there is no reason for anyone to refrain from price cutting as long as there is excess supply, since competitors may do so anyway, if they are not, the firm cutting the price would take a little business from each of a number of firms without influencing the action of any of them.

In such industries prices will move upward and downward with shortrun changes in demand. The range of movement will be sufficient to keep supply and demand in balance.

Over longer periods, of course, supply can be increased or decreased by the construction of additional plant, or the abandonment of old plants. The adjustment of capacity places a limit on the extent of which price can deviate from average cost in efficiently operated new plants, except for short periods.

Prices of the products of highly concentrated industries are much less responsive to shortrun movements in demand than prices in highly competitive industries.

When demand declines managements tend to avoid open price cutting because each firm expects that others would retaliate if it cut prices.

On the other side, when demand increases, large firms often refrain from raising prices even though they could sell more than they can produce at the existing price.

It is easy to see why large firms tend not to cut prices when sales are low. Unless sales are very responsive to price, it will be unprofitable for any firm to seek more volume by cutting prices when its rivals are fairly sure to retaliate.

In order to insure price stability when sales are declining it is necessary to refrain from raising them when sales are rising.

In addition, large firms are usually sensitive about their share of the market and are, therefore, unwilling to risk the loss of customer goodwill by frequent price changes.

At least some large firms are sensitive to customer relations and political considerations.

Finally, if prices are raised during periods of high demand, unions may attempt to capture some of the increased profits in the form of a wage increase which cannot be reversed if prices should fall.

When there are only a few large firms in an industry, the relation between prices and direct operating costs tends to be very unresponsive to changes in the relation between demand and capacity.

However, when an industry is fairly heavily concentrated, but contains a certain number of small firms which together account for an appreciable proportion of output, the picture may be somewhat different.

When demand declines, the smaller firms may lead the way in cutting prices—either openly or more commonly through various types of unannounced discounts and other concessions to buyers. They tend to do so partly because each small firm can gain a substantial percentage increase in volume by taking a small percentage of sales from the larger ones if they can cut prices for a time without retaliation.

The small firms may lead prices down, eventually forcing the large ones to follow them. To the extent that prices decline when demand declines in the industry, they will also tend to rise when demand increases.

In general, then, it can be said that as the proportion of an industry's output produced by small firms increases, the tendency for prices to vary with demand will also increase. That proposition is, of course, only a broad and loose generalization.

Price movements are influenced by many other aspects of industrial structure besides the size distribution of the firms in the industry.

If demand moves upward and downward, relative to capacity, prices—in relation to direct costs—will tend to move upward and downward as well. The variation in both directions will tend to be larger in industries in which a large share of output is produced by small firms than in those in which most of the output is produced by a few large ones.

If demand fluctuates, the prices in industries with a low degree of concentration will fluctuate more widely than those in highly concentrated industries, but over the cycle difference in the amplitude of price fluctuations need not affect the average level.

It cannot, therefore, be said that the small-business sector intensifies the secular upward trend of prices in anyway.

However, the fluctuations in prices may have an indirect influence on the long-term trend of prices. Price increases during boom periods raise the cost of living. Increases in living costs intensify demands for higher wages.

An increase in wages granted during a boom is not likely to be reversed even when demand declines. Wage increases tend to be built into the cost level and prevent prices from falling as far during slack periods than they rise during booms and price fluctuations may not cancel out over the cycle.

The temporary price increase in each boom has a permanent effect on wages and costs which contribute to the upward drift of prices.

The competitive structure of an industry also influences the industry's response to trade union wage pressures. There is some reason to believe that managements in highly concentrated industries can grant wage increases with less fear of loss than those in less concentrated industries.

Profit margin in highly concentrated industries seem to be limited by the possibility that customers will supply themselves, that firms

in related industries will enter the field, or that small firms will expand by giving price concessions if profit margins will sooner or later attract competition in an unspecified way.

In those circumstances, an increase in wage costs can be reflected in prices since it affects potential competitors in the same way as existing firms.

Moreover, trade unions in these industries try to obtain similar concessions from all firms whether there is industrywide bargaining, or not.

Finally, there seems to be a general belief that sales are not very sensitive to industrywide price changes. Under these conditions managements may feel that they can grant wage increases and raise prices without losing business.

In less concentrated industries the situation is different. If wage increases are granted they cannot be reflected in prices by the decisions of a few managements. Wage increases will lead to price increases only because the increase in costs induces some firms to contract output so that demand exceeds supply at the old price.

The amount of price increase which results depends on the sensitivity of output to prices and the sensitivity of sales to prices in the industry as a whole.

Individual managements cannot judge those factors very well.

As a consequence, it is more risky for managements in highly competitive industries to grant wage increases than for those in highly concentrated ones. That risk is increased by the fact that there may be more unorganized firms in an industry containing many small firms than in an industry with a few large ones.

Those considerations suggest that the cost-push element making for inflation may be somewhat less powerful in highly competitive industries than in highly concentrated ones.

However, there appear to be a number of industries in which trade union pressures on wages are very effective in spite of the large number of small firms in the industry.

Construction is the most impressive example.

Thus, small firms may provide some resistance to cost-push inflation, but they do not always do so.

Moreover, comparisons between wage and price movements in competitive and highly concentrated industries have to be made with care, because other factors beside the degree of concentration are important.

To sum up, then, prices fluctuate most in some manufacturing fields in which small business predominates, and these price fluctuations may contribute indirectly to the long-term upward drift of prices.

On the other hand, these same highly competitive sectors may resist the cost-push component of inflation somewhat more strongly than industries dominated by a few large firms.

Neither of these considerations relates to a dominant force causing inflation, and it is important to take account of numerous other factors when judging comparisons of wage and price movements in industries with different competitive structures.

Competition plays an important role in connection with incentives for investment and innovation. We have argued that there are strong incentives for cost reducing investment and innovation even in very highly concentrated industries. But the continued operation of these

incentives would not be guaranteed if the whole manufacturing sector consisted of a few hundred very large firms.

If the management of every large firm could feel that its resources permitted it to be a follower rather than a leader, the incentive to innovate would be greatly reduced.

It is not necessary to have very large numbers of firms competing in order to provide adequate incentives for investment and innovation, but the adequacy of investment incentives is not guaranteed in industries dominated by a very small number of firms.

We have argued that large firms have a distinct advantage in conducting industrial research, but that small firms can make significant contributions to technical development. In this connection new firms play a particularly important role.

When we attempt to take all those considerations into account at once it is apparent that an optimal industrial structure is not one in which all firms, even in a single industry, are cast in the same mold. Too many diverse considerations have to be reconciled for that.

There is a place in an efficient, progressive economy for the very large industrial firm capable of supporting large-scale research activities and able to venture millions of dollars on the success of a new product or process.

But we would be unwise to entrust our fortunes wholly to three or four such large firms in each industrial sector.

For all their large resources, and even when they have adequate incentives, large firms may and actually have neglected to develop important processes and products which smaller firms have exploited.

Moreover, while there is no doubt that large firms have adequate resources for research and for the investment required to put their results into practice, their incentive to take the necessary risks is not so securely based.

It is true that rivalry among a few large firms provides more incentive for a progressive investment policy than is sometimes thought to be the case, but the rivalry among very large firms might very well atrophy—or be reduced in intensity by various types of market sharing—without the constant threat of aggressive behavior on the part of small and medium-size rivals hungry for a larger market share.

I might add that my colleague, Professor Galbraith, has made some comparison of wage and price movements between industries and given particular attention to a comparison of wages and prices in textiles and apparel as against steel. It strikes me that the particular comparisons which he makes are a good example of the many other factors that I have mentioned, because it is clear that the textile and apparel industry are relatively slow-growing demand industries in which there are special conditions in labor supply, owing to one migrating to the South and the other having the benefit of a lot of migration. Textiles have tended to have excess capacity because of the regional shifts toward the South.

On the other side the steel industry in addition to the competitive structure factors and the trade union situation in the steel industry has been an industry with increasing capital costs. So that making any point to point comparisons where you take a single industry against a single other industry won't give you reliable results unless

you take very considerable care to take into account all the other factors besides the central ones in which we are interested. In many cases it will turn out that you get false results by that kind of comparison. In general, however, I wanted to emphasize the two points. There is some reason for thinking that the industries with more price competition and more price flexibility contribute in an indirect way in some periods to inflation when their demand is rising very fast through their effect upon cost of living and cost for other industries.

On the other hand, the more highly concentrated industries contribute to inflation through a different route, that is, not so much through raising their profit margins but through being in a position where it is fairly easy for them to give wage increases and pass them on into prices. So one cannot draw any simple conclusion as to the effect that strong market power in itself gives us a great deal more inflation than we would have with a somewhat different structure or the contrary.

I would like to emphasize just in closing the one point that industries with long-run price policies in which there is a strong competitive element from what I have called fringe competitors may be industries in which you get as nearly as possible the best of both worlds. At least it is very important, I think, to protect—I should not say protect—to see that conditions are as favorable as possible for the relatively small firms in industries which are otherwise heavily concentrated. Let me stop there.

The CHAIRMAN. Thank you very much.

Mr. Fellner.

#### STATEMENT OF WILLIAM J. FELLNER, YALE UNIVERSITY

MR. FELLNER. Mr. Chairman, I have prepared a brief presentation here, and I think I might read it without abridgment unless, as I go along, you feel I take too much time, in which case I will cut it short at some point.

The CHAIRMAN. You may proceed.

MR. FELLNER. General economic analysis is becoming increasingly oriented to the investigation of paths of growth rather than of static equilibrium conditions. This has important implications also with respect to the analysis of market power.

Earlier it was usual to base the main economic objection to the concentration of market power on the proposition that such concentration distorts the allocation of resources to specific uses. In the lines of activity where appreciable market power exists, producers find it profitable to use fewer resources than would be justified by the relationship of costs to consumer preferences. This stays a valid proposition, but its significance is somewhat reduced if we look at an economy from a dynamic point of view and make it our business to appraise the results obtainable along a path of growth. Whatever the degree of malallocation of resources may be at any given level of general activity, changes in resource input in various lines of activity do respond properly to changes in costs and in consumer demand, except if, unexpectedly, the degree of concentration of market power were to show a rising tendency. It remains true that the monopolist produces relatively too little and the competitive producer relatively

too much, but this is not the aspect of the problem which at present would deserve the primary emphasis.

As for the speed at which an economy is moving along a growth path, the proposition has been advanced in economic theory that firms possessing market power retard the introduction of improved methods. I will not go into this matter in detail, but I will say here that the assumptions on which this particular proposition rests are very restrictive. For this reason the argument is inconclusive.

## II. PROBLEMS NOW IN THE FOREGROUND

The main reason why high market power creates difficulties at present is that powerful unions and corporations are apt to engage in inflationary wage and price raising action at levels of activity which are not yet so high as to be associated with excess demand. The dangers of such inflation—cost push inflation—are very considerable.

In a highly competitive noninflationary economy prices would have to decrease gradually in the industries where the productivity of physical inputs is rising at a higher rate than it does on the average in the various sectors of the economy; in the industries with slower than average productivity increases prices would be rising; and the average price level would remain stable. As for wage rates, if the relationship between the occupational preferences of the labor force and the availability of various occupations stayed the same, and if the relationship between the distribution of skills and the demand for various skills also stayed stable, wages would be rising across the board roughly in proportion to the average increase in labor productivity over the economy as a whole. Changes in wage differentials would reflect changes in the distribution of the tastes and skills of the labor force relative to the distribution which is needed.

In a fully competitive economy monetary fiscal policy could create the aggregate monetary demand which is required for near-capacity production at a stable general price level, and the economic system would actually tend to use up this demand for near-capacity production with no price inflation. But where there exist important sectors with unions and corporations possessing high market power, part of the effective demand needed for full use without inflation will be used up for wage and price increases at an underemployment level of output. The monetary-fiscal authority then becomes faced with a choice between accepting enough underemployment to break the inflationary pattern or accepting inflation. This kind of inflation, if not curbed, is likely to show an accelerating tendency and, sooner or later, to cause grave disturbances.

In what follows I shall have mainly these difficulties in mind, although these are not only ones which the concentration of market power creates for a growth oriented policy. For example, the insistence of unions on not overworking the labor force during work hours may shade over into productivity slowing practices by which the demand for specific varieties of labor is artificially increased. This, too, may retard the growth process noticeably.

## III. REMEDIAL POSSIBILITIES

There exist several types of policy by which market power could be reduced to more easily manageable proportions.

The cleanest solution would be to reduce the size of unions and of corporations sufficiently to assure that in each major industry there should be a fair number of independent bargaining pairs (each pair consisting of a firm and a union). Broadened antitrust legislation would have to be enforced against collusion between these pairs of bargaining units. After such a reform we could set ourselves the objective of approximating full employment, without fearing that the monetary demand will be used up for feeding an inflationary process. This is because each bargaining pair would be under appreciable competitive pressure from the others. Furthermore, at the high levels of employment which we are envisaging here, there would be no danger of a flattening of the uptrend in real wages. There is no reason to expect that the trend in labor's share in the national income would be changed.

An alternative method of dealing with the problem would be to suspend (outlaw) collective bargaining for wages for any period in which the aggregate unemployment rate in the economy is lower than a stated percentage (but not for periods in which there is more than, say, 4-percent unemployment).

The CHAIRMAN. Let me see if I understand you on that point. Are you saying that there should be no collective bargaining in periods of high employment?

Mr. FELLNER. Yes.

The CHAIRMAN. And that collective bargaining should be saved for periods when unemployment is high?

Mr. FELLNER. Yes. If I may add one sentence here, instead of expressing this in terms of aggregate unemployment, we could express it in terms of unemployment of long duration. We could say that collective bargaining for wages is suspended for periods during which unemployment of long duration, say of more than 15 weeks duration, falls short of some stated figure.

Monetary fiscal policy could then be aiming at practically full employment. The idea underlying this suggestion is that the general trend in real wage rates takes care of itself in the labor market whenever the level of employment is high enough. In these periods collective bargaining for wages has mainly the effect of causing inflation, not of raising real wage rates. The highly organized sections of the labor force obtain wage-differentials in their own favor, but the catching-up process starts soon in the other sectors, and the inflationary process gets rolling.

Of these two methods the first—the reduction of the size of units possessing excessive market power—is perhaps more satisfactory in terms of fundamental principles. But both suggestions seem logical, even though appreciable political difficulties stand in the way of both. Still, I think we have been giving solutions of this sort too little attention. We have been overlooking the fact that bypassing suggestions of this character leads into other difficulties which are also likely to prove substantial. What are the other possibilities?

One of the other possibilities is to leave the institutional setting unchanged and to use monetary-fiscal restraints as soon as the degree of resource-utilization reaches the point where cost-push inflation becomes a serious threat. In essence this is the policy which we have been using, perhaps half-heartedly. It is a policy of compromise with the Devil. The desirability of this particular compromise depends in part on how high the degree of employment is which proves compatible with a reasonably stable price level. Very much depends also on what the long run growth rate is which proves compatible with the degree of employment at which the present methods of wagesetting lead to no appreciable inflation.

This compromise may turn out tolerably well, if for example at a 95 to 96 percent level of employment the economy should be growing rather smoothly, without much change in the price level, at an average yearly rate determined by population growth plus an appreciable increase in labor productivity. But the compromise is inevitably a risky one, because the degree of employment at which inflation ceases to be a serious problem may turn out to be lower than I have assumed in my illustration, and because at a reduced degree of utilization the long run growth rate may also prove to be intolerably low.

The CHAIRMAN. Let me see if I can translate this. Are you saying it may be that you will need more than 4 or 5 percent unemployment to prevent inflation from being a factor?

Mr. FELLNER. Yes, Mr. Chairman. I would add a somewhat separate question is this: Do we get proper growth rates at that degree of employment at which cost plus inflation subsidies, or does it not yet become a serious problem? I believe that only experience can show that. My own interpretation of recent policies has been that essentially we are engaged in this kind of experiment.

Only experience can show whether, given the present institutional arrangements in the labor market, it will be possible to get a reasonable degree of utilization and acceptable growth rates without much inflation.

If the answer to this question should come out unfavorably, and if we shall not dare to enforce more competition in the wage-setting procedure, then we shall probably be moving toward direct administrative wage and price controls. This, to me, seems the least desirable alternative, because it would render the allocation of resources thoroughly arbitrary. Furthermore, there would take place a very great concentration of power in the hands of the executive branch of the Government. I will add that I see no essential difference between direct controls and so-called friendly agreements concluded by the Government, the representatives of labor, and those of industry—with the Big Stick behind the scenes.

The CHAIRMAN. I notice you capitalize "Big Stick." Just what do you mean by "Big Stick"?

Mr. FELLNER. These friendly agreements, I think, will be effective only if behind them there is constantly the threat of legislation.

The CHAIRMAN. In other words, Congress is the "Big Stick"; is that right? You have disguised Congress and given it an impersonal title, but Congress is the "Big Stick."

Mr. FELLNER. Mr. Chairman, I meant to say, however, that Congress would not pass very specific legislation in such matters. Con-



gress would have to pass legislation that gives the executive branch of the Government certain powers, and those powers would have to be exercised by the executive branch of the Government. So I don't quite know whose "big stick" it would at the end be.

The CHAIRMAN. I was curious as to who this "Big Stick" was.

Mr. FELLNER. In summary, I would like to list the remedial possibilities as I see them. We may reduce to size of the bargaining units in the labor market through what essentially is an extension of "anti-monopoly action"; secondly, we may suspend collective bargaining for wages, for periods in which the overall unemployment rate is lower than a stated figure—here if I may add again a sentence to the effect, instead of expressing this in terms of the overall rate of unemployment falling below a stated figure we could express it in terms of unemployment of long duration, let us say more than 15 weeks' duration. Thirdly, we may aim for the maximum degree of employment and the maximum growth rate which are compatible with no appreciable inflation (especially with no accelerating inflation), given the present wage-setting procedures; fourthly, we may use direct administrative wage and price controls. I find the last of these alternatives exceedingly undesirable. On my interpretation, we are now engaged in an experiment moving along the lines of the third of these four alternatives. It is too early to tell whether the results will come out favorably. For the event that the results of this experiment should not prove reasonably satisfactory, I would like to urge giving the first two possibilities very serious attention.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you very much.

Mr. Hamberg, we are very glad to have your very thorough paper.

### STATEMENT OF D. HAMBERG, UNIVERSITY OF MARYLAND

#### SIZE OF FIRM, MONOPOLY, AND ECONOMIC GROWTH

Mr. HAMBERG. For a number of years we used to be treated to the defense of giant, plural-unit corporations with monopoly powers, on the grounds that these were needed to achieve the economies of mass production made possible by modern technology. This argument always suffered from a certain lack of conviction, though, if for no other reason than the fact that in numerous cases the giant firms represented amalgamations of other firms that by any measure had been large and efficient corporations unto themselves; witness, for example, the absorption of Carnegie Steel by United States Steel. Empirical support for this argument was also hard to obtain. Other reasons centered on the widespread belief that most of the economies of mass production were to be found in the large-scale plant, as opposed to the large firm. This belief seemed to gain support from the efforts of some of the largest firms to decentralize many of their operations to the point where individual plants or subdivisions were encouraged to compete with one another.

Failing to carry the day on "cost" grounds, the defenders of giant corporations and monopoly power have more recently been treating us to another brand of argument. Starting with the pronouncements of the late Professor Schumpeter in the thirties and forties, we have been told that monopoly, far from being undesirable, is actually advan-

tageous when economic progress is taken into consideration. In general, the case rested on the thesis that substantial monopoly power creates an environment propitious to both capacities and incentives for innovation. We shall examine this argument in the second half of the present paper.

First, however, we want to deal with another form of sanction of big business and monopoly power that has captured the popular imagination. This comparatively new apologia may be set forth as follows:

The independent inventor is not *passé*. In his place have come the giant corporations as the cradles of invention; only these great firms possess the resources to finance the skilled teams of scientists and engineers, working in splendidly equipped laboratories, that are now the providers of new production methods and new products. In short, inventions are believed no longer to originate in cold, barren garrets; instead, they are now the product of institutionalized research carried on by teams of experts working on preassigned projects whose results are preordained.

Not only has the independent inventor been swept aside by the invention of new ways of inventing, the argument continues, but the small- and medium-size firms are also losing out in this process. Those who may be concerned about the monopoly powers of the giant corporations are assured that this is a small price to pay for the contributions to technology, and consequent improvements in our living standards and overall power, that the corporate giants are now making.

The above is an important and influential line of thought, and no doubt many readers will find themselves in agreement with it. Nevertheless, although there is undeniably a basic element of truth in this view, it is easily, and indeed has been, greatly exaggerated. It will be my task in the first half of this paper to try to place some perspective on this issue and to sound some warning notes against too ready acceptance of the argument of the preceding two paragraphs, both on the grounds of what is and what ought to be.

A good way to go about this task is to seek the answer to four related questions:

(1) Is it true, really, that technical development is now the exclusive preserve of the teams of scientists and engineers working in the research laboratories of the giant concerns?

(2) Do the large corporations in fact finance the bulk of modern research activity?

(3) Has large size per se been a guarantee of serious interest in research, so that we have reason to look to an important offset in the form of progress to the monopoly powers of the giant firms?

(4) To what extent is large business size a necessary condition of modern research, and under what conditions?

The answers to these questions should not only cast in a true light the respective roles of the giant firms, the small- and medium-size ones, and the independent as sources of invention, but they may also tell us something about the reputed need for large size firms in the modern realm of inventions.

## THE SOURCES OF INVENTIONS

As we have noted, the belief that large business size and economic progress go together rests considerably on the conviction that invention is now the exclusive domain of the giant corporation. How accurate is this view? A recent study of 61 important inventions made since 1900 discloses that more than half were the product of independent inventors, working alone, unaffiliated with any industrial research laboratories. (See J. Jewkes, D. Sawers, and R. Stillerman, "The Sources of Invention." London, 1958, pp. 82 ff.) Among these were such diverse inventions as air conditioning, automatic transmissions, bakelite—the first commercial plastic—power steering, catalytic cracking of petroleum, the cottonpicker, cellophane, the gyrocompass, the helicopter, the jet engine, quick freezing, streptomycine, insulin, and the continuous casting of steel. Stainless steels were discovered almost simultaneously by an independent inventor and a member of a research laboratory.

In addition, several important inventions have been the product of research conducted in the laboratories of small- to medium-size firms. These include terylene—one of the great synthetic fibers—the crease-resisting process for fabrics, DDT, the continuous metal-casting process, as well as the continuous hot-strip rolling of steel sheets and shell molding.

In short, a total of 40 inventions out of the group of 61 selected as a sample of important inventive activity since 1900 have been the product of research carried on by the independent inventor or in the research laboratories of relatively small firms. Assuming the sample of 61 inventions is reasonably representative of major inventive activity in the current century, these figures certainly cast serious doubt on the thesis that technological progress is now the bailiwick of the large numbers of research workers employed in the great laboratories of the big firms.

Further indications along these lines have recently been provided by another study based on a sample drawn from U.S. patent data (Jacob Schmookler, "Inventors Past and Present," Review of Economics and Statistics, August 1957). This study shows that 40 percent of the patentees were not technologists, and therefore were presumably not in the employ of research laboratories. In addition, only some 40 percent of the patentees were full-time, hired inventors, the remainder having been line technologists, executives, or individuals employed in diverse occupations, all ostensibly devoting their leisure time to their inventions. In other words, 40 to 60 percent of the patentees could probably be said to have worked outside the organized teams of research workers of the industrial research laboratories, figures that appear to correspond with the findings of the study cited earlier. Corroboration of this statement is suggested by the patent-study finding that some 50 percent of the patentees were not college graduates, and it may also be presumed that this group would not be among the skilled teams of the industrial research laboratory.

These percentages are borne out by the basic patent statistics themselves. These statistics disclose that 40 to 50 percent of patented inventions are the product of the work of independent inventors. (It is worth noting that the basic patent statistics contain a strong and

misleading numerical bias toward corporation-sponsored inventions. For the large corporations tend to be mainly responsible for a proliferation of patents on quite marginal variations on original, basic inventions. Among the reasons for this are a desire to maintain control over earlier patents and a desire to create roadblocks for competitors. One corporate director of research has said that as a result of indiscriminate patenting by large corporations, corporate patents involve much less true invention than those of independent inventors and should therefore be discounted.)

Moreover, preliminary results of a study, being conducted by the present writer, of 45 important inventions made between 1946 and 1955 also lend strong support to the percentages cited in the preceding paragraph; if anything, they seem to show an even larger proportion of important inventions originating outside the research laboratories of the giant corporations.

All this is not meant to denigrate the contributions of the industrial laboratories of the large firms; the latter have been responsible for some very important inventions. Nylon, of course, was the product of the immense research facilities of the Du Pont laboratories, and if these did not discover cellophane—an individual did that—they were responsible for the development of its present moisture-proof qualities. The General Motors laboratories discovered Freon refrigerants and tetraethyl lead and were responsible for the final developments of the diesel-electric locomotive that made it commercially feasible—although the work had already been done by two small firms that were absorbed by General Motors, along with some of the most experienced workers in the field. The fabulous transistor was the product of the Bell Telephone laboratories, and so on. Altogether, about 11 of the 61 important inventions mentioned earlier may be traced to the work of teams working in the industrial laboratories of large firms.

Yet even in many of these cases, like television, silicones—materials whose characteristics remain unchanged through wide variations in temperatures—and plexiglass, much of the basic research had already been performed by individual inventors working alone or in laboratories of small firms or specialized research laboratories. All this evidence combined seems to tell us that those who believe that the great industrial research laboratories of the giant firms are now the primary leaders along the path of technical advance in our brave new world have a seriously distorted view of things. There is little doubt that the laboratories are much more important in this century than they were in the last one, but apparently they are a far cry from having become the chief source of (qualitatively important) inventions.

#### SOME STATISTICS ON RESEARCH EXPENDITURES

It might be well to look at some of the data on expenditures for research to place the role of large business-financed research in better perspective. First let us note that in the United States in 1957, about \$9 billion were spent on research and development. Of the \$9 billion figure, at least a half and possibly as much as two-thirds was spent by the Federal Government, mostly for defense purposes. Over half

of Federal spending was used to finance research and development carried on in the private sector of the economy. This information explains why more than half of private research is found in the aircraft, electronic and electric equipment, atomic energy, and guided missile industries.

In the United States, 84 percent of corporation expenditure in aircraft is met by the Federal Government; in electrical equipment, 54 percent; in scientific instruments, 45 percent; in telecommunications and broadcasting, 52 percent \* \* \* In nonsubsidized research and development about one-half of the expenditure is to be found in chemicals, electrical, and other machinery and petroleum refining (Jewkes et al., pp. 148, 152).

What inferences can we draw from these data? For one thing it seems clear that the prodigious increase in corporate research and development spending since 1940, about which so much has been heard, has been largely the result of Government financing for defense reasons. Further, most of this spurt in research activity has been concentrated in relatively few industries, largely those with defense connections. That is to say, most manufacturing industries and firms have not shared in this spectacular growth in spending on research and development. In fact, other data show most manufacturing firms, large and small, carry on very little of this activity; they concentrate on manufacturing.

Even in the relatively few industries where corporate research is carried on in a big way, in view of the stimulus that they have received from Federal financing, what can we expect from them in the future? Some may assert that war preparations are here to stay, so that we can look forward to a continued strong interest in research from these groups, and the large firms, with their wonderfully equipped laboratories and skilled research personnel, will lead the way into the technological future. In part, the element of truth in this assertion depends on the length of time cold—and hot—wars will indeed remain with us, and this is a political question beyond our purview. It also remains to be seen to what extent defense-connected industries hold the torchlight to future technical developments.

Others will insist that even if the Federal Government steps out of the financing picture, the firms who are now spending on research in a big way will get in the habit of doing so, and will continue to do it in the future. Again, this may or may not be true. Certainly, there is room for some skepticism. Inviting caution on this point are the number of instances of firms that were quite aggressive in their research interest and spending at one time and lapsed into a state of semisomnolence at another. Once the Government stops footing the bill, there is always the possibility that the comptrollers and accountants, with their everlasting myopic attitudes toward research, will find continued large scale spending in this direction wasteful and expendable. This, too, has happened before, and it can happen again.

#### DOES LARGE SIZE PER SE LEAD TO INTEREST IN RESEARCH?

Among those who believe that large size and technical progress have become as one, there seems to be the implicit notion that all or most giant firms have become sponsors of industrial research. Our previous discussion of the comparatively small proportion of important inventions since 1900 emanating from the giant corporations

should be enough to cause strong skepticism on this score. Beyond that, we need only to note a number of important industries dominated by very large firms where interest in research has traditionally been at a minimum. The steel industry is a notable case in point. Since the turn of the century, this industry—particularly the largest firms—has not been noted for its progressiveness. Virtually all the important recent advances in the methods of producing primary steel have come either from outside the industry or from small firms within the industry. Continuous hot strip rolling and the oxygen converter were developed by small firms; continuous casting and planetary mills were created by independent inventors. (It is worth noting that three of these new processes just mentioned threaten to revolutionize our conception of the steel industry as one involving gigantic plants—and firms—that are irreducible in size and hence virtually inconsistent with much competition. With existing techniques of producing primary steel prevailing in the United States, the costs of plant and equipment per ton of steel fall within an estimated range of \$300 to \$400 per ton. This is the capital cost of primary steel as it goes through the open hearth, blooming, and conventional finishing mills. However, it has been reliably estimated that with the replacement of the open hearth by the oxygen converter, the blooming mill by the continuous casting process, and the conventional finishing mill by the so-called planetary mill, these capital costs should be reduced to some \$65 per ton. Yet it is interesting that, despite widespread adoption of these processes in Western Europe and Russia, the steel industry in the United States has shown virtually no interest in them, with the possible exception of the oxygen converter.) The same was largely true of the evolution of processes for using taconite ores—low-grade ores constituting an almost unlimited supply of iron. And as noted above, in some of these cases the large firms have strongly resisted the adoption of these new techniques.

But there is no need to dwell on the steel industry. It has been said of the cigarette industry, than which it is difficult to find larger size and more concentrated production, that its firms are almost totally innocent of any serious interest in research. In the equally if not more concentrated auto industry, it is fair to say that most of the recent engineering improvements have come from without the large firms of this industry. Many, like the new suspension systems, were pioneered by small European concerns, and others, like the automatic transmissions and power steering, were largely the results of the work of independent inventors. Again, during the years when the aluminum industry was a virtual monopoly of Alcoa, two of the three most important advances in production methods originated outside the industry. In the basic metal industries generally, where firms tend to be quite big, relatively little is spent on research. The same is true of the food products and agricultural machinery industries, both dominated by large firms. And so on through such similar industries as linoleum, plumbing equipment, meat products, distilled liquors, and so forth.

Certainly there are industries where the typical firm is large and interest and spending on research intense, such as the aircraft, heavy electrical equipment, chemicals and petroleum. But again, note that the first two of these have been the recipients of heavy Government

financing. More important, however, the large number of cases that can be cited where large firms have by no means been in the vanguard of developing technology is proof enough that large size per se is no guarantee of large-scale spending on research and development (a more detailed statistical confirmation of this conclusion is provided by Jewkes, Sawers, and Stillerman, *op. cit.*, pp. 156-157, and tables III, IV, V, VI, VII, pp. 193, 194, 195, and 196), and exceptional progressiveness. The fact that manufacturing industries where very large firms predominate have displayed no greater increases in output per man than other manufacturing industries is additional testimony to this fact. So is the tendency of large companies to get into new fields by absorbing smaller ones who have already made substantial progress and possess the men with know-how. General Electric got into the electric range and electric clock fields in this way, as did General Foods in moving into the frozen food market, and General Motors in becoming the chief producer of diesel-electric locomotives, to name but a few examples.

#### IS LARGE SIZE A NECESSARY CONDITION FOR MODERN RESEARCH?

The discussion in the last section indicates that large size is clearly not a sufficient condition for interest and spending on research in the modern world. On the other hand, can it be said that large size is still a necessary condition? Would breaking up the large corporations, for example, be tantamount to depriving us of the major source of research into new techniques and products that will pave the way for future economic progress? In a sense, our earlier examination of the sources of inventions implies a negative answer to this question. But the persistence of unsubsidized research in certain industries, like the chemical and petroleum refining industries, both characterized by very large firms, suggests that in some cases there may indeed be some connection between expenditures on research and size of firm.

This connection seems to lie in fields of research or invention where the path to success is not a systematic one, but rather rests on a protracted and expensive series of experiments and tests. The element of chance assumes a large role as the researchers play a hunch that on the basis of known properties of certain elements or compounds—or soil and bacteria cultures—other compounds or molds—as in the cases of the antibiotics—with desirable properties can be found. Or often, a long series of tests may be performed in the mere hope of discovering unknown properties of certain compounds that will yield useful applications. A knowledge of science may be helpful in narrowing the range of experiments that must be performed in these cases, but perhaps only from 100,000 to 10,000 experiments.

This information may come as a surprise to many who believe that modern science and technology has lost its, supposedly, "hit or miss" qualities of the past, and is now on such a systematic basis that its results are foreordained. Yet a number of important discoveries have been made in recent decades that have been matters of chance observation arising in the course of a search among many possibilities. These discoveries include such products as tetraethyl lead, Freon refrigerants, Duco lacquers, polyethylene, penicillin, streptomycin, and numerous others. (See *ibid.*, pp. 68-69 and 163-166, from which most of this discussion has been drawn.)

The significance of research of this type for the problem at hand is not hard to discern. When inventions or discoveries involve innumerable observations from a long series of experiments, teams of research workers, with ample and sometimes elaborate research facilities at their disposal, may provide the fastest and most efficient way of achieving results. For the ground to be covered can sometimes be methodically divided between different workers, and teamwork may be of greater value since the accumulation of negative results is one method of finally identifying the correct line of attack (*ibid.*, p. 166). Here, then, the financial resources of the big firms may be required to provide both the facilities and the teams of workers. Moreover, where the element of chance is great, the large firm is in a better financial position to absorb the costs of the many failures involved before success is achieved.

However, we must not exaggerate the potential of the large firm in this respect. For one thing, the kind of expensive experimentation just described appears to apply mainly to chemical and related inventions. For another, this type of research is not new, and has been successfully conducted in the past by individuals or small teams of workers utilizing a bare minimum of equipment. This was true in connection with the discovery of the first aniline dye and the vulcanization of rubber in the previous century, for example, and of Freon refrigerants, tetraethyl lead, and nylon in the 20th century. In fact, some of the very large firms operate a number of small laboratories rather than one large one. This indicates, on the one hand, that there are often serious disadvantages to the very large laboratory and big teams—for reasons to be discussed—and on the other hand, that comparatively small firms can afford laboratories of their own. Supporting the latter statement is the information that—

in the United States the average operating cost of a laboratory per research engineer or scientist is about \$25,000 \* \* \* so that a group of 10 such workers, with their ancillary personnel and aids, would not appear to be beyond the resources of a moderately sized firm (*ibid.*, p. 160).

Finally, let us note that although an ample supply of funds helps, it does not necessarily guarantee results. In fact, concentration of research attack in one large firm may actually hinder achievement. In the face of the tremendous uncertainty that actually surrounds most major inventive activity, it is usually important that as many avenues as possible be explored and that the individual researcher be given as free a hand as possible. High level programing and direction should be limited to statements of objectives; the choice of pathways and techniques for achieving the objectives should be left to the research personnel, and substantial competition and even duplication in research efforts should be encouraged and fostered. This type of approach to research and development is one of the great lessons learned from U.S. experience with military research and development projects. (See B. H. Klein and W. H. Mechling, "Applications of Operations Research to Development Decisions," *Operations Research*, May-June 1958; B. H. Klein, "A Radical Proposal for R. and D.," *Fortune*, May 1958; also see R. R. Nelson, "The Economics of Invention: A Survey of the Literature," *The Journal of Business of the University of Chicago*, April 1959; and C. J. Hitch, "Character of R. and D. in a Competitive Economy," proceedings of a conference on R. and D. and its



impact on the economy, National Science Foundation, Washington, 1958.)

However, it is an approach that typically runs counter to management ideas about efficient organization. Although there appear to be some important exceptions, the control of most industrial laboratories tends to be rather centralized, with early programing by the director of research in which each worker is assigned a prearranged task. Duplicative efforts often seem economically wasteful, especially to those controlling the purse strings. Modern notions about efficiency of business administration, buttressed by growing reliance upon cost accounting as a way of minimizing costs by weeding out inefficient operations—these are too deeply imbedded in the minds of most managements to permit the loose type of organization required for original and important inventions. Some large firms have tried it, at least for limited periods. But the odds seem against it.

The foregoing discussion should be sufficient to raise serious doubts that the great industrial laboratories are now the repositories of research and invention in the Western World that they have been made out to be and to caution against the glib tendency to identify large firms with serious research interests. This discussion should also prompt us to guard against glib assumptions that large teams of organized scientists and technicians working under close administrative guidance, with their tasks and goals carefully preestablished, are indeed the best approach to invention. It certainly remains to be demonstrated that there is a definite correlation between size of research organization and quality as well as quantity of inventive achievement. On the contrary, it is disquieting to hear of the number of research administrators who remark on the amount of piddling that goes on in the great laboratories and the heavy spending on marginal improvements designed to maintain patent controls. And students of invention have often commented on the number of truly important inventions that have been the work of individuals unassociated with an industry and thereby able to approach its problems with a completely fresh and detached outlook.

#### OUTSIDE SOURCES OF INVENTION

Apart from the individual inventor's making his ideas known and available—for a price, of course—to business firms of all sizes, there are a number of sources of inventions outside the firm that make it possible for even the comparatively small firm to obtain the benefits of research and development. Take, for example, agriculture, that paragon of pure competition and the small firm. Except for isolated discoveries by wealthy farmers, in the past little technical advance has originated in this sector, but important advances, recently almost embarrassing advances, have nonetheless been made. How? By whom? The answer is familiar to all: primarily, Government research agencies and experiment stations, and the agricultural schools of the land-grant colleges.

This fact is, of course, well known. Yet it is surprising to find how many people refer to it in disparaging terms, as though there were something unclean about Government research performed for the farm sector. But such research is just as valuable as that performed in the private sector, and there is no reason why it cannot be

enlarged in the interests of making research and development compatible with more competition and smaller size firms.

Of course, under the impact of defense goals, a greatly expanded program of Government research is already being carried on, and many recent tendencies in private industrial technology are traceable to pioneering Federal research and development projects. Among these tendencies are the application of radioisotopes, the drive toward competitively priced atomic power, cold sterilization of food by radiation, the formulation and fabrication of titanium and magnesium and other heat- and corrosion-resistant metals and alloys, and so forth. If such things can be accomplished by Government research for defense purposes, why can't they be done in peacetime as well? There is certainly one decisive advantage Government research and development has over private, and that is the avoidance of patent problems: the results are made available for all firms, large and small, to utilize as they wish and as promptly as they wish.

Moreover, it should be remembered that a potentially large portion of the benefits of private research and development cannot be latched onto by private firms in the form of profits. This stricture applies particularly to the results of basic or fundamental, as opposed to applied or practical, research, and probably plays a significant role in explaining the notable failure of private industry to engage in much basic research. Rightly so, I believe, patent law typically disallows the patentability of discoveries of fundamental ideas. At the same time, the absence of patent protection at the fundamental level must be acknowledged as a deterrent to the conduct of basic research by private firms. Furthermore, the fruits of basic research are likely to be rather long delayed and comparatively uncertain—uncertain as to outcome in general and uncertain as to the ability of the sponsoring firm to exploit a particular discovery because of resource limitations of one sort or another. Under these circumstances, Government agencies, representing society or industry in general, possessing much lower time preference and risk discount rates and also lower capital costs, are potentially the ideal groups to conduct basic research, an area that by common consent has been badly neglected in this country.

This same line of thought suggests another potentially important drawback of the financial strength of the large firm in the field of research and invention. As a result of its ability to pay attractive salaries to scientists and technicians plus the factors mentioned in the preceding paragraph, the giant corporation succeeds not only in concentrating scarce resources in research featuring the short payoff, prototype production, or design characteristics, but it deprives other sectors of the economy, like the university and Government sectors, of the resources to use in basic research. And of course, we might, if we wish, extend this point one important step further. We might also argue that the relatively high-paying large corporations are drawing scientific personnel away from teaching, as well as research pursuits, in our universities. In addition to being lost to basic research, therefore, they are being lost to a function certainly as vital, if not more so, to the extension of knowledge; namely, education.

This loss must be considered in any evaluation of the research and development activities of the large firm.

Returning to the theme of sources of invention outside the business firm, let us note the appearance in recent years of another potentially important outside source. This is the independent profit-seeking research firm. Although large corporations make frequent use of such firms, their interest for us lies in another solution they pose to the problem of expensive research and the small firm. In essence, the problem of the small firm consists of its inability to bear the potentially large overhead costs of its own research facilities and workers needed in some types of research. But the independent research firm, in making its services and facilities available to small firms, provides a wonderful way in which large numbers of the latter can, in effect, share these costs. The rapid proliferation of such firms holds great promise for future reconciliation of the problem of maintaining research, economic progress, and active competition. In an interesting way, these firms are another example of a free-enterprise system's remarkable capacity for providing people to undertake something when it is profitable to do so. And if research is as profitable as it is supposed to be, we may expect an increasing number of independent research firms to appear. Certainly, this is an institution whose growth warrants strong encouragement.

Paralleling the growth of such firms has been another institution especially designed to make available outside research and development facilities to the small firm. This is the industrial research association, a group which the members of an industry jointly finance and from which all can take new technical discoveries on equal terms, and in many cases there is no question of agreements to fix prices. Provided price fixing can be uniformly avoided, the industrial research association is another way in which small firms can and do share the overhead costs of research.

Add to these the many nonprofit research institutions and foundations, the laboratories of the universities, and the individual inventor, whom we have found to be still a decidedly prominent source of inventions, and it will be seen that there are many outside sources of research facilities available to the small firm. When we consider the matter in this light, research, economic progress, and active competition, characterized by small- and medium-sized firms, do not appear as incompatible as they are often made out to be.

#### MONOPOLY AND ECONOMIC PROGRESS

As remarked at the beginning of this paper, there are many who claim not only that the giant firm is needed to undertake research in the modern era, but that the substantial degree of monopoly power that large size usually confers is equally vital to economic progress. Far from being exorcised by the existence of significant monopoly power, these people see in it a definite advantage aiding our quest for technical progress and higher living standards. This advantage is felt to outweigh by a considerable margin the losses from oft-admitted monopolistic powers. So, without further ado, let us see of what fabric this argument is made.

## THE CAPACITIES FOR, AND STIMULI TO, PROGRESS ENGENDERED BY MONOPOLY POWER

The arguments favoring monopoly power as a source of progress fall into two categories. One is that the capacities of the enterprises with significant monopoly power are more likely to lead in the direction of progress than those enmeshed in the environs of pure competition. The other argument views a strong element of monopoly power as an absolute stimulus to progress.

Capacities for innovation: Dynamic and imaginative entrepreneurs are not likely to be found in pure competition, for the very nature of this market structure tends to be too inhibitive, limiting as it does the activities of the firm to pure production decisions. There is no room for aggressive price and sales policies, no leeway for "creative" product variation, and no outlet for original and striking advertising campaigns. These are indeed cold and uninviting surroundings for the energetic and fertile businessman, galvanized for action and impatient to try out new ideas.

Moreover, because the monopolistic firm is apt to be large in size, it will be in a good position to afford to employ executives with the traits just described, men with the capacities to originate and develop new ideas and ways of doing things. In addition, monopolistic power is frequently the result of superior entrepreneurial ability, ability that can be counted upon to continue to drive for new methods and new products in an effort to enhance monopoly power, perhaps, but still redounding to the benefit of society.

Furthermore, and probably more important, monopoly profits are a principal source of funds to finance research and to finance new equipment implementing discoveries. Expenditures for research are also a very risky type of investment, and the protection that monopoly power affords acts as an inducement to spend on research, because the firm feels a measure of security from the knowledge that it will likely be the sole possessor of the new inventions it produces. Ample proof of this is found in the demonstrably heavy concern with research in concentrated industries and, within these, in the largest and more monopolistic concerns. This last is a highly questionable statement, as the discussion on pages 569 to 572 above showed.

Incentives to innovate: Probably the most important aspect of the monopoly cum progress argument is associated with the matter of incentives. Monopoly power is said to be an indispensable adjunct to the willingness of the firm to invest in the production and sale of new and untried products and techniques of production. Investment of this type, i.e., innovational investment, is often very risky and expensive. It runs the risk of buyer resistance, of long and expensive sales campaigns to overcome this resistance, and possibly of ultimate failure. Expensive investments in new plant and equipment may be required, often preceded by equally expensive periods of experimentation and development. As a result, the excess profits associated with substantial monopoly power are a necessary inducement to innovation. Without the protective shield of such monopoly power, or contrariwise, with the prospect of easy and quick imitation and vigorous competition, the incentive to undertake these expensive risky innovations would evaporate. Vigorous competition

in the innovative process would cause this process to wither on the vine. Monopoly power in this connection is the very lifegiving air on which economic progress thrives.

#### MONOPOLY POWER AS A SOURCE OF RESTRAINT ON ECONOMIC PROGRESS

As usual, there are at least two sides to every question, and this is no less true on the issue of the role of monopoly power in the innovation process. For one thing, it would be an egregious mistake to identify the growth of monopolistic power with superior entrepreneurial ability. In some cases, such as the Ford Motor Co., there doubtless has been a large element of this superiority behind the accrual of such power to giant firms. But looking back over the past, particularly to the great merger movements in the period around 1900 and in the 1920's, we find that the greatest source of impetus to these movements originated in the desire to curb competition and from the great profits for the promoters of these mergers. Today, such things as tax considerations, desires to assure sources of supply or market outlets, or product diversification seem to be fostering mergers, rather than any unusual entrepreneurial talents—at least of the type that necessarily bodes well for technical progress.

Moreover, quite the opposite from being a convenient vehicle for the exercise of the talents of the dynamic and imaginative entrepreneur, the large corporation can lead, and has led, to developments not conducive to the risk taking that is associated with innovation. Chief among these is the emergence of bureaucratic organizations of officials to carry out the multiple, complex functions inherent in modern large-scale enterprise. The bureaucrats of the large corporations, usually cloaked with substantial monopoly power, develop a strong sense of security about their jobs, a career attitude toward managerial positions, that make it imperative to be a good organization or team man, to follow the accepted rules of action and behavior. For interesting and incisive discussions of the extent to which these qualities of corporation executives are now being emphasized, see Vance Packard, "The Hidden Persuaders," Philadelphia, 1957, chapter 18; and W. H. White, "The Organization Man," New York, 1958. These are not the qualities of the prospective innovator. Risky ventures are avoided that might destabilize existing market situations and threaten the position of the entrenched managerial bureaucracies, which operate better in a stable, rather than a changing, environment. These bureaucracies tend to become instruments of resistance to, not promoters of, change.

Moreover, it must be remembered that innovations that are substitutes for existing products and processes involve losses from the scrapping of existing plant and equipment. Firms protected by monopoly power may be expected to try to avoid such losses by postponing innovation until the existing capital goods have considerably depreciated. Why render obsolete with a new innovation what may have been painfully built up in the past? And this is no less true of firms that spend large sums on research than of those who do not. In fact, for the former, much of their research may be aimed at the protection of existing monopolistic strength, as well as the avoidance of capital loss through obsolescence—by obtaining patents ahead of

others threatening the firm's entrenched position. Scrutiny of the innovational behavior of the electric lamp, radio and television, railway locomotive, and telephone industries, among others, discloses that innovations of competitive products have occurred only after long periods of market exploitation of old products. The investigations of a number of writers have brought them to the conclusion that new firms are very often needed if radically new innovations are to take place; this has even been true in industries where the established firms have had reputations for progressiveness, such as the electric lamp and telephone industries. (See W. R. MacLaurin, "Invention and Innovation in the Radio Industry," New York, 1949; A. A. Bright, "The Electric Lamp Industry: Technological Change and Economic Development, 1800-1947," New York, 1949; and R. Schlaifer and S. D. Heron, "The Development of Aircraft Engines and Fuels," Cambridge, Mass., 1950. See also Nelson, *op. cit.*, pp. 108-109.) A study of new firms established in Connecticut after World War II reveals that a large percentage were set up in order to innovate a new product invented by one of the owners. Frequently, the inventor felt constrained to leave his previous job for this purpose because he could not interest his superiors in his invention. (See G. Brown, "Characteristics of New Enterprises," New England Business Review, June and July 1957. Cited in Nelson, *loc. cit.*)

This information should not be unexpected. Innovation is certainly expensive and risky. The intelligent entrepreneur is all too aware of this, particularly if he has recently experienced the trials and tribulations of innovation and market consolidation. Following this experience, a period of quiescence is apt to be the most attractive situation. With good profits, monopoly powers that may insulate well against potential competition, executives are more prone to refrain from innovation, to be content with protecting the fruits of past efforts. They are hardly likely to want to render obsolete soon afterward with a new innovation what may have been painfully built up in the past.

#### COMPETITION AS A SOURCE OF INNOVATIONAL INCENTIVES

These problems do not arise when there is active and intense competition, although not necessarily pure competition. The adoption of new techniques or products by some firms under competitive conditions literally forces the rest to follow suite, to abandon its existing equipment and write off the losses, or else run the risk of being under-sold or losing customers to the new products being introduced by the competitors. In addition, a firm without significant monopoly power, whose share of the market is small, will find the adoption of the latest techniques and products especially attractive as a means of underselling competitive firms and invading their markets. For the losses from scrapping existing equipment will seem rather minor compared to the profits to be garnered from the enlargement of its markets. It is the monopolistic firm, with a sizable portion of the market, that finds losses on sunk capital large compared with prospective profits from further broadening of its market share.

Likewise, competition in contrast with strong monopoly situations is ordinarily associated with freedom of entry, with the full freedom of new firms to enter an industry with new and cheaper techniques

or new, substitute products. The new firm, too, is likely to be a more aggressive innovator. By definition, it has no vested interest in maintaining the capital values of existing plant and equipment, no vested interest in maintaining existing markets. It will want to take advantage of the latest techniques and equipment, and in doing so will force the existing firms to fall in line or be outsold.

Monopoly, on the other hand, obstructs the entry of new firms. Sometimes it does this by deliberate action, as by threatening destructive price competition, patent shelving, and expensive and drawn-out patent litigation, controls over supplies of important materials, etc. At other times, the mere strength of the monopolistic firm's hold on the market may act as a strong deterrent to the entry of new firms.

Perhaps the outstanding feature of active, intense competition in connection with the innovating process is the persistent pressure it exerts to search for and adopt innovations that would otherwise be delayed if introduced at all. It is sometimes said that strong monopoly power is not necessarily inconsistent with innovation. Despite what was said above, there are large firms that can and do have vigorous managements vitally interested in research and development, of sanguine outlook and adventurous spirits, and constantly willing to exploit new ideas in the marketplace. This is true; there are indeed firms with such managements. But we have also seen that there are many firms, with much more monopolistic power, whose managements have not been of this ilk.

The advantage of active, intense competition lies in the fact that it does not leave innovative ability and behavior to pure chance. The persistent pressures from competition provide a compelling force to innovate or fall behind and perhaps eventually disappear altogether. Competition is also the proper stimulant to prevent firms from seeking "the quiet life," from being content to reap the fruits of past efforts and rest on their laurels. If it is true that modern managements of large corporations are not profit-mad, grasping ogres, anxious to maximize earnings, it follows that the drive for profits is no longer the reliable spur to innovations it was once thought to be. Competition again, however, does not rely on the chance existence of a strong drive for profits. It provides an inspiration to innovate all its own.

In reply, it is often argued that even firms with apparently substantial degrees of monopoly power are not immune to strong competitive pressures. There have been dramatic struggles even in monopolistic, or oligopolistic, markets; new firms have overcome obstacles in the past and encroached seriously upon monopolistic markets; interindustry competition among otherwise monopolistic firms producing substitute goods has often waxed hot, and so on. In brief, competition is an ubiquitous and pervasive force from which no firm can ever completely cut itself off and enjoy peace and tranquility.

There may be a strong element of truth in this view, although there certainly have been protracted periods during which many large firms have been able to enjoy peace and quiet. Irrespective of the truth of these remarks, however, they can hardly be regarded as a defense of monopoly power. They merely show that despite its existence elements of competition may make their presence felt. This sounds like

a very good case for enlarging the area in which competition is allowed to operate, that is, for weakening the forces of monopoly.

#### TEMPORARY VERSUS ENTRENCHED MONOPOLY POWER

We have yet to deal with the argument that monopoly power is a necessary incentive to innovation. This argument, remember, rests on the promise that the prospect of excess profits stemming from monopoly power are needed to induce potential innovators to undertake the great risk and expense that is often associated with innovation. If potential imitation is quick and easy, there is little inducement to accept the possibility of losses. There is undoubtedly considerable merit in this reasoning, and of course, upon it rests the basis for the patent system, which is certainly one of the outstanding but widely accepted, forms of monopoly. Paradoxically, from the point of view of maintaining competition, there is an even more persuasive case in favor of the patent system. It is the one source of potential reward for the independent inventor or new and/or small firm attempting to market a new process or product. Certainly, any efforts to raise outside funds with which to exploit inventions would be well-nigh hopeless without the patent.

However, even if we grant the validity of this form of monopoly power, this is something quite different from granting the general validity of all forms of monopoly power, even for economic progress. In examining the role of monopoly power in economic progress, we must be careful to make a proper distinction between those *temporary* monopolies that are needed to induce investment and the more general and *established* monopolies that threaten to, and often do, stifle progress. For we have found nothing in established monopolistic power that necessarily constitutes a source of incentive to innovate; on the contrary, we have found much that may smother progress. If established monopolies remain progressive, this characteristic may probably be traced to the persistence of competitive pressures, or possibly to chance attributes that make management interested in invention and innovation.

Even in the case of the supposedly temporary monopolies granted by patents, there are many instances of strong innovative activity without them, or with patents of dubious value, because the original inventions were subject to sufficiently close imitation as to negate their exclusive value. This knowledge should make us wonder whether the value of the patent system, and its temporary monopoly power, hasn't been exaggerated. Questions of this sort have even been raised in connection with that almost uniquely expensive innovation, nylon, on which some \$6 million were reportedly spent. It is asked whether in the face of the obviously enormous market decreed by fashion, a number of firms wouldn't have been willing to risk this innovation under competitive conditions. And in the face of the numerous competitive synthetic fibers that were already in prospect at the time nylon was marketed, it may be asked just how much of an incentive the patent on nylon offered. In view of the ease with which so many inventions may eventually be imitated, it may rightfully be asked whether the gains from patents are really in the nature of monopoly profits or whether they merely reflect the profits that accrue to the innovator simply because he is ahead of others and that a time lag is involved



before the rest can catch up. Some large corporations implicitly recognize the legitimacy of this question by making most of their patents available to everyone in the knowledge that patents have a very restricted utility, because imitation is so easy. However, this is no place to go into an extended discussion of the patent system.

Whatever the merits of temporary forms of monopoly power like those granted by patents, one thing seems certain. There are so many instances of innovations by firms possessing little or no monopoly power that we can feel free to cast to the winds most of the suggestions that established monopolies are a necessary, or even an important, ingredient of economic progress. The one feature of large business size and monopoly power that appears to carry considerable weight is associated with the unusually large, absolute profits of the big monopolistic firm as a source of funds to finance research and innovation.

This, however, is simply one aspect of the well-known differential access to finance of the small and large firms. To recognize this finance problem, however, is not necessarily to condone giant size and monopoly power as the solution. Financial aid to small business of the sort envisioned in the establishment of the Small Business Administration and the recent expansion in its activities offers a more hopeful and worthy solution.

But such programs must be carried out on a much larger scale if they are to succeed in their goals of maintaining and enlarging the scope of competition in our economy.

Thank you, Mr. Chairman. The paper is pretty much divided into two halves, the second half dealing with monopoly power as a source of capacities and incentives to innovation, and the first half dealing with the asserted role of the giant corporations today as the modern cradle of invention to the exclusion of the independent inventor and the small firm. I think I should like to concentrate the oral part of my presentation on the first half, since I think there are perhaps more novel ideas in this half than there are in the second half, where the range of discussion is pretty familiar to the professionals.

The CHAIRMAN. You have studied patent systems and inventions and discoveries quite thoroughly, I take it.

Mr. HAMBERG. I would not want to go overboard on that, Mr. Chairman. I only recently, within the last year, have gotten into it. I have been working rather hard on the subject. I would like to begin this task of what I will call really a questioning job of this asserted role of the giant corporations as the modern repositories of invention.

I would like to begin, first, by pointing to three studies on sources of recent inventions. The first one concerns 61 important inventions made since 1900. Over half of these 61 turn out to be due to independent inventors and two-thirds appear to stem from independents and small- or medium-size firms. A second study deals—

The CHAIRMAN. That is the Jewkes study?

Mr. HAMBERG. The first study was the Jewkes study; yes. The second study deals with a sample of patent data and shows that 40 to 60 percent of the patentees were such that they could probably be said to have worked outside the industrial laboratory. The third study deals with the preliminary results of my own work on a study of 45 important inventions made between 1945 and 1956. So far the preliminary results lend strong support to these percentages that appeared

in the first two studies; namely, more than 50 percent of inventions stemming from independent and small firms. The patent statistics also bear out these figures—at least, so far as the assignment data are concerned—and they are the only relevant ones for this problem. Forty to fifty percent of the patents have been assigned to independent inventors. This is despite the numerical bias toward corporate-sponsored inventions. I don't want to elaborate that point because it has been taken care of in the paper.

Senator BUSH. If I may ask a question at this point, in taking a group of inventions like this, how are they weighted in your mind? Are some of them highly significant?

Mr. HAMBERG. The effort has been to pick out important inventions. This is a strong reason for staying away from the patent statistics. The patent statistics include so much marginal-type inventions. Despite the fact that they are the only data capable of yielding a really statistically valid approach, they are full of substantive drawbacks.

Senator BUSH. You are restricting your inventions to those that have been significant.

Mr. HAMBERG. Yes, these have been important inventions. I could cite my own; and if you look at these citations in the Jewkes study, you can see the type of inventions studied.

The CHAIRMAN. Would it be too much trouble if you submitted the list of these inventions? Some of them are given here.

Mr. HAMBERG. I could submit them at a later time, Mr. Chairman. (The information referred to follows:)

#### JEWKES LIST OF INVENTIONS

- |                                    |   |
|------------------------------------|---|
| 1. Air conditioning                | 32. Xerography  |
| 2. Automatic transmissions         | 33. Zip fastener  |
| 3. Bakelite                        | 34. Cellophane tape   |
| 4. Ballpoint pen                   | 35. Continuous hot-strip rolling                            |
| 5. Catalytic cracking of petroleum | 36. Crease-resisting fabrics                                |
| 6. Cellophane                      | 37. DDT   |
| 7. Chromium plating                | 38. Shell molding   |
| 8. Cinerama                        | 39. Terylene polyester fiber                                |
| 9. Cotton picker                   | 40. Continuous casting of steel                             |
| 10. Cyclotron                      | 41. Acrylic fibers (orlon, etc.)                            |
| 11. Domestic gas refrigeration     | 42. Freon refrigerants                                      |
| 12. Electric precipitation         | 43. Krianium  |
| 13. Electron microscope            | 44. Methyl methacrylate polymers (lucite, plexiglass, etc.) |
| 14. Gyro-compass                   | 45. Neoprene  |
| 15. Hardening of liquid fats       | 46. Nylon and perlon  |
| 16. Helicopter                     | 47. Polyethylene (plastic)                                  |
| 17. Insulin                        | 48. Silicones   |
| 18. Jet engine                     | 49. Stainless steels  |
| 19. Kodachrome                     | 50. Television  |
| 20. Magnetic recording             | 51. Tetraethyl lead   |
| 21. Penicillin                     | 52. Transistor  |
| 22. Polaroid Land camera           | 53. Diesel-electric railway traction                        |
| 23. Power steering                 | 54. Duco lacquers   |
| 24. Quick freezing                 | 55. Fluorescent lighting                                    |
| 25. Radio                          | 56. Long-playing record                                     |
| 26. Safety razor                   | 57. Modern artificial lighting                              |
| 27. Self-winding wristwatch        | 58. Radar   |
| 28. Streptomycin                   | 59. Rockets   |
| 29. Sulzer loom                    | 60. Synthetic detergents                                    |
| 30. Synthetic light polarizer      | 61. Tungsten carbide  |
| 31. Titanium                       |   |

NOTE.—The first 33 on this list of inventions may be ascribed without qualification to independent inventors. The 40th (continuous casting of steel) was

primarily the product of two independents (a German and American) working separately, with a small amount of help being supplied in the last stages by steel firms. Inventions 34 through 39 were the product of comparatively small or medium-size firms. Inventions 41 through 51 were definitely the products of research laboratories of large corporations. The remainder defy classification. At different stages, independent inventors, small firms, large firms, and government agencies were variously involved in the inventive process.

HAMBERG LIST OF INVENTIONS (SO FAR COMPLETED OUT OF A LIST OF 45)

- |  |   |
|--|---|
| 1. Electronically controlled mechanical heart-lung     | 9. High-top pressure method of blast furnace operation              |
| 2. Color television                                    | 10. Stereophonic sound  |
| 3. ENIAC   | 11. Acala 4-42 (new strain of cotton)                               |
| 4. Calva process (transforms wool into synthetic furs) | 12. Jet piercing drill  |
| 5. Systox (herbicide)                                  | 13. Liquefaction of coal  |
| 6. Flying typewriter                                   | 14. Ultrafax (high speed word transmission and reproduction system) |
| 7. Photon (typeless typesetter)                        | 15. Cold sterilization  |
| 8. Automatic milling machine                           | 16. Terrelac (synthetic sow's milk)                                 |

NOTE.—The first four on this list of inventions were the work of independent inventors. The next five inventions were produced by small firms, including an independent research firm, and a university. The 10th, stereophonic sound, is the result of inventions by an independent (English) inventor and an engineer in a large American record company. The 11th invention, Acala 4-42, is the product of one individual working in a Federal Government agricultural experiment station in California. The last five inventions were all the product of research laboratories of large corporations.

MR. HAMBERG. Now, I would like to turn to some statistics on research expenditures. In 1957, approximately \$9 billion was spent on research and development. At least one-half and possibly as much as two-thirds seems to have been spent by the Federal Government, mostly for national defense. Over half of Federal spending was used to finance research and development in the private sector. This information appears to explain why over one-half of the private research is found in the aircraft, electronics and electrical equipment, atomic energy, and guided fissile industries; and why some 50 percent or more of corporate expenditures in the private sector seems to be concentrated in these industries and is met by the Federal Government.

It is also interesting to note that about one-half of nonsubsidized research and development expenditures appears to be concentrated in three industries, or largely in three industries—chemicals, electrical equipment, and petroleum refining.

Now I would like to turn to a second question dealing with size and research, stating it: Does large size per se lead to interest in research? This seems to be one of the tenets of those who have recently been arguing that we have got to accept large size now, even if it is accompanied by a strong degree of monopoly power, in view of the contributions to economic progress made by the large firm.

I would like to refer to these tables which are not embodied in the paper. In answer to the question—Does large size per se lead to interest in research?—I would say that the research and development statistics show, in general, that research and development on some scale is found more frequently in larger than in smaller firms. Firms employing over 5,000 workers all do research and development to some extent, whereas only roughly 10 percent of firms employing less than 500 do. There are a number of important qualifications to this statement.

First, whatever size group of firms is chosen, there appears to be a wide range of expenditure on research and development as between different industries. This seems to be borne out by the first table in this group here.

TABLE 1.—*United States, 1953: Expenditure on research and development per company for all companies conducting research and development, by size groups of companies and industries*<sup>1</sup>

[In millions of dollars]

Industries	Expenditure on research and development per company for companies—	
	With employ-ment over 5,000	With employ-ment 500 to 999
Food and kindred products.....	1.0	0.02
Chemical and allied products.....	8.6	.44
Petroleum products and extraction.....	6.1	.12
Rubber products.....	5.2	.09
Primary metal.....	1.5	.02
Fabricated metal.....	1.7	.15
Machinery.....	3.6	.16
Electrical equipment.....	28.7	.42
Aircraft and parts.....	35.8	1.95
Professional and scientific instruments.....	11.4	.70
Other manufacturing.....	5.9	.03

<sup>1</sup> Based on National Science Foundation, "Science and Engineering in American Industry," tables A.3 and A.9, cited; Jewkes, Sawers, and Stillerman, "The Sources of Invention."

The tables should have been enumerated. I am sorry they are not. They appear in the numerical order in which I shall cite them. The type of industry appears to be an important determinant in the amount spent on research and development.

The second qualification: Those industries in which average size for firms is larger do not necessarily spend more on research and development than those in which the average size of firm is smaller. This would be borne out to some extent, I think, by table 2.

TABLE 2.—United States, 1951: Ranking (1-14) of major industrial groups as to research and development expenditure and size of firms

Industry	Ranking of 14 industrial groups according to—		
	Expenditure on research and development (non-Government financed) as percent of sales	Average size of firm (number of employees)	Percent of total employment in upper 1 percent of firms
	(1)	(2)	(3)
Electrical machinery.....	1	5	7
Professional and scientific instruments.....	2	9	4
Chemical and allied products.....	3	8	2
Stone, clay, and glass products.....	4	12	9
Transportation equipment.....	5	1	1
Machinery (except electrical).....	6	10	8
Textile-mill products.....	7	6	13
Rubber products.....	8	3	5
Petroleum refinery.....	9	2	3
Fabricated metal products.....	10	11	11
Other manufacturing.....	11	14	12
Paper and allied products.....	12	7	14
Primary metal industries.....	13	4	6
Food and kindred products.....	14	13	10

Col. (1) based on tables in "Scientific Research and Development in American Industry, 1953," Bull. 1148, U.S. Department of Labor.

Cols. (2) and (3) based on "Size Characteristics of the Business Population," Survey of Current Business, May 1954, cited; Jewkes, Sawers, and Stillerman, "The Sources of Invention, 1958."

The third qualification: Although small firms are less likely to spend on R. & D. than large firms, when they do, the small firms seem to spend as much as large firms in proportion to their size, expressed as a percentage of sales.

The fourth qualification I would add is that the evidence indicates that in the same industry, firms of the same size differ widely in their spending on R. & D. This last qualification is borne out by the last two tables.

TABLE 3.—Chemical and allied products, United States, 1951:<sup>1</sup> Percentage of cost of research and development to value of sales

Size group of company	Average percentage	Median percentage	Lower quartile percentage	Upper quartile percentage
Less than 500 employees (162 companies).....	2.5	2.6	1.3	5.8
500 to 4,999 employees (58 companies).....	2.4	1.7	1.0	2.7
More than 5,000 employees (22 companies).....	2.6	2.4	1.7	3.9

<sup>1</sup> "Scientific Research and Development in American Industry, 1951," U.S. Department of Labor, table C-20, cited; Jewkes, Sawers, and Stillerman, "The Sources of Invention, 1958."

TABLE 4.—15 largest oil companies in the United States, 1948

Size group total assets	Average size of research staff	Smallest research staff	Largest research staff
Over \$1,500,000.....	811	455	1,123
\$1,000,000 to \$1,500,000.....	944	469	1,129
\$500,000 to \$1,000,000.....	691	378	1,314
\$230,000 to \$500,000.....	184	95	347

Cited as above, "The Sources of Invention, 1958."

My paper also discusses a large number of industries dominated by large size firms where interest in research has traditionally been at a minimum.

The CHAIRMAN. You use steel and cigarettes.

Mr. HAMBERG. Steel, cigarettes, autos, linoleum, plumbing equipment—

The CHAIRMAN. Is this true of autos?

Mr. HAMBERG. I cite the auto industry by way of noting that the large number of recent important innovations in the automobile itself seem to have come from abroad—in the case of the suspension system small firms abroad—or in the case of automatic transmission or power steering from independent inventors. I think that although some of the firms seem to spend a fair amount on research and development, I am not sure just exactly where it has led to.

Representative CURTIS. Could I ask a question at this point?

Mr. HAMBERG. Yes.

Representative CURTIS. You mentioned spending outside the industry. A certain amount of that expenditure is the result of the big corporations financing this industry. Have you checked into that at all?

Mr. HAMBERG. No. I am not aware of that in the case of the power steering and automatic transmission.

Representative CURTIS. I modified my statement by saying a "certain amount." I don't know whether it is great or small. I simply know in the field of automatic transmissions two small companies who were financed by two of the large auto companies to continue their research work. I don't know how much of that goes on.

Mr. HAMBERG. This does not seem to have shown up in a case study that was undertaken in this connection. I did not do the case study, and I have no further evidence on that matter.

The CHAIRMAN. Steel and cigarettes are cases of relatively high concentration, and the firms do not seem to have developed any real advances in the industry.

Mr. HAMBERG. I think the cigarette industry is outstanding in this respect. It was cited some years ago.

Representative CURTIS. What would you do in the cigarette industry? You talk about research and development. What would you do there? It is the nature of the business. They have certainly done a lot in the field of advertising, I regret to say. It is just an industry that does not lend itself to much research?

Mr. HAMBERG. That may be, Mr. Curtis. I have suggested in this oral part that apparently other factors than size distribution of firms enter in. I think we might mention such things as the technological base of the industry among others. On the other hand, my major point here is to suggest that large size and concentration of industry do not necessarily coincide with interest in research.

Senator BUSH. That last page, Mr. Hamberg, would seem to be awful good evidence of that. At the top of the third page of illustrations where you show the average percentage in the three size groups of companies, 2.5, 2.4, and 2.6, it is almost identical. Isn't that what you are saying?

Mr. HAMBERG. As a percentage of sales, this shows that the small firms don't seem to spend any significantly less amount.

Senator BUSH. That is the best proof of what you have said, is it not?

Mr. HAMBERG. I would hope it is not the best proof.

Senator BUSH. It seems to me to be very good proof.

Mr. HAMBERG. On the other hand, be sure that you see that we are talking about percentage of sales. The larger firms still spend larger absolute amounts than the smaller firms.

Senator BUSH. In the next table below there it is rather surprising to find some of the smaller oil companies doing so much in that field.

Mr. HAMBERG. The oil industry is one of the few private ones, as I noted earlier, that seems to spend a lot without subsidy on research and development. In this respect it stands out along with the chemical industry, I think, from the rest. I think it is important to note that among the industries that spend so much on research, these percentages I have cited in the text of the paper, percentages that are contributed by the Federal Government: 84 percent of corporate expenditure in the aircraft industry met by the Federal Government, 54 percent in electrical equipment, 47 percent in scientific equipment, 52 percent in telecommunications and broadcasting. I think these suggest that the reputed surge in spending on research and development in large scale, private and concentrated industry has been largely connected with the increase in Federal spending on R. & D.

Senator BUSH. Could you accept the generalization that your figures seem to show that the companies which enjoy a large margin of gross profit seem to be those which spend the most on research?

Mr. HAMBERG. I don't think we could generalize that far, Senator Bush. I would think, for example, if we could substitute sales for gross profit, the fourth table here would cast some doubt on that. There is a big difference between sales and gross profit. In any event, so far as percentages are concerned, proportions, those with the larger profit margins I would doubt spend more than those with smaller profit margins. There are industries where large profit margins are available that spend next to nothing on research. We don't have to look to data of this sort. The cigarette industry is a good case in point.

Senator BUSH. I don't want to be contentious about this with an expert like yourself, but if you take the second table in which you rank from 1 to 14 the major industrial groups, my impression is that the gross profit in the electrical machinery business, which is No. 1, and in chemicals and stone and clay and so forth, transportation equipment, which presumably is automobiles to a large extent, and then going on down to industries like food and kindred products, where the margins of profits are very narrow.

Mr. HAMBERG. I accept your authority on that, Senator Bush. I honestly am not familiar with profit margins in these industries. Incidentally, one of the things I plan to do in the near future is to undertake a statistical analysis of research and development expenditures by industry with something like your profit margin as a variable in the analysis. I think this needs to be done.

Senator BUSH. I don't think it is especially significant except that, if this is true, then it would appear to be a reasonable justification of larger profit margins in important industries. In other words, if it stimulates a higher degree of research and development, that is desirable.

Mr. HAMBERG. If it does, Senator. I would remain a bit skeptical unless you took other factors into consideration.

Senator BUSH. You are not prepared to assert that today anyway.

Mr. HAMBERG. No, sir.

I think that additional testimony against the thesis that large size and progress go together is suggested by the data on output per man in manufacturing industries. These data show that the industries in which large size firms predominate do not have a higher growth rate in output per man than the industries in which smaller size tends to predominate. I think these figures were cited extensively by Professor Stigler in a recent study. I think, further, that additional testimony is to be found in the tendency of large firms to get into new fields by absorbing smaller ones who have already made extensive progress and possess know-how. General Electric got into the electric range and clock fields this way. General Motors became the chief diesel producer in this fashion. General Foods moved into the frozen foods industry by absorbing the firms that had already established themselves. So they seem to skip a large amount of that early innovative process.

Representative CURTIS. May I make another suggestion there? I am giving you this from actual experience. Many times a large corporation will have a bright young fellow, who has developed some idea and wants to develop it further, and then breaks off from the corporation and goes and sets up his own concern. Yet, actually, it is with the consent of the larger concern, and they may to a large degree foster and encourage this. I don't know how much of that goes on, except that I do know that there is enough so that it is just not isolated. Then after it proves itself, that venture may be merged back in. I don't know how much of that goes on, but I just raise the question.

Mr. HAMBERG. I have not heard of that, Mr. Curtis. I would wonder why the firm would undertake to finance the risk apart from itself and then reabsorb it.

Representative CURTIS. Because they don't want to get into that field themselves. In fact, they are not sure. They don't want to devote the time. This fellow will get other people to put equity capital in it. They are interested enough to see it go ahead. Air Path Instrument Co. of St. Louis started in that fashion. It never was reabsorbed back. That started out from Curtiss-Wright and has expanded. I know just innumerable examples where that process has been going on.

Mr. HAMBERG. The original company contributed to the financing of the new one?

Representative CURTIS. Yes. But the two individuals who worked for Curtiss-Wright went out and got equity capital of their own. There is no question but that the big company was the one that was encouraging them to go along. I have talked to heads of large corporations who say that they do a lot of their research and development through encouraging small firms whom they think have smart people in them to test these things out.

Mr. HAMBERG. Just what form does this encouragement take?

Representative CURTIS. By actually paying money to them to continue their work in that area. It is an actual contract relationship. I have actually written some of the contracts. I guess they have a tie-in to purchase their production if the thing proves to be what they expect.



Again I have no way of estimating the amount of this other than the fact that I know some of it occurs and some big corporations use that as a method of fostering research and development. I do want to add this. I am not saying that in the way of criticism of your conclusions, because for many years I tended to agree with your conclusions here. I think your paper is very, very valuable. I am throwing that out for further comment on this process.

Mr. HAMBERG. There is an interesting study on that point that is cited on page 23 of the original paper in footnote 13. "Characteristics of New Enterprises," published in the *New England Business Review*, pointing out that a large number of new firms had grown up in New England as a result of the kind of constraint that an inventor felt to leave the firm—his original firm—because he could not interest his superiors in the invention he had to offer, and so went out on his own.

The CHAIRMAN. Do you think this may be a peculiarity of New England management which is not true of other sections of the country?

Mr. HAMBERG. Do you think this is the independent spirit in New England asserting itself?

Senator BUSH. I would like to comment that those venturesome souls probably came to New England to enjoy the better inventive industrial climate.

The CHAIRMAN. There has been an infusion of western ability in New England which has saved that section of the country from further deterioration, of which the Senator from Connecticut is a notable example himself.

Representative CURTIS. I would suggest if a followup were made case by case that you would find that in the majority of the cases this separation was very amicable. Probably some of the people in the big firm itself, the executives, might have invested in the smaller operation and they remain close together and the laboratories were used.

I might add this because I have been giving this out as if it was limited to my own personal experiences. A great deal of what I am reciting is the result of work that the Small Business Committee of the House, of which I was a member, did back in 1951-52, and I have tried to follow the situation of small business quite closely. Again it is a subjective presentation I am giving. I have not made any attempt to make any statistical study of this thing. It would be interesting on this New England thing to take a few spot checks and see if the process I have suggested is not really rather common.

The CHAIRMAN. I don't want to get into a row with my good friend from Connecticut who is apparently now more a New Englander than he is a Hoosier, and I don't want to go into the sociological theories behind the novels of Mr. John P. Marquand, but it is commonly believed that the trusteeship system which came into New England at the time of the Civil War, in which the original bold spirits feared that their children would not have sufficient ability to carry on and put the industries therefore in the hands of trustees, that this has been a retarding influence upon development. Perhaps I should strike this from the record.

Senator BUSH. You better had, or I will have to. If you want to leave it there, I will simply make this observation, that as long as the

Senator comments about the prestige of New England—incidentally, they are all concentrated in Boston—

The CHAIRMAN. I know, and you have the proper accent for Boston.

Senator BUSH. Thank you very much. Despite their conservatism, they have been a very progressive influence and a very venturesome group as a whole as any study of their investments over the period since the Civil War would disclose. They have started a great many enterprises.

The CHAIRMAN. Always away from New England.

Senator BUSH. No, not at all. Despite the fact that the South has taken a great deal of industry away from New England, they have been very successful in replacing industry with the type of companies that our good friend, Mr. Hamberg, is talking about, in the smaller companies, the inventive companies. I may say that I am particularly proud that Connecticut has been in the forefront of those in the last 10 years, in bringing new enterprises into being up there and encouraging the fellow with inventions to move into that area.

Representative CURTIS. The spirit of Eli Whitney still prevails.

Senator BUSH. Certainly. I am glad the Senator brought that out. It gives me a chance to proclaim the virtues of our area, which are very great.

The CHAIRMAN. It is a characteristic of England that the people who come down from Scotland and the northern counties of Lancaster and Yorkshire become suddenly Englishmen firmly wedded to the practices of the counties of south England. Similarly it is true that men from the Middle West who go and succeed in New England become more New England than the original personnel.

Senator BUSH. I will have to submit my biographical history to the Senator, because I go back to New England I believe as far as he does. I would like to ask the Senator where he did come from.

The CHAIRMAN. I came from New England, but I was wise to get out. I think we are trying to have some fun with each other. This is not a great economic judgment, and I suggest we strike it from the record.

Senator BUSH. No; I don't think it should be stricken.

Senator SPARKMAN. Mr. Chairman, I would like to get into this discussion briefly and pay a compliment to New England—believe it or not. In the field of small business, I think New England has been outstanding, both in its area of accomplishment and in its organized effort and forward movement. I think it has done a remarkable job.

Senator BUSH. The Senator is in a good position to know as chairman of the Small Business Committee of the Senate. I appreciate that observation.

Senator SPARKMAN. One of the outstanding small business organizations, of course, is the New England Small Business Association, as the Senator from Connecticut well knows.

Senator BUSH. That is right.

Senator SPARKMAN. I want to say just a word about the statement that the Senator from Connecticut makes to which I do not subscribe at all, that the South has taken industries. What has happened is a

movement back home of industries that never should have gone to New England.

Senator BUSH. I did not say the South had taken them. They gravitated to the South.

Senator SPARKMAN. I thought you used those words.

Senator BUSH. I will change them.

Senator SPARKMAN. Since the reshuffling and the more equitable arrangement of freight rates and with the southern area taking full advantage of the opportunity to develop its power resources while New England did not, those industries that belonged originally in the South have little by little gone there. New England has done a remarkable job in doing just what the Senator from Connecticut has said, in replacing those with indigenous industries that they should have been devoting their attention to all the time. They had no business trying to manufacture textiles.

Senator BUSH. They did pretty well.

Senator SPARKMAN. I know you did as long as you kept us in bondage with the freight rate that we had.

Senator BUSH. I don't mean the Senator should take this personally.

Senator SPARKMAN. I do not mean you put us in bondage.

Senator BUSH. I would not want the record to show it was only the freight rates that attracted these people.

Senator SPARKMAN. I said we took full opportunity to develop our power resources where New England has not.

Senator BUSH. Since Senator Sparkman has been so generous in praise of our recuperative powers, I will not go into the other attractions which have helped to move some of these industries in his direction.

The CHAIRMAN. The past few minutes have been, I am sure, the dream of all witnesses before a congressional committee, in which members of the committee begin to cross-examine each other, and not the witnesses. Perhaps we can now turn to Mr. Hamberg.

Mr. HAMBERG. I should like to turn to the question of whether large size is a necessary condition for modern research, and if so, under what circumstances.

Senator BUSH. Will you say that again, please?

Mr. HAMBERG. I would like now to turn my attention to the question of whether large size is a necessary condition for modern research, and if so, under what circumstances. I would think that some of my earlier remarks would indicate that large size is not a sufficient condition for interest in research. Nevertheless, the persistence of unsubsidized R. & D. expenditures on a large scale in the chemical and petroleum refining industries, where large firms do predominate, suggest that there may be a connection between research and development and size of firm. The connection may be, as has been suggested, one that lies in those areas of research and invention where the path to success rests on a protracted series of expensive experiments and tests and where the element of hunch and chance play large roles. This has been notably true, I think, in the chemical and pharmaceutical industries.

The CHAIRMAN. This is interesting, because I noticed in your text you mentioned penicillin and streptomycin as examples where a tremendous number of more or less hit or miss experiments had to be

made. But as I remember, penicillin was discovered by Flemming, who was completely unattached to any business concern.

Mr. HAMBERG. So was the discovery of streptomycin, a fellow of Rutgers.

The CHAIRMAN. Yes. These are cases where the discoveries were made outside the business process; isn't that true?

Mr. HAMBERG. Yes.

The CHAIRMAN. In an area where according to standards you have just laid down would be most adapted for large-scale research.

Mr. HAMBERG. Yes. I have a qualifying remark to that effect. Although in an a priori manner this would seem to be the logical area where the financial ability of the large firm to carry on such extensive and chance type of experimentation would seem to be at its greatest, nevertheless there have been notable cases where independents or very small groups have achieved the desirable results without such financing.

The CHAIRMAN. As I understand the story of streptomycine, Waxman conducted his research with almost no funds and was always on the point of being dropped from the faculty.

Mr. HAMBERG. I don't recall the latter part. The former I remember. I would like to emphasize that there has been an exceedingly exaggerated notion about the degree to which the results of modern research are foreordained. It is just a matter of setting up the experiments and you know what the results will be. I would say there is a large amount of evidence that runs just contrary to this notion, that we have gotten to a point in scientific development where things can set off in an automatic sequence with the results pretty well known beforehand.

Representative CURTIS. Could I ask a question on that point? Particularly in light of Senator Douglas' question. Of course, corporations have gotten into the business of setting up chairs in faculties or at least trying to do some financing in this area. I don't know how extensive that is, either. I do know this. Outside the United States, in Switzerland, the watch industry really subsidizes chairs in horology and other aspects of that industry. Have you studied that relation? Is that fairly prevalent now or increasing?

Mr. HAMBERG. I honestly don't know, Mr. Curtis. While you mention the European case, it is probably worthwhile mentioning, without any strong statistical evidence to bear this out and hearing this more by word of mouth than anything else, there appears to be a substantial amount of subsidized research by large American corporations in Europe. I will tell you a tale along these lines. I can't identify names because I don't know them myself. I know a lawyer who was formerly connected with one of the largest chemical concerns in the country. This concern seems to have paraded its extraordinary interest in research on all the news pages and television screens available. The president of this concern informed his counsel at one stage, off the record, that actually most of the inventions for which it had taken credit in recent years had come from Europe. The reason was simply that it was much cheaper to finance these guys in Europe than it was in the United States. The scientific personnel is just too expensive here. I have the feeling, more intuitive than anything, and I won't try to substantiate it, that a good deal of this goes on.

Representative CURTIS. About 3 years ago in conjunction with the Fiscal Policy Subcommittee of this committee, we did go into the aspects of expenditures and went into the subject of research and development. The panel did get into the discussion of how some of the European countries produced research and development. As I recall it, there was pretty strong evidence that a lot of the subsidization came from private concerns into the universities for this sort of work. Maybe there is a different pattern. I don't know.

Mr. HAMBERG. It may be. University personnel in this country may also be cheaper in the universities than they are within the firm. They can pay them their university salaries.

Representative CURTIS. I think some of that goes on. I don't know how much. I know I recently got money for a Chair in a business school from a company that was interested in that particular aspect. It was financed solely because of the tie-in of the interest of this big retail outfit in one aspect of marketing. I do know there is some of that. I don't know how much.

Mr. HAMBERG. There are let contracts to universities. I know personally the University of Delaware in its chemical engineering department is heavily subsidized by the Du Pont industry.

The matter of chance observation in modern experimentation and scientific effort has been vastly underrated as I suggested earlier. We can cite other cases than penicillin and streptomycin in this connection. Tetraethyl lead, Freon refrigerants, and polyethylene all seem to have been the result of pure chance discovery. The general proposition here, I would suggest, is that you have a case in which some properties of known elements, possibly compounds, are used as a basis for combining them with other elements and compounds in the expectation of getting a result which would pretty well conform with the scientist's expectations. On the other hand, there seem to be cases in which they simply fool around combining elements and compounds in the hopes of finding properties that they were not aware of. This has come out in a number of cases. It is just a matter of experimenting without any prior knowledge of what the results will be. Sometimes they have an idea where they will lead themselves and other times none at all.

In any event, it would seem that the large firm would have an advantage in being able to bear the cost of numerous teams. In a case like this there would seem to be an advantage of having a number of teams pursuing different lines of attack to a given problem, and the large corporation should presumably be better able to finance this sort of thing, as well as bear the costs of failure in these experiments. I suggest that this seems to be largely true of the chemical and petroleum refining industries, and this may explain why they seem to spend so much more than other industries on research and development.

On the other hand, I would hardly want to venture this as conclusive evidence by itself. The role of the scientific base in an industry is clearly an important one. When there is a fairly well advanced state in the basic science in these fields, the costs of research can be expected to be much cheaper. Since these two industries seem to be set on a rather well advanced scientific basis, this may account for their heavy sums.

The CHAIRMAN. Mr. Hamberg, I found your paper to be one of the most interesting that I have heard in a long time. Our time is somewhat limited. I wondered if you would be willing, if you can terminate your paper in a minute or two in general summary, so that we could have general discussion? I want to compliment you on the quality of your work.

MR. HAMBERG. Thank you, Mr. Chairman. I don't know exactly how to summarize it. I think I would like to perhaps close the remarks by emphasizing a point in the paper, and that is the outside sources of invention available to small firms and medium-size firms that make compatible economic progress, growth, and perhaps much more competition than presently exists in a number of industries. I think, for example, we should not, as many are commonly wont to do, play down the role of Government as a potential source of research. I think its success in agriculture, which is well known, has been almost embarrassingly good. I see no reason why it should be treated as a dirty word, as seems to be the case in many instances.

Further, I think that Government research has the advantage also of posing no patent problems. The results of the research are available to be used as the firm wishes and often without any royalty. Equally important, Government is probably the major source of basic research, something that we all know is notably lacking in this country, and probably for good reasons from the point of view of the private concerns. The product of basic research is likely to be difficult for the firm to latch onto in the form of profits. For one thing, our patent system, and I think rightly so, usually refuses to patent basic advances in fundamental ideas. On the other hand, while that may be proper, it still poses a drawback to the firm which is perhaps interested in carrying on more basic research. Furthermore, basic research tends to be highly uncertain. It tends to have a long period of experimentation and these cause the firms also to shy away from here, and in turn causes them to concentrate on the short payoff or the prototype product or design characteristics.

Along the same lines I think we should note that the large firm can have a decisive disadvantage in its financial capacities, because in this context of the lack of basic research, it commands the power to compete away scientific personnel from basic research in Government and the universities and put them on more applied research with that short payoff period I mentioned earlier.

Finally, I would like to mention the independent profit-seeking firm which has been proliferating in years. This is a development that should be given the greatest encouragement because I think what it does in a very neat fashion is to provide an important answer to the basic problem of the small firm in research, namely, that of enabling a number of small firms to share the overhead costs of research and development which presumably is a major obstacle in their paths.

Then I would also like to mention the industrial research corporation which has been making its appearance in recent years, a little more in Britain than here, I think. Here the members of an industry jointly finance the organization and join in the results, and in many cases without agreeing to fix prices. Provided that latter arrangement can be sustained, this, too, is a very agreeable develop-

ment. If you add to these the nonprofit research institutions, the foundations, and the university laboratories as well as the still important independent inventor, there seem to be a number of outside sources of invention to the small- or medium-size firms that make more competition and progress eminently compatible.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you.

Senator Bush.

Senator BUSH. Thank you, Mr. Chairman.

I would like to go back to Dr. Fellner's paper, to the conclusions. I would take up first the remedial possibilities that he suggests. He speaks of reducing the size of the bargaining units in the labor market to what essentially is an extension of antimonopoly action. How would you propose that suggestion be implemented, Mr. Fellner? Through amendments to existing laws, such as the antitrust laws that we now have, or have you thought enough about it to suggest that a new body of law be created for dealing with the monopoly characteristics of unions? What are your thoughts about that?

Mr. FELLNER. Senator Bush, in the first place, I would like to say that this is something I would suggest doing only if we should discover that we do not get a reasonably high degree of employment and good growth rates along the lines along which we are trying to get these now. So this is something I might say I would like to see on the shelf. I would like to see this problem studied in detail. I would like to see some willingness to fall back on this line if we should run into a situation where a fight against substantial inflationary pressures would lead to more or less chronic underemployment and weak growth rates.

Senator BUSH. You visualize this suggestion as sort of a standby?

Mr. FELLNER. Yes. This is what I would consider it now. I think within a year or two we shall see whether we are getting somewhere along the lines which we apparently are trying to get right now, namely, by restraining inflationary pressures whenever we encounter them, and we are hoping that this policy will be compatible with a reasonably high degree of resource utilization and good growth rates in the long run. In the short run it did cause a recession or contributed to the development of a recession. But this was to be expected. You can't move from an exceedingly high pressure situation toward the kind of situation toward which we are trying to move now without a detour over a recession. So I don't think that the past 2 years would prove that we are getting nowhere with this policy. I think that within a year or two we should see whether we do get reasonably high degrees of utilization and good growth rates with the policy of fighting inflationary pressures where we encounter them. If the answer to this should be "No"—that is to say, if it takes intolerably low growth rates to get the inflation problem under control, that is what I mean by a negative outcome of this experiment—then I think I would like to see Congress fall back on this line about which we are talking now, namely, this extension of the antimonopoly policies. I think that this would require studies which I think we have not really engaged in. I don't think we know enough about this problem. But I am sure it would require new legislation. I would suggest a new body of legislation. It is not simply an antitrust problem in the conventional sense

of the word. I think the problem which has been posed by these difficulties is different from the problem to which our antitrust legislation is oriented. It would require a new body of legislation. I think its aim then should be to establish a fair number of bargaining pairs in each major industry with no collusion between them and in an environment in which each of these bargaining pairs is under substantial competitive pressure from others. This would be my idea.

Senator BUSH. Then I presume that the second suggested remedial possibility would be in the same category; it is a standby thought.

Mr. FELLNER. Yes.

Senator BUSH. And something that ought to be studied with a view that possibly in the future one might fall back on suspension of collective bargaining for wages and so forth in periods during which the unemployment figure was below a certain figure.

Mr. FELLNER. Yes.

Senator BUSH. I would suggest that is going to be very much more difficult to study and much more difficult to effect in the future than I can foresee. Certainly it is an interesting thought. I agree it ought to be studied. I would also be inclined to observe that thus far there is not any conclusive evidence that the size of these bargaining units is a deterrent to economic growth. It may have some effect upon price stability.

Mr. FELLNER. Yes.

Senator BUSH. But I don't think any clear case has been made for that yet, do you?

Mr. FELLNER. My view about that, Senator Bush, would be that there does exist a clear case for this concentration of market power standing in the way of price stability objectives in the circumstances in which we experience inflationary movements over the past few years. What interferes with growth I would say is the fact that if we try to suppress this cost push inflation, then we run into a situation where growth may be difficult, I would not like to say that this has been clearly established. What I think has been clearly established—I should not say it has been clearly established, but a very strong presumption exists—that the attempt to curb this cost push inflation by monetary-fiscal means has contributed to a cyclical contraction which we have experienced—has been a contributing cause, and it may in the future prove difficult to get high degrees of utilization and high growth rates with this concentration of market power unless we accept inflation, which I think we should not do. So it is more this way: this concentration of market power directly interferes with our price stability objectives. If we can't get good growth rates with an anti-inflationary attitude on the part of the Federal Reserve and the Government, then it will have also interfered with our growth rate. This is how I would like to put it, Senator.

Senator BUSH. Mr. Chairman, there is one thing that has not come out in these hearings in connection with economic growth and price stability and so forth that I am rather hopeful we may get into at some point. That is the question of credit. I don't mean Federal Reserve credit, but the general field of credit as extended from private sources and what effect it has in this whole picture. In other words, as an example, I cite installment credit. The question has been raised in my mind regarding installment credit as to whether there should



be restraints upon installment credit. Whether it would be proper, as we have in times of emergency given the Federal Reserve Board some authority over installment credit, to consider that as a standby weapon, so to speak, to deal with these problems, and especially the inflationary problem. I wonder whether we should consider that? I don't believe any of our hearings have dealt with this subject. I notice in the items on the agenda for the end of the month, at the end of October, again we don't seem to tend to get into that. I do believe that is an important consideration in this whole business. I wonder whether any of the monographs that are being prepared by economists for this committee are dealing with that specific subject?

The CHAIRMAN. That is a very good inquiry. I am not able to answer it at the moment. Mr. Knowles is getting some information.

I am informed that is being dealt with in the staff study, the effect of credit control. I think it might well be that we could squeeze a public hearing in if the Senator would be interested in that in which the members of the committee could question members of the staff who are preparing this material.

Senator BUSH. I think that would be very helpful sometime. It is a little difficult to know when we can work it in because of the tight schedule.

The CHAIRMAN. I know when we were preparing one of the bills in 1955, the question, as you probably remember, came as to whether we should impose any restrictions on instalment selling. Looking back at the tremendous growth of the automobile industry in 1955 and the troubles which subsequently came, I still sometimes wonder whether we erred in not dealing with the issue. The great growth of 1955 was a prelude to the troubles which later came.

Senator BUSH. It was financed with borrowing of 1956 and 1957. I agree that ultimately brought the decline in the automobile business which really brought about the great recession.

The CHAIRMAN. It may.

Senator BUSH. It looks as though it did.

The CHAIRMAN. As I look back, I voted against the extension.

Senator BUSH. The Federal Reserve Board is apparently divided on the question as far as I can see.

Representative CURTIS. If we do it, I hope it is done on a comprehensive basis, which is merely spreading income. I think once you get your income spread, which we never have, you will have an end to this thing. This is only one aspect of spreading income.

Senator BUSH. I have no solid ideas about it. I do think it is a tremendous influence in consumer purchasing power and also has real inflationary possibilities connected with it. I think that has been demonstrated most recently, as the chairman said, the 1956-57 period. I think as long as we are in this study this is a subject that is really involved in our major study.

The CHAIRMAN. I am inclined to agree with you, Senator. I think perhaps I may have been at fault in not bringing the issue forward more fully.

Representative CURTIS. I would like to request that if we do go into it fully we should take the whole subject of spreading income, which will include retirement benefits, small loans of all sorts, installment credit, and even the fact that we do not have a method of spreading our income tax over fluctuations of income.

Senator BUSH. I do not quite get your point about that.

Representative CURTIS. It is simply this: Insurance is another aspect of it. A person goes to work at 20 and theoretically retires at 65. He has roughly 45 years of earning capacity.

This is one of the devices of spreading his income at various stages of his earning capacity. The only thing that would worry me if we ever got a person borrowed up beyond his earning capacity. The device of allowing people to spread their incomes in a more even fashion, I think, is all to the good. I would hate to see us try to regulate our economy in any way which requires interfering with the normal processes of consumer choice.

That is why I say it is all part of the problem of spreading income. Insurance, all small loans, the fact that we do not have a method of spreading income tax over uneven years of income, these are all part and parcel of this thing. The effect of these things on the tax structure is tremendous.

I think it is a good thing that people at the age of 20 have been able to borrow against their future income because they needed more.

The CHAIRMAN. Do you advocate purchasing meals on the installment plan?

Representative CURTIS. Possibly. You can joke about it but I think the whole problem is very serious and should be studied. I would hate to take one thread of it and not keep it in relation to the whole cloth.

Senator BUSH. I am not opposed to consumer borrowing as a general thing. That is not the point. The question is whether some control, as we control other forms of credit such as stock exchange credit, such as bank credit and so forth, should not be involved in this.

The question is whether a large item such as \$35 billion worth of consumer credit, a large percentage in installment credit, should not also be subject to some restraint in order to avoid inflationary pressures and the boom and bust cycle. That is my point.

Representative CURTIS. I think the point is well taken. I would like to see studies made of this. I would want it as part of the whole picture rather than from the angle that was suggested just in automobiles. Let us take housing. One of the things I thought has been a great advancement and sound advancement is the lowering of downpayments for homes, although a lot of people claim that has been an undue liberalization. I have never felt it has.

I think we could go further and be still on a sound financial basis. That is all I am saying. Let us keep it in context. I would be very happy to see the study.

Senator BUSH. I do not think it should be confined to installment credit, but general consumer borrowing.

The CHAIRMAN. I understand that Mr. Fellner has to leave at a quarter to 5. Congressman Curtis?

Representative CURTIS. I would like to ask this general question. It brings in Professor Duesenberry, too. In the reference to this use of market power, the thing that concerns me is whether market power is used with a disregard for the economic forces at play. I do not believe you imply that it would be used in disregard to these market forces, is that correct?

Mr. DUESENBERY. I am not quite sure what you have in mind.

Representative CURTIS. Here is what I am getting at. Throughout this discussion much attention has been given to the point of how much market power is developed in these oligopolies and how the use of such power relates to economic growth and so forth.

In Dr. Fellner's paper, he has referred to the market power of the union and also the market power of management and sort of coupled them together. I was going to ask the further question to try to distinguish between those two market powers because I think the market power of the union is in a very limited area and something that is easier to determine and really a more powerful thing, as opposed to the market power of management, even in a monopoly.

So what I am trying to get at is this: Where I would think it would be really dangerous is in this case: If a monopoly gaining a market power to sell used it in disregard for the economic forces at play. So the question, in most of these instances, is not whatever market power that might be possessed, let us say, by one of the big automobile companies, very definitely used with a very high regard toward their estimation of what actual and potential market forces may exist in the economy. They conduct very extensive research into the consumer demand. They do a lot of researching in other areas to try to estimate what are the economic forces that they have to contend with.

So do you feel that this power that you say they possess is exercised somewhat in ignorance or rather in spite of what the forces might be?

Mr. DUESENBERY. No. I would simply mean that almost our definition of market power here means that the firm is subject to different kinds of consequences from its behavior and a textile firm—for example, let us take the steel case, industrywide bargaining followed by a general price increase. There the industry as a whole has its market power, if you like. Limited by the possibility that other firms will come in, that imports will come in, that automobile firms will make their own steel instead of buying it and such things as that.

If they push prices too high they will pay some consequences.

Representative CURTIS. Let me try again to clarify my point. Here is what I was thinking your use of the term "market power" there meant. It was that they had the power to control the market to some degree.

Mr. DUESENBERY. That is right.

Representative CURTIS. Such as is meant by those who use the term "administered prices." What I am trying to get at is this: Is that a power that they can safely exercise while ignoring the real economic forces of the market? Isn't the power you are talking about limited by an evaluation on their part of what these economic forces are, and therefore affected by what their decisions might be?

Mr. DUESENBERY. My only amendment to that would be, from the point of view of an individual firm the most important economic forces are competition from the other firms in the industry. So the economic forces which condition the firm's actions are just different in the case of an industry with three firms.

I would say "market power" is not a very good term here. I take it the staff put in "market power" instead of "administered prices" because that was an even worse term. It is very hard to get a nice tag which describes the situation.

Representative CURTIS. That is why I was trying to get into the term itself. Let me develop the one thought I had about the distinction between the market power of the union and management. It seems to me, if you are talking about a real concentration of market power, the union really does have great market power over the commodity which it is selling, which is labor.

It does not have to regard too much the economic conditions. I would say, of course, that I know of the European labor leaders' deep concern for foreign competition, where foreign trade is so important that they often limit their bargaining requests very much on the basis of how they might affect the industry itself in their foreign competition.

Is it not a different kind of power that unions have than that which management has? Take the steel industry where you do have such a great concentration. The union has almost a complete monopoly over steel labor.

Mr. FELLNER. I do believe, Mr. Curtis, that there is a difference between market power when we use this term to describe the power of unions and when we use it to describe the power of corporations with only a small number of large corporations in an industry.

I also believe that if you wanted to exclude this cost-push variety of inflation at very high levels of employment, then it would take not only a fair number of unions in each such major industry, but a fair number of independently acting firms in each such major industry.

Else, through one or the other channels this again would be a collusive arrangement with the result that wages would be raised to an inflationary extent and then prices would be adjusted. Because, as Mr. Duesenberry pointed out a moment ago, the main competitive forces—to which the firms of a really competitive industry are exposed—come from the other firms of the same industry.

It would, therefore, be necessary, I think, for this to work to have a fair number of unions and a fair number of firms, none of which would have overwhelming power in the market.

Representative CURTIS. As I understood this, you related this conclusion to the full utilization of capacity.

Mr. FELLNER. Yes.

Representative CURTIS. It has always struck me as interesting—in fact, I have heard the accusation actually made—that in the coal industry almost by collusion with management and labor they had regular strikes just to shut down production. In fact, it got to be almost a seasonal proposition.

Possibly that is what has happened to some degree in the steel industry. Certainly, inventories were high and so on. Would you go so far as to think that that could occur as the result more or less of an agreement between management and labor in an area such as we have described here?

Mr. FELLNER. I do not know about that. I would say that the main reason why I link this with the degree of resource utilization is this: As long as the structure of these markets is such as it is now, the monetary-fiscal policy of the country will always have to shy away from degrees of utilization at which this cost-push becomes significant. You may put it this way. It is the monetary-fiscal authority that perhaps keeps pressure low—or tries to keep the pres-

sure low—and thus, indirectly, prevents the degree of resource utilization from reaching these very high levels.

But it does that because it is afraid of inflation. It is afraid of inflation because the character of these markets produces this inflation when the degree of resource utilization is high. This is how I see it.

Representative CURTIS. The reason I was leading up to that question is that I wondered whether or not, in these instances of coal and steel that I tried to pose, whether the explanation isn't actually that there is not enough demand. There has not been in coal, there has not been enough demand for full utilization of the productive capacities in both those industries.

I wonder if that is not the economic force that produced this result rather than other explanations.

Mr. FELLNER. I would agree with this to some extent. But I think the reason we are cautious in our policies concerning demand—and this is a matter that can be influenced by Federal Reserve and fiscal policies—the reason we are so cautious about how much demand we create is that when we come up to high degrees of resource utilization this cost-push starts.

Representative CURTIS. There is a big difference I see between the way things seem to have happened in the past and the way they seem to be happening in the present. It used to be that consumer demand was very closely related to purchasing power. Today it seems to be that there is actually a great deal of margin for discretionary consumer choice as between particular expenditures and between spending and saving.

When people feel they do not need things they do not buy them. If the fact is that demand is tending to become satiated, if we are approaching the economy of plenty, messing around with our fiscal and monetary policy will not affect real consumer expenditures much. In the past it has because demand was cut back or expanded with purchasing power.

We have enough production for all the steel that people would buy even if they had more money. If that were the case they would have to cut back production for that reason alone.

Mr. FELLNER. I think it is most unlikely that demand should be satiated along all lines in an economy. It is impossible that this should happen. Quite aside from that we are now following rather tight credit policy and we are restraining demand. I suppose we are restraining it because we are afraid of inflation.

Representative CURTIS. I do not know that we are. That is one thing I do not understand. There is one field I know in which additional money income will not make any significant difference as far as demand is concerned, and that is in agricultural products. We certainly have got overproduction there. You can put 10 times the purchasing power in the pockets of our people and I don't think we would cut into the amount of surplus wheat, cotton, and so forth.

If this is true in that area, could it not also be true in some of these other areas? The real problem may not be one of additional purchasing power but actually may be that you have got to a point where people just do not want more steel for whatever uses to which it may be put. It is just a matter of choice.

Mr. FELLNER. I would take it for granted that they do want something. They may not want this or the other product.

Representative CURTIS. They may want a house instead of an automobile. They may want a boat instead of a house. Are we not at a point in this economy of ours where shifts within discretionary consumer choice are actually entering this picture? Before it used to be that the ability to buy dominated the picture. I wonder whether we are not at the point where ability to buy is not a much smaller aspect of the problem.

Therefore, any attempts to regulate expenditures by controlling purchasing power through the fiscal and monetary field are not going to hit home because that is not what the problem is.

Do I make myself clear?

Mr. DUSENBERRY. You make yourself clear. I think you are exaggerating this point. I have seen this point many, many times. I must say if you look at the statistics of consumer expenditure, while it is true that there is a certain amount of random variation and once in a while we see a rather impressive thing like automobile purchases in 1955, really consumer expenditures fall within a very narrow band.

First, about the totals. If you look at the statistics you see that consumer expenditures in the postwar years since about 1950 have fallen within about two percentage points—let us say between 95 and 93 percent of disposable income—in every year since about 1950.

Actually, the band on the whole, is narrower than that. After all, 2 percent here is \$6 or \$7 billion. If you swing all at once through that whole range that has a considerable impact. But it means not that we do not expect expenditures by our monetary and fiscal policies, but that there is a certain free play.

If we like, we pull on the ring and it has a little bit of slack sometimes so we do not get all the result we expect.

The other question is about particular commodities. It could be the case that consumers were spending a fairly constant percentage of their income jumping around from one product to another. I think there is no doubt in the durable goods field that there is more play than there used to be because we are getting in some products to the point where we have reached some basic level of saturation in demand.

You may have some further demand for replacement. Then you do not know where they will jump. You do not know whether they will buy motorboats. That is not the crucial problem.

The crucial problem is that there are certain industries that get overcapacity because there are longrun changes in demand. It takes a long time to adjust. In the case of coal this is an industry which has been adjusting to a downward demand for many, many years—since the twenties. In the case of agriculture, what the industry would do in the way of adjusting supplies if left to itself, we do not know. It has never been adjusted freely.

It seems to me that it would still not be true that we have an inability to control most of the demand. We have some problems. Our life is made more difficult if consumer expenditures become more variable in distribution because we have more unemployment. We try to control the demand in order not to have excess demand in one place and then we have too little demand overall.

This makes our life more difficult, but I think it is a little strong to say that we are not getting anywhere with monetary fiscal controls.

Representative CURTIS. I will make a peculiar statement, but one I think is true. I am not a wealthy person but I do not honestly see how I can spend much more money than I do. I think a lot of people in America are getting to that point. Even if I had more money, I do not know how I would spend it. I would have to spend time figuring out how to.

Mr. HAMBERG. Mr. Curtis, I would like to refer you to the seminal contribution on the subject by Mr. Duesenberry.

Representative CURTIS. Has he written one?

Mr. HAMBERG. Actually, your idea is one of very long standing in the history of economic thought and you can find the famous Alfred Marshal, I believe, raising the point about the advent of a time when we would pass the range of basic necessities and there would be greater discretionary spending power. Isn't that the line of thought? I think Professor Duesenberry has rather convincingly demonstrated that, at least in most of the Western societies and those cultural environs, the desire to get on, to imitate, to climb up the income ladder, or the consumption ladder, in imitation of those one step ahead of us, remains a rather strong force in keeping what seem to be discretionary type of expenditures more within the realm of social necessities.

Representative CURTIS. That is the question. I think we are actually reaching the point where that force is not what it used to be. I know there is a recent book on our keeping up with the Joneses.

The CHAIRMAN. Status seekers.

Representative CURTIS. That is the one I am thinking about. There are a lot of people in this country who are not status seekers. The writer missed the boat, I think, on that. I want to conclude my questions because I have taken too much time, but I do want to raise this last question. That is, whether we might not be reaching that stage in society.

If we are, then there is less status seeking in such things as eating different kinds of meals, not as much. If we are reaching that point, we had better look for other things than monetary and fiscal controls to affect demand. Use of these controls is what the arguments have been pointing to. Use those to regulate demand. That is the only reason I bring it in.

If we are reaching that kind of satiated economy, we better start thinking along alternative lines.

Mr. HAMBERG. I would say that is a big if, Mr. Curtis.

Representative CURTIS. That may be.

Mr. HAMBERG. I have too much faith in the American public's desire for frivolities.

Representative CURTIS. I have seen too many instances of the lack of faith of that, so many cases where you do not see it any more.

The CHAIRMAN. The discussion has gone on for some time. I have only one question to ask. It is a sort of general one. This morning we were discussing the degree to which departures from perfect competition, assuming cost curves to be identical, resulted in higher unit prices, the larger the proportional size of the plan. While I do not

want to force the conclusions, I think it was the general opinion of the panel that this was true.

I personally believe it is very much true along the lines of Mrs. Robinson's book, "Economics of Imperfect Competition." But the argument which developed on the part of two of the discussants was that the larger the firm, the greater the funds and desire for research, and the higher the profits, the greater the funds available to push discovery forward.

This, I take it, was Professor Schumpeter's theory. As I understand your paper, Mr. Hamberg, it casts a great deal of doubt about this general conclusion. Is that true?

Mr. HAMBERG. Yes, I think in general I would say, to put it as accurately as possible, it would be difficult to find a neat statistical correlation between size of firm, profits, and expenditures on research and development.

The CHAIRMAN. Even more important than expenditures, the question is results of research.

Mr. HAMBERG. I think that is a very important point, Senator Douglas.

Another reason for shying away from the patent statistics, as I suggest in a footnote in my paper, is that apparently—and this seems to come out in discussions of one sort or another including those from research directors—the large corporations seem to do an awful amount of piddling designed to maintain or retain patent controls—I guess the word should have been "maintain"—or head off new competitors.

Interestingly enough, also to avoid payment of royalties when they come upon something that they do not themselves particularly feel like using or do not see any clear-cut virtue in using at the moment, but they are afraid that someone else will come along and take a different view, use it, perhaps put them in a position of having to use it, too, and pay royalties.

So they take out a patent on anything that comes along just as a precautionary measure. Therefore, I think the patent statistics have a strong numerical bias in favor of marginal patents issued to the large corporations. I think it is worthy of note that I stated the patent statistics—the assignment data—indicate that a minimum of 40 percent of patents are assigned to individuals. That is the minimum figure that you can get out of it. How much it goes above it, it is difficult to say.

The patents first of all are issued only to individuals under our system and the British system. When they are assigned you have no basis from the assignment records—assigned to a corporation—you have no basis for determining the source of the assignment to the corporation.

You cannot determine whether the assignment came from an inventor working within the laboratory of the corporation itself or from an outside inventor. My guess would be that probably 40 to 50 percent is a pretty accurate figure.

The CHAIRMAN. Is this an accurate statement? On the whole, your studies and those of Professor Jewkes seem to indicate that Shumpeter generalized very much too quickly and the evidence seems to be contrary or at least does not bear out as yet his assumption.



Mr. HAMBERG. Actually, Shumpeter—I guess there are overtones—was primarily concerned with defending monopoly power as such.

The CHAIRMAN. Monopoly power being the extreme variant of imperfect competition?

Mr. HAMBERG. Yes. These studies bear more on this more recent issue raised by Professor Galbraith and a number of others, that the giant corporation, perhaps with its monopoly powers, has become the cradle of research and invention. It is all institutionalized. The results are pretty mechanical and so forth. The independent inventor has become passé. The small- and medium-size firm is at an extreme disadvantage in this.

I think that these studies indicate that this aspect is not true, that large size as such, the giant corporation as such, does not guarantee progressiveness, economic progress, if you like, interest in research.

There are cases where it does; there are other cases where it is not borne out. This stands a little apart from a monopoly issue, although clearly they are related as far as size and large monopoly power of a connection.

The CHAIRMAN. I hope you continue with your research because I think this is one of the most important subjects.

Mr. HAMBERG. And one about which we know very little.

The CHAIRMAN. That is right. There is just one final question. This applies to distribution of governmental expenditures for health. We are appropriating large sums of money for research for cause and cure of specific severe diseases. One is cancer. But also crippling diseases. I voted for those appropriations.

I think on the whole this is a productive expenditure. The allocation of these funds is another matter. As you know, a few miles out of Washington we are building up gigantic institutes of health with separate institutes for the various groups of diseases.

There is a very nice question as to whether the major emphasis in research should be concentrated at these gigantic laboratories, or whether there should be more diffused expenditures over the country.

I happen to have my own prejudices on this matter, which I will not state, but I would be very glad to get your opinion.

Mr. HAMBERG. I have my prejudices, too, Senator. I think I emphasized them at some length in the paper here. I think that in view of the still existing uncertainty that characterizes major inventions, and not marginal improvements, that we have a strong case for suggesting as much competition and duplication in the invention processes as possible.

You are probably familiar with this as being a strong conclusion which the people at Rand have recently come to as the result of their examination, shall we say, of the failures of military research and development. A major part of such failures as we have experienced in the past in military research and development can be attributed heavily to the decisions at a very early stage of experimentation to pursue a single line of attack in the optimistic views that the results were pretty much preordained. The percentage of error in these predictions is very high, well over 50 percent. They have chosen a particular path at a very early stage of the experimentation and have been proved totally wrong, even when powerful scientists have been involved.

I would say, therefore, we have a very strong case for decentralization of inventive activity so you get as many lines of attack as possible with as much freedom allowed the independent researcher or the individual researcher as possible.

This seems to be a very striking conclusion to be drawn from our experience in military research and development and would probably carry over into other lines of inventive activity as well. Consequently, I would say, even in health, there is probably a strong case for decentralizing these activities.

The CHAIRMAN. Mr. Duesenberry, have you any conclusions on this matter?

Mr. DUSENBERRY. I would support Mr. Hamberg, on the whole. I, too, have been impressed by the Rand work. If you have not seen it, the paper by Bert Kline, which is referred to in a footnote as an excellent account of these results, it is based on a very wide study of military research and development.

On the whole, I would support Mr. Hamberg's conclusions.

The CHAIRMAN. Thank you very much for coming, gentlemen.

We meet tomorrow at 10 o'clock.

(Whereupon, at 5 p.m., the hearing in the above-entitled matter was recessed, to be reconvened at 10 a.m., Friday, September 25, 1959.)

# EMPLOYMENT, GROWTH, AND PRICE LEVELS

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FRIDAY, SEPTEMBER 25, 1959

CONGRESS OF THE UNITED STATES,  
JOINT ECONOMIC COMMITTEE,  
*Washington, D.C.*

The committee met, pursuant to recess, at 10 a.m., in room P-68, the Capitol, Hon. Paul H. Douglas (chairman) presiding.

Present: Senators Douglas and Bush.

The CHAIRMAN. The committee will be in order.

Gentlemen, we appreciate your willingness to take time out of your busy lives to give us the benefit of your studies and observations. The subject this morning, as you know, is the longrun determinants of U.S. economic growth. We have had statistical statements of growth earlier in the year, but I take it this morning we are going to go behind the statistics of what the growth may be. We are very glad indeed to have as our first discussant the distinguished economist from Duke University, who unfortunately left the State of Illinois some years ago—a loss we have always lamented—Mr. Calvin Hoover.

## STATEMENT OF CALVIN B. HOOVER, DUKE UNIVERSITY

Mr. HOOVER. Mr. Chairman, I shall read my statement and try to keep within the time period.

When we compare the longrun determinants of the national-income differences of the countries of the world, economists have generally considered these determinants to be natural resources in proportion to population, accumulated capital, the health, level of education, and training and morale of the working force, the fund of scientific and engineering knowledge, the organizing ability of the entrepreneurial and managerial classes and the character of political and social institutions in their effect upon stability and industrial progress. Those countries which were more favorably endowed with respect to these determinants had higher per capita incomes than those less favorably endowed.

No one would deny that these determinants are still basic in accounting for the differences in per capita national income among countries. Paradoxically, however, in recent years we would not be able to rank the countries of the world with respect to their comparative national incomes as presumably affected by these longrun determinants and find these ranks positively correlated with respect to their rates of economic growth. Indeed, there would appear to be some evidence of a negative correlation.

Something like a trend for those countries which in the past have been in a more unfavorable position with respect to national income

as affected by these presumed longrun determinants to be improving their relative position with respect to the presumably more favorably endowed countries seems to have appeared. This trend is not true for all countries and the reasons for it are complex and not always easily understandable. This trend, if it can be called such, manifests itself even in the United States, where statistical evidence shows a tendency for the States which have had lower per capita incomes to gain relatively on the States which have had higher incomes.

The trend for the South to "catch up" with the rest of the United States has been pointed out by Prof. B. H. Ratchford and myself. The tendency for the gap between per capita income in the higher- and lower-income States of the United States to diminish has been shown by the statistical studies of Prof. Frank Hanna.

To the extent that this trend exists, it means that we could expect the rate of economic growth for the United States during recent years to be lower than the rates of growth of countries whose per capita income has been below ours. As I will point out later, this is apparently true if a comparison is made of rates of economic growth for the United States and those of Western Europe or of Soviet Russia. It would be fascinating to speculate whether this tendency for the countries which have had lower per capita incomes to catch up with the United States reflects a diminution in the importance of what we have in the past considered the longrun determinants of national per-capita incomes or whether the differences among nations in the determinants were diminishing.

Because my time is so limited, however, I am going to turn directly to a comparison of the growth rates of the United States as compared with Western Europe and with Soviet Russia and consider very briefly one of the factors which may account in part for the lag in our growth rate, even though it would not ordinarily be thought of as coming under the heading of a longrun determinant of economic growth.

Difficulties in the measurement of the rate of economic growth in any country are very great. These difficulties are compounded in any attempt at comparing the rates of growth among two or more countries. Statistical evidence, however, indicates that the current rate of economic growth in the United States is only around half that of the Soviet Union and is measurably less than that of the average rate for the countries of Western Europe. A research study<sup>1</sup> of the OEEC estimates that between 1950 and 1955 real per capita GNP rose by 24 percent in eight countries of Western Europe compared with a rise of 12 percent in the United States.

Actually that latter part is an understatement and I stated this very clumsily. What might be said is this. If you take the current rates which the Soviet Government claims they would be about triple our long run rate of growth. I would estimate that, instead of being triple, they are about double, whereas the rates of Western Europe are about double as far as statistical evidence is concerned.

The CHAIRMAN. You are speaking of average real per capita gross national product?

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<sup>1</sup> "Comparative National Products and Price Levels—A Study of Western Europe and the United States," by Milton Gilbert and Associates, OEEC, Paris, 1958, p. 23.

Mr. HOOVER. No.

The CHAIRMAN. Or are you speaking of the index of physical production?

Mr. HOOVER. At the moment I am not speaking of per capita, which would be a more exact way of doing it. I am speaking about the total real rate of growth, but not per capita.

The CHAIRMAN. In terms of gross national product.

Mr. HOOVER. Yes.

The CHAIRMAN. Not physical productivity.

Mr. HOOVER. No. At least not in terms of productivity per man-hour.

The CHAIRMAN. The Federal Reserve Board, as you probably know, has announced that its index of physical productivity, which they have hitherto used, understates what they believe to be the real increase by about 10 points.

Mr. HOOVER. Yes, sir; I noticed that. I am rather imprecise here, I fear, in an effort to be brief. If I spoke with precision, I would have to devote a number of pages to it.

The CHAIRMAN. I understand.

Mr. HOOVER. Parenthetically, however, the taxpayers of the United States through furnishing economic aid to Western Europe during the critical postwar period and by carrying so large a proportion of the cost of the defense of the free world and of economic aid to the underdeveloped countries has greatly facilitated this high rate of economic growth in Western Europe.

Aggregate measurements of economic growth do not reflect adequately the spectacular triumph of the American economy over the age-old enemy of man, hunger. During most of the history of man, if there had been a concept of gross national product, its all important component would have been food. Currently in the United States there are no longer the same rigid and almost absolute physical limitations upon production which once characterized the efforts of all nations to increase national product when food was the all important product and which is still largely true for most nations. The flow of inventions, innovations, and improvements, in which the free capitalistic system is so prolific, can probably be counted upon to furnish the means for a high rate of economic growth in the United States. This is likely to be true so long as the political and sociological fundamentals of our system are preserved, without cause for deep worry over our natural resources from the strictly economic point of view.

It is not easy to discover or to analyze the circumstances and the factors which are responsible for our relatively unfavorable current rates of economic growth. Within the time at our disposal it is possible to deal with these circumstances and factors in only the most general way.

There are some reasons to expect a more mature and wealthy economy such as ours to have a slower rate of economic growth than would be true of a poorer country in the early stages of industrialization. In part, the higher rates of growth shown by the indexes for countries which are going through the early stages of industrialization are due to statistical anomalies. In some degree, however, in the slower rate of growth of an economy such as our own it is not easy to disentangle statistical anomalies from reality. Thus the larger propor-

tion which the production of services bears to the production of goods in a wealthy economy tends to lower the statistical measures of economic growth. The statistical measurement of changes in the production of services also reflects conceptual difficulties which are almost insoluble.

It is obvious that a free economic and political society like our own suffers some handicaps as compared with a totalitarian society such as that of the Soviet. Fortunately there are also decided economic advantages which a free society has which go far to offset those of a totalitarian society. Of course, in terms of the good life by which societies should be judged, we would totally reject the totalitarian society, even if such a society were more economically efficient measured in net material production than our own.

It is much easier to attain a higher rate of economic growth if very little attention has to be paid to changes in consumer tastes and whims and if production can be concentrated upon staple and basic products. There is almost no consumer sovereignty in the Soviet Union such as exists in the United States. Perhaps that statement is a little too strong, but in some sense it is true. However, our catering to even the most casual preferences of consumers gets us no credit in statistical measures of comparative economic growth.

In all economic systems the rate of growth is greatly affected by the rate of capital saving and investment. In our own system people are free to consume or to refrain from consumption and thus to release funds for capital investment while in the Soviet Union decisions about how much to save and where capital is to be invested are made by the state. On balance, experience indicates that decisions with respect to where and how to invest capital are more efficiently made in the United States than in the Soviet Union but saving is not limited by investment demand in the Soviet Union as is sometimes true during recessions in the United States. These advantages and disadvantages in capital saving and investment are reflected in comparative rates of growth.

Let us take an example in which our economy is far more productive than the Soviet economy, namely, agriculture. We are not able to get the full advantage out of this higher productivity because a substantial proportion of our agricultural output under present circumstances is surplus and cannot be fully and freely utilized as an addition to our national income.

I suspect actually most of that does show up in statistical measurements, but I don't think all of it does. Anyhow, that introduces a complex element. The particular kinds of price-marketing problems in agriculture which exist for us do not exist for the Soviets.

If we take another example, restrictive labor practices commonly called "featherbedding" play little role in the Soviet economy. Free labor unions do not exist in the Soviet Union or in other totalitarian countries. There exists no independent power to protect the worker from the employer-state. The limitations on our rate of economic growth for which restrictive labor practices or governmental inventions in agriculture are responsible are probably statistically of minor importance. They are cited only to illustrate that the Soviet Government does not have to take into account, as we do, the political power of particular economic groups.

Turning to the most generalized way in which the limitations on our economic rate of growth can be expressed, I would put this in terms of the difficulties in a modern free but complex capitalistic system in maintaining as high a level of output as would physically be possible while preventing inflationary price rises. During the great depression of the thirties many would have wanted to state the difficulty simply in terms of the dilemma we face in providing consumer purchasing power for what we are quite able physically to produce. But I think we know now that this was not the correct way to put the matter. In any case, we now have the inflationary problem to meet also.

In recent years we have had periods of expansion characterized by quite satisfactory rates of economic growth. But these periods of expansion could not continue because the monetary authorities felt that money dare not be made so easily available that inflationary pressures would be generated. This meant that the monetary media available for investment, for building up inventories and indirectly for consumer purchasing power, had to be restricted. The consequent recurrent recessions from which our economy suffers limits our rate of economic growth substantially.

I am not for a moment blaming the monetary authorities for their efforts to prevent inflation. It must never be forgotten that we often have had good cause to fear that the action of the monetary authorities might not succeed in restricting the formation of money to the extent necessary to control inflation. This fear has been accentuated by the development of "cost-push" inflationary forces. Our monetary authorities have sometimes the task of trying to offset increases in cost, increases in prices, and increases in the money supply which have already occurred.

In view of the current high interest rates and the scramble for funds by the Government, industry, and the general public, it might be thought that shortage of capital was a factor operating to limit economic growth independently of the problem of maintaining production while restricting inflation. In fact, the capital shortage which exists is integrally connected with this problem. Bank deposits are commonly thought of as the result of saving. It would perhaps be more accurate to say that a certain amount of saving, in the sense of abstention from consumption, has to be done if bank deposits created by borrowing are to be prevented from having an inflationary effect. The saving by itself does not increase bank deposits. We might say that the problem of the monetary authorities is to let the supply of capital increase as much as they dare through borrowing. If they let the dollar supply of capital increase too rapidly, there will be inflation. If they restrict borrowing too greatly, both consumption and investment will fall off more than is necessary, and the money supply of capital will not increase rapidly enough to utilize our manpower and other physical resources.

This is not to imply for a moment that the most skillfully managed money system could of itself maintain the full employment and stable prices which would be conducive to a higher rate of economic growth than we have recently had. Monetary management cannot serve as a complete substitute for the other factors which affect the level of prices, wages, saving, and investment. But I have chosen to empha-

size how under present circumstances the checks to expansion which our monetary authorities must often invoke is perhaps the most important part of the mechanism which limits economic growth, even though these monetary checks cannot usually be considered as the basic cause of the momentary interruption of economic growth.

To state the matter far too simply on account of time limitations—our rate of growth and to a considerable extent our rate of capital formation is limited by the efficiency with which the potential growth of production physically attainable can be approached in view of the necessity for preventing inflation. This is by no means, however, determined solely by the wisdom and skill of the monetary authorities. Cost-push inflationary forces may be so great that the monetary authorities have no alternative other than regulating the rate of economic expansion by recurrent slamming on of the brakes, sometimes accompanied by a complete momentary halt in the rate of economic growth. To the extent that this is true, improvement would have to be sought in the direction of changes in the organization, or, at least, operation of our cost-price system. The difficulties in this direction are highlighted by the present steel strike and the complex relations in that industry among wages, profits, management stock options, productivity, and prices. Additional studies on the national level of these relations would throw light on the task of preventing recessions without so substantially interrupting the rate of economic growth are urgently needed.

The CHAIRMAN. Thank you very much. The discussion will be continued by Professor Power.

#### **STATEMENT OF JOHN H. POWER, ASSOCIATE PROFESSOR OF ECONOMICS, WILLIAMS COLLEGE**

Mr. POWER. My aim is to set forth as briefly as possible a theory of economic growth that—

1. Is consistent with the main facts of our growth experience, and
2. Is helpful in assessing the probable effects of alternative social policies to promote growth and stability.

In the interest of both brevity and clarity, I will try to avoid throughout the usual academic disclaimers and qualifications which tend sometimes to cloud the main points.

#### 1. BUSINESS CYCLES

The most obvious fact about our growth experience is the persistent recurrence of business cycles. It is my contention that these cycles are symptoms of growth disequilibrium, and that solving the basic growth problem in our economy would not only make possible a more rapid rate of growth, but would also largely eliminate the problem of the business cycle as we have known it.

It will be convenient to begin, however, with some generalizations about our cyclical experience before linking cycles to the growth problem. Though no two cycles are precisely alike, there are some important characteristics that seem to be common to most cycles in the experience of advanced capitalist countries like the United States.



First, cycles appear as deviations from a full employment growth trend. This means simply that business cycle peaks ordinarily reach approximate full employment of the labor force. Thus, unemployment does not cumulate from one depression to another, but is wiped out periodically in the upswings.

Whether this means that the potential labor force is fully utilized over the long run depends on what we assume about the effects of depression on the growth of the labor force. To the extent that periodic depressions slow population growth and reduce the longrun rate of participation of the population in the labor force there is not full utilization of the potential, as opposed to the actual, labor supply. To this extent depressions mean a slowing of the rate of growth of output because of a slowing of the rate of growth of one of the factors of production, labor.

We should be more concerned, however, about the retardation of capital formation during depressions, partly because the magnitude of this effect is much greater and partly because we are more interested in the growth of output per capita than in the growth of total output. The sharp drop in saving and investment during depressions means that potential capital resources are lost forever and that the level of per capita output is permanently reduced.

Let me simplify the discussion considerably by assuming that labor supply is largely independent of the cyclical nature of the growth process, while capital formation is markedly retarded during depressions.

We have, then, long run growth at full utilization of the potential labor supply, but at less than full utilization of the potential capital supply. The difference is that workers are left over from the depression to be hired in the boom, but their labor time which could have produced capital instruments as well as consumption goods is lost forever.

It is not easy to explain precisely why booms typically have carried to full employment and not beyond in U.S. experience. Whatever is the mechanism involved, however, there seem to be endogenous destabilizing factors sufficient to insure that booms once started ordinarily develop the momentum required to reach a ceiling beyond which lies inflation, but not to pierce through this ceiling. And this ceiling must be linked directly or indirectly with full employment of the labor force. Otherwise, it would be very difficult to explain why full employment is maintained—at cyclical peaks—over a very long run involving many cycles.

I could assume, along with a ceiling, a floor of steadily rising autonomous investment, but this is not essential. Let us suppose simply that stimuli from discovery, invention, or the bunching of innovations hit the economy in irregular fashion. Each such jolt—of sufficient magnitude—will start the economy on its way to full employment at which point the rate of growth must retard and a downturn follow.

There are, then, four elements in this picture of cycles:

First, I assume irregularly spaced exogenous stimuli.

Second, I assume an internal or endogenous, mechanism that is destabilizing—an upturn generates its own steam.

Third, I assume the existence of a full employment ceiling at which point growth is retarded.

And, fourth, I assume that the ceiling rate of growth cannot be maintained.

The first assumption requires no explanation; without this there would be no growth. The endogenous destabilizing mechanism could be the so-called multiplier-accelerator interaction. It could be Keynes' psychological waves of overoptimism and overpessimism. It could even be governmental monetary-fiscal policies—in the upswing, at least—designed to facilitate growth in the early states of a boom.

We need not choose among these alternatives; they are not only compatible, but would, in fact, reinforce each other.

Note, however, that it need not be an explosive mechanism. It could be, for example, a multiplier-accelerator interaction with damped cycles, but whose natural cyclical peak is above the full employment level of output—thus, an upward movement from a very deep depression might not reach the ceiling.

Whatever the precise character of the mechanism, our economy appears to have the kind of natural volatility that is required by the second assumption.

The assumption of a full employment ceiling is easier to defend by appealing to history than to logic. Serious inflation in other than war and postwar periods has been a rarity in the U.S. experience. Somehow the economy slows down as bottlenecks are reached rather than exploding in spiraling prices. Perhaps this is because bottlenecks are reached unevenly. It is more difficult for a small part of the economy to raise prices independently of the rest than for all to raise prices simultaneously. Perhaps it is due to the prevalence of administered prices in product and labor markets. Perhaps it is due to monetary fiscal policy designed to dampen a boom in its later stages.

Whatever the cause, the economy tends to slow its growth when supply bottlenecks are reached and this slowing works to reduce demand before serious price inflation sets in.

Why this normally occurs at or near full employment of the labor supply is a very important question, the answer to which provides the key to an understanding of our basic growth problem: an inability to maintain full employment growth. The discussion of this question brings us finally to a linking of cycles with growth theory.

## 2. GROWTH THEORY

The theory that I will present in abbreviated form is an exceedingly simple one, but I believe that it contains the elements essential to an understanding of the longrun determinants of growth.

I take as given population growth, scientific progress, a propensity on the part of individuals to accumulate wealth, as well as a propensity to pursue material gain on the basis of more or less rational calculation—broadly speaking, the profit motive.

To probe deeply in an attempt to discover the basic causes behind these social phenomena would carry me far beyond the normal bounds of economic analysis, and certainly far beyond my depth. Instead I will remain within the traditional confines of economic theory and ask simply what happens to employment and output in a profit-motivated economy in which there occurs saving and investment, population growth, and technological progress.

Given the stream of improvements in technological knowledge, output will be higher at any time the more fully productive resources are utilized. A maximum rate of growth, then, is necessarily a full employment rate of growth.

But full employment of what? It is difficult to attach meaning to the notion of full employment of natural resources, since in some cases utilization means depletion. So, while the Malthusian problem of diminishing returns from fixed natural resources as population and capital grow lurks constantly in the background, I intend to put it aside for now to concentrate on the problem of the full utilization of the two growing factors, labor and capital.

I return to this problem, however, in the appended note on "Population Growth and Economic Progress."

I'll assume that there are no serious problems about the meaning of full employment of labor. I'm not concerned here about the difference between 2 percent and 5 percent unemployed.

Full utilization of capital in a static context refers to utilization of the material capital instruments, but we are interested in the long run. Here the relevant supply concept is the flow of saving that individuals and institutions are willing to provide. The flow of saving itself is, of course, dependent on the current level of output and income, which, in turn, depends on the extent of employment of the labor force. Consequently, full utilization of our capital potential overtime means the realization in real investment in capital instruments of the flow of saving out of income corresponding to continuous full employment output—in short, investment of full employment saving.

Curiously, a failure to achieve full utilization of capital, in the above sense, results in unemployment of labor. For the failure to employ our full saving potential in real investment creates a deficiency of aggregate demand for output as a whole.

Under these circumstances, both the existing stock of capital instruments and the existing labor force will be underutilized. This is the kind of unemployment to which Keynes directed his attention in his pathbreaking "General Theory of Employment, Interest, and Money." It has been a chronic problem for advanced industrial economies.

Students of the economics of underdeveloped countries are aware, however, of a quite different kind of unemployment—one that stems not from a deficiency of aggregate demand, but from a deficiency of capital. Investment equal to full employment saving is insufficient to equip the growing labor supply at the capital labor ratio appropriate to existing techniques of production, so that some of the workers remain unequipped or underequipped.

In this case there is full employment of the existing stock of capital instruments, together with redundant labor, instead of simultaneous unemployment of both capital instruments and labor supply as in the Keynesian case.

These two kinds of unemployment suggest two conditions for full employment equilibrium growth. First, all increments to the available labor supply must be equipped with capital at the ratio of capital to labor appropriate to existing production techniques as determined by technical knowledge and the prices of the factors of pro-

duction—labor and capital. I call this rate of capital formation the natural rate of capital widening. In our economy this means at present about \$17,000 worth of capital per worker.

I assume for simplicity that depreciation allowances match actual depreciation and obsolescence, so that the improvement of the existing stock of capital occurs gradually through "replacement investment." I also assume that the economy grows in such a way that the newly available labor is equipped with capital at the average ratio for the economy as a whole. Neither of these simplifying assumptions is essential to the argument, however.

The increments as to the available labor supply include not only those arising from the growth of population, but also those technologically unemployed by laborsaving innovation.

Over the past 75 years the ratio of capital to labor in the U.S. economy has risen at a rate of about  $1\frac{1}{4}$  percent per year. Thus, every year, on the average, the same capital stock—in its altered form—has required about  $1\frac{1}{4}$  percent fewer workers, the latter, along with the growth from population increase, requiring net capital formation.

In recent years the rate of laborsaving has been somewhat higher, but still under 2 percent per annum. Suppose, however, that we put laborsaving currently at 2 percent. This, together with a rate of growth of the actual labor force of about 1 percent per annum, suggests that this year the natural rate of capital widening requires about \$17,000 per man, for about 2.1 million workers—3 percent of a fully employed labor force of about 70 million—or \$35.7 billion of net investment.

I consider it only a remarkable coincidence that the latest figure for net investment—for the second quarter of 1959—shows an annual rate of \$35.8 billion.

The second requirement for equilibrium growth is that net investment thus required by the increments to the available labor supply equal net saving at full employment output, or, in other words, that aggregate demand equal full employment aggregate supply. This is, of course, the Keynesian condition for full employment.

Full employment output is equal to the fully employed labor force times average labor productivity—at present about 70 million times \$6,500, or a net national product of roughly \$455 billion.

In order that saving should not exceed the \$35 to \$36 billion of investment warranted by the underlying growth determinants, net saving would have to be about 8 percent of net national product, a ratio significantly under what appears to be normal either over the long run or in any recent period.

These figures are just rough estimates, however, and are introduced here for illustrative purposes only.

My primary concern is to emphasize the dual condition for full employment equilibrium growth: the rate of net investment must match both the capital requirements of the newly available labor supply and the disposition on the part of individuals and institutions to save out of full employment income.

This dual condition for equilibrium growth can be put in the form of a simple equation :

$$\frac{\Delta L}{L} \times \frac{L}{\Delta L} = \frac{S}{Y} \times \frac{Y}{L}$$

where the first ratio on the left-hand side is the annual increment to the free labor supply—remember, that technologically unemployed are included—as a percentage of the fully employed labor force; the second ratio on the same side is the investment per additional worker required by existing techniques of production; the first ratio on the right-hand side is the full employment saving output ratio, and the last ratio is average labor productivity at full employment.

It will simplify notation considerably if we substitute letters for the ratios so that the equation reads :

$$g \times c = s \times p$$

We might estimate hypothetical equilibrium values for the U.S. economy today to be something like  $\frac{3}{100}$  times \$17,000 =  $\frac{5}{100}$  times \$6,500.

We can distinguish two kinds of growth disequilibrium, and correspondingly, two kinds of unemployment and two kinds of inflation. One of the principal difficulties in prescribing social policies to promote growth and stability is to distinguish between these two categories of disequilibrium.

The first, which I shall call the deficient capital case, is characteristic of low productivity, low saving economies—typically those that are labeled underdeveloped. Investment at the natural rate of capital widening—i.e., at the rate given by  $g$  times  $c$ —exceeds full employment saving, implying an inflationary gap. Only if saving could be forced via inflation above its normal level could investment actually proceed at the natural rate.

Alternatively, investment might fall short of this rate and a part of each increment to the free labor supply would remain unemployed, or underemployed. This is a source of what has been called in underdeveloped economies, distinguished unemployment.

In the deficient capital case we have unemployment that is not amenable to Keynesian remedies. Any attempt to raise aggregate demand through monetary fiscal policies would simply intensify the inflationary gap. Here is inflation in the classical sense, a chronic tendency toward an excess of demand over productive capacity when investment proceeds at the natural rate.

The alternative to inflation is technological unemployment. That is, holding investment down so as to eliminate the inflationary gap means failing to equip, or underequipping, a part of the labor force.

Usually economies of this kind get something of both difficulties, so that the symptoms of growth disequilibrium in the deficient capital case are chronic tendencies toward a shortage of capital, technological unemployment—often taking a disguised form—and excess demand inflation of the classical sort.

What is needed for equilibrium growth in the deficient capital case is a reduction in  $g$  times  $c$  or a rise in  $s$  times  $p$ .

If, however, we take population growth, technology, and social attitudes toward saving as given, it is evident that it is not easy to implement a solution. What is left is movement within the existing

spectrum of technological possibilities toward lower ratios of capital to labor. But these would appear profitable only if labor were somehow cheaper and capital more expensive.

Neoclassical economics assumed, of course, that this is precisely what would happen. After all, this is a clear-cut case of capital shortage and labor surplus and relative prices should move as indicated by market supply and demand to eliminate the disequilibrium.

Under these circumstances one might say, then, that it is the failure of real wages to fall that is responsible for growth disequilibrium and technological unemployment. It is evident, I hope, that happier solutions would be a fall in the rate of population growth, reducing  $g$ , or a rise in labor productivity, if these could be achieved.

I have dwelt this long on the deficient capital case simply because there is so much confusion about the nature of our own growth problem. We are not an underdeveloped economy; we are not chronically in the situation I have just described. Yet there are many who insist that our problem is a shortage of capital, that our unemployment is mainly of the technological variety, that real wage rates should fall to correct unemployment, and that inflation in our economy stems from an excess demand for goods and services.

An analysis of growth disequilibrium in a high productivity, high saving economy, suggests that all of these are misconceptions.

Here the disequilibrium situation is reversed. The natural rate of capital widening— $g$  times  $c$ —chronically tends to fall short of full employment saving— $s$  times  $p$ —resulting in a deficiency of aggregate demand and unemployment of both labor and capital equipment. The redundancy of capital equipment leads to a fall in investment and the downswing of the cycle is underway.

The downswing is characterized by a rate of net investment below that required by the growth of the free labor supply. This means that in the ensuing upswing the rate of net investment can for a time exceed the long run or natural rate.

Furthermore, replacement of obsolete equipment is postponed in the depression, permitting an excessive rate of replacement investment in the upswing.

Thus, for two reasons, investment can continue for a time in the boom at a rate in excess of that which can be maintained in the long run. When, however, full employment is reached and postponed replacements are completed, the initial growth disequilibrium reasserts itself and a downturn must soon follow.

The business cycle is seen then as essentially a fluctuation of the rate of investment around a longrun maintainable rate—the latter being given by the growth of the free labor supply and the capital intensity of production techniques.

Depressions must occur often enough and last long enough to reduce longrun saving to this level of investment. This means that business cycles are viewed as symptoms of growth disequilibrium—a disequilibrium characterized by a real underlying labor scarcity and saving surplus.

Adjustment through market influences, as envisaged in neoclassical theory, would have wage rates rising and rates of interest falling until techniques sufficiently capital intensive to warrant investment equal to full-employment saving were adopted.

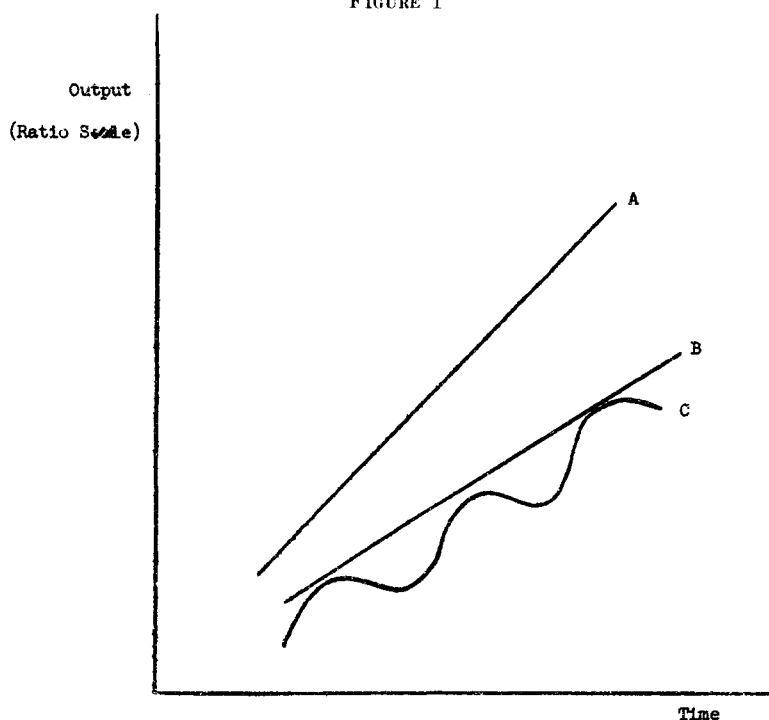
The cyclical adjustment precludes adjustment through market forces, however; booms halt at full employment of labor, so that the underlying real labor scarcity is never made fully explicit, while periodic depression eliminates what would otherwise be a surplus of saving.

What effect does this have on the rate of growth? First, note that over the long run the actual growth path is a cyclical one below a rising trend line with the peaks normally representing approximate full employment of labor. This is curve C in figure 1.

The trend line, curve B, is a full employment growth path, but one appropriate to a lower propensity to save than is the case with curve C. C periodically drops below B because saving at full employment is in excess of the capital requirements of the natural rate of growth. Hence, the full saving potential cannot be invested continuously over time, and recurrent depressions serve the function of eliminating the excess saving.

It would obviously be better to find some way to curb our tendency to oversave, thus enabling us to approach the steady growth path B. (The chart referred to follows:)

FIGURE 1



Mr. POWER. This would mean, however, eliminating cycles without raising the longrun rate of growth. If the latter is our goal, some way of using our full saving potential must be found.

Obviously, a higher rate of investment for a given rate of growth of available labor can be accomplished only with techniques of production that require higher ratios of capital to labor. But if such

techniques could be adopted, the economy could move along growth path A.

The difference between paths A and B is simply a higher rate of capital formation for the same growth in the labor force.

We come now, however, to a critical aspect of the problem. The techniques of production which are actually in use, and which are insufficiently capital intensive to use fully our saving potential, are presumably the most profitable ones given the state of technical knowledge and the prices of labor and capital.

What it requires is that businessmen be induced by a relative rise in the price of labor and a relative fall in the price of capital to adopt more capital-intensive techniques. But this is precisely what is difficult to achieve. In the first place, there would have to be some means of preventing prices from rising to negate the rise in wage rates.

And, second, businessmen would have to be willing to spend actually more on capital formation in the face of a lower rate of return. We have little reason to be sanguine about the prospect that either of these conditions would hold.

What actually happens as the economy approaches full employment is that the effect of labor scarcity on real wage rates is dissipated in price increases. And the monetary authority, viewing the rise in prices as evidence of an inflationary gap, permits credit to tighten and interest rates to rise.

Thus a disequilibrium characterized by a shortage of labor and a surplus of saving cannot make itself felt in the market because price increases negate the attempt of real wage rates to rise, and the monetary authority, pretending to follow neoclassical maxims, but failing to recognize in wage-price inflation a real scarcity of labor, lets the supply price of capital funds move in precisely the wrong direction.

It is evident now how the character of inflation differs in the deficient demand case from inflation in the deficient capital case. Our kind of inflation is not well described by either the demand pull or the cost-push theorists. For we can be in a position of short-run Keynesian equilibrium at full employment; that it, with neither an inflationary nor a deflationary gap, and the investment required to create this full employment demand will normally imply a rate of increase of capital faster than a free labor supply is becoming available.

So without any demand pull on finished goods prices, there is a demand pull on wage rates. And prices, unfortunately, respond to rising labor costs. This happened before we had unions, and it happens now with unions.

Though I have left natural resources out of the discussion, I cannot help noting that the above argument is further strengthened by introducing short-run inelasticities of raw material supply.

### 3. SOCIAL POLICY

It is easier to achieve stability than growth. Simply by reducing the saving-output ratio sufficiently we could eliminate our chronic tendency to vacillate between wage-price inflation and recession, though this would mean accepting a lower rate of growth than one which utilized our full saving potential.

And if we are stuck for a means of lowering the saving output ratio we can always simply run a Government deficit. The Government



could either cut taxes, thereby reducing social saving, or it could raise its expenditure on social consumption.

In any case, the lower saving function would make it possible to match saving with investment without putting pressure on the supply of labor. Hence, a Government deficit of this kind would not be inflationary. Those who assume automatically that any deficit run by our Government is necessarily inflationary mistake us for an underdeveloped economy. The actual effect of a Government deficit depends on its influence on resource demands.

To achieve both stability and a more rapid rate of growth is certainly more challenging. To use our full saving potential would require a more rapid increase in the capital-labor ratio than we have known heretofore.

This probably means a rate of labor saving more rapid than the future stream of progress in technical knowledge and ordinary profit considerations would allow—I am taking the stream of technological progress as given, but, obviously, a more rapid rate of growth of knowledge would, under any circumstances, permit more rapid growth.

In other words, to accumulate capital that rapidly would probably mean a falling rate of return on capital—this would be true a fortiori if we got our explosive rate of population increase under control.

Is it possible for the rate of profit to fall significantly over the long run? The traditional means of reducing the rate of profit is to reduce the rate of interest. A lower rate of interest is supposed to induce the entrepreneur to be willing to undertake investments at a correspondingly lower yield.

While recent opinion is perhaps more dubious as to the sensitivity of investment to interest rates, I think that there is much to be said for aiming at a steady, but gradual, fall in interest rates. In particular I think that a policy of permitting interest rates to rise in boom periods to unmaintainable levels should be avoided, for this simply complicates the task of educating wealth owners to expect lower returns in the future.

But a substantial portion of investment in the United States is undertaken by large corporations which seem to have their own interest rates. The rates that are crucial to their investment decisions are their own internal target rates of return, and these seem to be particularly insensitive to monetary policy.

How can these high target rates, which inhibit more capital-intensive investment, be whittled down?

I have a proposal in this regard which I think merits consideration. A slow but steady reduction in the corporate profits tax would permit corporations to reduce their required profit rates gradually without any adverse effect on profits after taxes.

Whether they would do so, or not, is another matter. So I would couple this with some kind of policy to inhibit price increases by large corporations, perhaps public factfinding boards, or some similar device. In this way, it just might be possible for wage increases to reflect labor scarcity without inflation. And it might be possible to get corporate internal interest rates down so as to induce a more rapid rate of labor saving.

In conclusion, I should admit that I have taken a longrun view throughout the discussion. I do not think that the problems that I have discussed are as acute today as they have been in the past, or as they are likely to be in the future. There are two reasons for this:

First, the current saving output ratio is abnormally low because of our huge expenditures on social consumption of defense services;

Second, the annual increments to the labor force should rise rather sharply in the next few years, raising the rate of capital formation that is possible without wage price inflation.

But I like to believe that in the more distant future we might not be obliged to devote so much of our resources to producing and maintaining armed strength.

And I like to believe, too, that we might once again get on that happy trend of declining rate of population growth.

Then we will really have to learn to live with the fact that we are not an underdeveloped economy.

(The tables referred to follow :)

TABLE I.—*Unemployment and changes in wage rates*

[Figures for new definitions in parentheses]

Year	Percent unemployed <sup>2</sup>	Average hourly money wage rate <sup>3</sup>	Percent change in wages	Year	Percent unemployed <sup>2</sup>	Average hourly money wage rate <sup>3</sup>	Percent change in wages
1900 (T) <sup>1</sup>	5.0	0.151	3.4	1914 (T) <sup>1</sup>	8.0	0.220	-0.4
1901	2.4	.158	4.6	1946 (P) <sup>1</sup>	3.9	1.13	6.6
1902	2.7	.165	4.4	1947	3.6 (3.9)	1.30	15.0
1903 (P) <sup>1</sup>	2.6	.170	3.0	1948 (P) <sup>1</sup>	3.4 (3.8)	1.41	8.4
1904 (T) <sup>1</sup>	4.8	.169	-5	1949 (T) <sup>1</sup>	5.5 (5.9)	1.46	3.5
1905	3.1	.172	1.7	1950	5.0 (5.3)	1.55	6.1
1906	.8	.184	7.0	1951	3.0 (5.3)	1.73	11.6
1907 (P) <sup>1</sup>	1.8	.191	3.8	1952	2.7 (3.1)	1.83	5.7
1908 (T) <sup>1</sup>	8.5	.184	-3.8	1953 (P) <sup>1</sup>	2.5 (2.9)	1.94	6.0
1909	5.2	.184	0	1954 (T) <sup>1</sup>	5.0 (5.6)	1.97	1.5
1910 (P) <sup>1</sup>	5.9	.198	7.6	1955	4.0 (4.4)	2.05	4.0
1911 (T) <sup>1</sup>	6.2	.202	2.0	1956	3.8 (4.2)	2.15	4.8
1912	5.2	.207	2.5	1957 (P) <sup>1</sup>	4.3 (4.3)	2.24	4.1
1913 (P) <sup>1</sup>	4.4	.221	6.7				

<sup>1</sup> "T" refers to NBER reference cycle troughs while "P" refers to peaks. Source: Hearings, Joint Economic Committee, 86th Cong., pt. 2, "Historical and Comparative Rates of Production, Productivity, and Prices," p. 399.

<sup>2</sup> Stanley Lebergott, "Annual Estimates of Unemployment in the United States, 1900-1950" in "The Measurement and Behavior of Unemployment" (National Bureau of Economic Research) 1957, p. 215.

<sup>3</sup> Albert Rees, "Patterns of Wages, Prices, and Productivity" in "Wages, Prices, Profits, and Productivity" (the American Assembly, Columbia University, 1959), p. 15.

<sup>4</sup> Postwar wage rates represent total compensation; i.e., average money earnings plus wage supplements

TABLE II.—*Percent unemployment at peak years in the business cycle*

Year	Percent unemployment <sup>1</sup>	Year	Percent unemployment <sup>1</sup>
1903	2.6	1926	1.9
1907	1.8	1929	3.2
1910	5.9	1937	14.3
1913	4.4	1944	1.2
1918	1.4	1948	3.4
1920	4.0	1953	2.5
1923	4.3	1957	4.3

<sup>1</sup> Stanley Lebergott, "Annual Estimates of Unemployment in the United States, 1900-50" in "The Measurement and Behavior of Unemployment" (National Bureau of Economic Research), 1957, p. 215.

TABLE III.—*Change in labor productivity, 1947-59*<sup>1</sup>

Year	Net national product (1954 prices)	Labor force	Net national product per worker	Percent change in net national product per worker
	<i>Billions</i>	<i>Thousands</i>		
1947	\$266.6	59,402	\$4,490	1.33
1948	275.7	60,573	4,450	0
1949	273.0	60,039	4,550	6.15
1950	296.5	61,398	4,830	3.31
1951	319.1	63,884	4,990	2.00
1952	329.2	64,628	5,090	2.75
1953	342.3	65,492	5,230	-58
1954	334.3	64,240	5,200	5.19
1955	361.1	65,962	5,470	-18
1956	369.0	67,565	5,460	.55
1957	372.0	67,808	5,490	-1.86
1958	358.7	66,603	5,390	5.86
1959	399.8	70,131	5,700	

<sup>1</sup> Economic Report of the President, 1959.

TABLE IV

Year	Civilian labor force <sup>1</sup>	Percentage change in size of labor force
1900	28,400	
1905	32,258	13.6
1910	36,441	13.0
1915	39,587	8.6
1920	41,750	5.5
1925	45,000	7.8
1930	49,820	10.7
	Including armed services <sup>2</sup>	
1930	50,080	
1935	53,140	6.1
1940	56,030	5.4
1945	65,147	16.3
1950	64,599	-8
1955	68,896	6.7
1956	70,387	2.2
1957	70,746	.5
1958	71,284	.8
1959	<sup>3</sup> 72,000	1.0

<sup>1</sup> Size of labor force computed from data found in Stanley Lebergott, "Annual Estimates of Unemployment in the United States, 1900-1950" in "The Measurement and Behavior of Unemployment" (National Bureau of Economic Research) 1957, p. 215.<sup>2</sup> Bureau of Labor Statistics.<sup>3</sup> Estimate.

TABLE V.—*Capital-labor ratio, 1900–1959*

Year	Capital <sup>1</sup>	Labor <sup>2</sup>	Capital/labor	Percent change in capital/labor
	<i>1929 prices</i>			
1900.....	104.7	28,400	36,866	
1905.....	124.6	32,258	38,626	4.8
1910.....	150.2	36,441	41,217	6.7
1915.....	174.3	39,587	44,029	6.8
1920.....	198.9	41,750	47,640	8.2
1925.....	233.4	45,000	51,867	8.8
1930.....	274.3	50,080	54,772	5.6
1935.....	253.1	53,140	47,629	-15.0
1940.....	269.2	56,030	48,046	.9
1945.....	271.9	65,147	41,736	-15.1
	<i>1947-49 prices</i>			
1945.....	537.9	65,147	82,567	
1950.....	629.3	64,599	97,416	18.0
1955.....	749.6	68,896	108,801	11.7
1956.....	749.6	70,387	110,276	1.4
1957.....	798.1	70,746	112,812	2.3
1958.....	812.7	71,284	114,009	1.1
1959.....	830.5	72,000	115,347	1.2

<sup>1</sup> Statistical Abstract of the United States, 1959, p. 325.

<sup>2</sup> Stanley Lebergott, "Annual Estimates of Unemployment in the United States, 1900-1950" in "The Measurement and Behavior of Unemployment" (National Bureau of Economic Research), 1957, p. 215. Also Bureau of Labor Statistics.

TABLE VI.—*Capital-output ratios at peak employment years* <sup>1</sup>

Year	Capital/output	Year	Capital/output
1899.....	3.44	1929.....	3.51
1903.....	3.27	1937.....	3.27
1907.....	3.19	1944.....	1.94
1910.....	3.29	1948.....	2.51
1913.....	3.55	1950.....	2.61
1918.....	3.00	1950 (new series) <sup>2</sup> .....	2.39
1920.....	3.56	1953.....	2.35
1923.....	3.37	1955.....	2.35
1926.....	3.45		

<sup>1</sup> Raymond Goldsmith, "The Growth of Reproducible Wealth of the United States of America from 1805 to 1950" in "Income and Wealth of the United States, Trends and Structure," Simon Kuznets (ed.).

<sup>2</sup> Estimates based on Goldsmith's data in NBER Annual Report, 1958, p. 67.

TABLE VII.—*Measures of U.S. economic growth, 1869-78 to 1944-53* <sup>1</sup>

	Relatives for 1944-53 (1869-78=100)		Relatives for 1944-53 (1869-78=100)
Net national product.....	1.325	Capital.....	993
Population.....	334	Capital per capita.....	297
Net national product per capita.....	397	Capital per employed worker.....	233
Labor force.....	423	Net national product per employed worker.....	310
Ratio: Labor force to population.....	127	Net national product per man-hour.....	426
Employment.....	427	Net national product per capital Unit.....	134
Ratio: Employment to population.....	128		
Standard hours.....	73		
Man-hours.....	312		
Man-hours per capita.....	94		

<sup>1</sup> Moses Abramovitz, "Resources and Output Trends in the United States since 1870," p. 81.

TABLE VIII.—*Saving, output ratios*

KUZNETS <sup>1</sup>			
Decade	Saving, net national product	Decade	Saving, net national product
1869-78.....	14.3	1909-18.....	12.5
1874-83.....	15.0	1914-23.....	11.5
1879-88.....	14.6	1919-28.....	10.6
1884-93.....	15.8	1924-33.....	6.3
1889-98.....	16.3	1929-38.....	1.7
1899-1908.....	13.9	1934-43.....	7.7
1904-13.....	12.7	1939-48.....	7.9

GOLDSMITH <sup>2</sup>			
Cycle	Saving, net national product	Cycle	Saving, net national product
1890-1900.....	10.5	1921-24.....	11.5
1900-1904.....	13.1	1924-27.....	14.9
1904-08.....	12.9	1927-32.....	5.7
1908-11.....	11.4	1932-38.....	-3.8
1911-14.....	11.7	1938-46.....	3.3
1919-21.....	8.8	1946-49.....	11.7

SAVING-OUTPUT RATIOS FOR SELECTED (CYCLICAL TOP NONWAR) YEARS <sup>3</sup>

Year	Saving, net national product	Year	Saving, net national product
1902.....	19.3	1929.....	15.0
1905.....	18.2	Average.....	15.5
Average.....	18.8	1948.....	14.4
1925.....	15.9		

<sup>1</sup> Simon Kuznets, "Long Term Changes in the National Income of the United States of America Since 1870" in "Income and Wealth of the United States, Trends and Structure," Simon Kuznets (ed.), p. 155.

<sup>2</sup> Goldsmith, "A Study of Saving in the United States," vol. I, p. 76.

<sup>3</sup> *Ibid.*, p. 79.

## APPENDIX I.—A NOTE ON POPULATION GROWTH AND ECONOMIC PROGRESS

Mr. POWER. Over the past two or three centuries the Western World has enjoyed an unprecedented increase of the productive powers of man, a phenomenon made possible by rapid accumulation and improvement of physical capital, knowledge, and skills.

The same period witnessed a rapid acceleration of population growth to about the middle of the 19th century, followed by a gradual slowing since then. Despite the decline in the rate of population growth over the past century, however, we are still expanding our numbers today at a rate that was unknown in the precapitalist period of history.

It seems clear enough that the rise in productivity influenced the trend of population growth by reducing death rates. But what has been the influence of population growth, in turn, on productivity and material levels of living? Has population growth contributed to economic progress, or has it been an obstacle in the path of a more rapid increase of material well-being?

From the beginning of modern economic science economists have split over this question. Adam Smith, for example, viewed rapid population growth as favorable to economic progress, while Malthus and Ricardo held that population growth would tend to keep living standards down to a subsistence level and would eventually eliminate the possibility of further growth. It might be instructive to review very briefly their arguments.

Adam Smith argued that increases in productivity stem from the division of labor and specialization of tasks. The larger is the population the greater are the opportunities for specialization. The process of furthering the division of labor requires capital formation; for workers must be provided with tools, material, and subsistence.

Capitalists will undertake this activity, however, only if they can make an adequate profit thereby. If population fails to grow, capital accumulation simply bids up the wages of the existing labor force until profits are eliminated.

Smith argued, however, that the rise in wages would itself bring forth the required growth of population. Since more numbers meant more specialization and higher productivity, wages could rise at some rate without impinging on profits. Thus capital accumulation, population growth, and rising productivity could proceed apace.

While Smith emphasized increasing returns from the continuing division of labor, Malthus and Ricardo emphasized diminishing returns due to the fixed supply of land and natural resources. Capital accumulation would proceed so long as a profit could be made; population would grow so long as capital accumulation bid wages above the subsistence level.

Eventually, however, the pressure of a growing population on given land and natural resources would so increase the costs of raw materials and foodstuffs—the cost of the latter determining the subsistence wage—that any further possibility of profitable capital accumulation would be eliminated.

In the absence of profit capital accumulation would cease; with wages at subsistence levels, population would remain constant.

Who was right? A superficial glance at the history of the past 150 years would seem to validate Smith's argument. Population has grown rapidly, as has productivity, and profits have not disappeared.

But one suspects that this has been due more to the rapid progress of science than to a continuing division of labor per se. Would not profitable opportunities for gains from specialization diminish rapidly in the absence of improvements in knowledge? And would not improvements in technical knowledge raise productivity per man for any given degree of specialization?

If we answer yes to these questions, we should characterize the past century and a half as a period in which a race between diminishing returns due to fixed land and natural resources and increasing returns from scientific progress was won by the latter.

But this means that without the rapid population growth we would not have had the effect of diminishing returns to offset against our gains from the progress of science.

Furthermore, resources that were used in capital formation to house and equip our growing numbers could have been devoted to a variety of other uses, including equipping better a smaller population.

It follows from the above argument that rapid population growth inhibits our ability to realize fully, in terms of rising levels of living, the gains from scientific progress and from the capital formation our saving makes possible.

The reasons, in summary form, are:

1. The principal advantages from subdividing tasks in production can be achieved with a relatively small population—especially with improved transportation and diminished trade barriers.

2. The gains in productivity per man from scientific progress are offset in parts by the increasing relative scarcity of land and natural resources and consequent rising relative costs of food and raw materials when population is growing rapidly (“relative” here means relative to what would occur in the absence of rapid population growth).

3. Rapid population growth requires the use of human and natural resources in capital formation simply to revent the quantity of capital per man from falling—resources which otherwise could be devoted to raising consumption or increasing capital per man.

All of this assumes that scientific progress would proceed as rapidly if population were to grow more slowly. Because the percentage of a given population that participates to any significant degree in scientific progress is quite small, the number so engaged can be increased greatly at little cost to society. Therefore, it would cost a society with a slowly growing population very little in terms of manpower to maintain a relatively rapid rate of progress in science.

Furthermore, since such a society would be raising output per man much more rapidly than one with rapid population growth, it could afford to devote more manpower to education and science. Hence, the assumption than scientific progress would proceed as rapidly were population to grow more slowly seems to be a reasonable one.

So far, we have neglected the influence of population growth on the demand for goods and services. This is in keeping with the classical assumption of Say's law: that production automatically creates an aggregate demand sufficient to buy what is produced; that saving decisions, in other words, represent a demand for output just as much as do consumption decisions.

After the publication of Keynes' "General Theory," however, interest centered about the demand-generating effects of population growth. At the close of the decade of the 1930's, in which deep depression had coincided with the slowest rate of population growth in our history, the view that rapid population growth was required to avert stagnation gained currency.

Today business opinion seems overwhelmingly to support the view that rapid population growth means high consumption, high investment, high profits, and prosperity.

There is no reason to doubt that rapid population growth means a high level of aggregate demand. The percentage of income consumed is higher in an economy in which population is growing—from rising births—because of the greater number of dependents per worker.

Investment is stimulated both by the prospect of growing demand for output and by the growing supply of labor. Thus, population

growth creates demand for resources to support and equip the growing population and this demand can raise output and employment.

Is this in conflict with our earlier conclusion that population growth inhibits economic progress? Not at all. In an economy in which investment chronically falls short of saving at full employment, any form of make-work activity appears to enhance prosperity.

Thus, a vast program of seeding clouds in winter to cause more snowfall could, by requiring additional employment both in the seeding operation and in the task of snow removal, create conditions of prosperity and raise real income above what it might otherwise be. So can war create prosperity in an economy which doesn't know how otherwise to use its productive capacity.

Population growth may be desired for its own sake. Well and good. But to welcome population growth because it uses resources which might otherwise remain idle is to advocate a make-work remedy for unemployment. For population growth requires resources that could otherwise be employed to raise per capita consumption, to increase productivity through greater investment per worker, or to permit greater leisure.

In addition, the classical argument of diminishing returns due to the fixed supply of land and natural resources is a valid one. In a dynamic context, this means not that living standards will decline but that the rise in per capita real income is inhibited by the growth of population. Thus, population growth involves a double cost to society.

Appendix II: "The Economic Framework of a Theory of Growth," by John H. Power, reprinted from the *Economic Journal*, March 1958. (The appendix referred to follows:)



# THE ECONOMIC FRAMEWORK OF A THEORY OF GROWTH

## I

THE purpose of this paper is to present a simple theory of economic growth that is sufficiently general to be useful in studying the growth problems of both developed and underdeveloped economies. The theory is purely economic in the sense that it ignores the manifold variations in cultural and institutional factors that are a very important part of the explanation of differences in levels of development and in rates of growth throughout the world. The basic determinants of growth are herein conceived to be population increase, saving and technological progress; and the theory that is set forth is essentially an explanation of the interrelationships among these basic elements and their effects on the growth of output of goods and services.

The theory is not new in any fundamental sense. It is rather a blend of the "heroic dynamics" of the classical school, the neo-classical marginal productivity theory and Keynesian employment theory. Thus the analysis lies within the main-stream of orthodox economics. For this reason it is undoubtedly more useful as it stands—that is, without amplification or qualification to take into account "non-economic" factors—when it is applied to the developed economies for which the orthodox economic theory was devised. Accordingly, in this paper the theory will be set forth within the context of the growth problems of a developed economy. Nevertheless, the writer believes that the theory has more general validity. While the purely economic model cannot stand alone, it is nonetheless an essential part of any general theory of growth.

## II. A SIMPLE MODEL OF A GROWING ECONOMY

In order to provide a general framework within which the various parts of our theory may be fitted, we present in this section a simple model of a growing economy.<sup>1</sup> In the interest of brevity we consider a closed, private economy with only two factors of production, labour and capital. We can ignore natural resources if we assume a rate of resource-saving improvement in knowledge that leaves unaffected the marginal productivities of capital and labour as their supplies grow in fixed proportion. We define this situation as one involving *no* technological progress. Furthermore, a positive rate of technological progress is construed to include not only all improvements in knowledge beyond that required to prevent diminishing returns from the fixed supply of natural resources, but also any possible tendencies toward increasing returns as supplies of capital and labour grow in fixed

<sup>1</sup> An earlier version of this model was presented in the writer's "Capital Intensity and Economic Growth," *The American Economic Review*, XLV (May 1955), pp. 197-207.

proportion. This enables us to employ the assumption of constant returns to scale, which in turn insures diminishing marginal productivity both of capital and of labour in the absence of technological progress. Finally, if we choose to relax the assumption concerning the rate of resource-saving improvement in knowledge we can treat diminishing returns from fixed natural resources as negative technological progress.

There are two conditions for full-employment equilibrium growth. First, all increments to what we shall call the "free labour supply" must be equipped at the ratio of capital to labour that is optimum (*i.e.*, most profitable) given knowledge, real wage rates and interest rates. When this occurs we will say that capital widening<sup>1</sup> is proceeding at the natural rate<sup>2</sup>—that is, at the rate that just matches the growth of the free labour supply. Increments to the latter include not only the natural increase of the labour force from population growth, but also those technologically unemployed by labour-saving innovation. Over the past seventy-five years the ratio of capital to labour in the United States, for example, has risen at a rate of about  $1\frac{1}{4}\%$  per year.<sup>3</sup> Thus each year the same capital stock (in slightly altered form) has required on the average about  $1\frac{1}{4}\%$  fewer workers—the latter, along with the growth from population increase, requiring *net* capital formation.

Let us assume for the sake of example that a labour force of 65 million workers is growing at a rate of  $1\frac{1}{2}\%$  per year and that the annual rate of labour-saving is also  $1\frac{1}{2}\%$ . Let us assume further that existing techniques, as determined by technical knowledge and factor prices, imply an average equipment per worker valued in current prices at \$18,000; and that growth occurs evenly throughout the economy so that increments to the free labour supply are equipped at the average capital-labour ratio. The natural rate of capital widening would mean, then, equipping annually 1.95 million workers with an average of \$18,000 worth of capital per worker—or net investment of \$35.1 billion per year.

The second requirement for full-employment equilibrium growth is that net capital formation thus required by the growth of the free labour supply equals net saving at full employment—or, in other words, that aggregate demand equals full-employment aggregate supply. The latter is equal to the labour force multiplied by average labour productivity (keeping in mind that output and consequently labour productivity are calculated net of deprecia-

<sup>1</sup> The term "capital widening" is borrowed from Hawtrey. The definition of capital widening employed here differs from that of Hawtrey, however, in that it means capital formation at a given ratio of capital to labour, rather than at a given ratio of capital to output. Cf. R. G. Hawtrey, *Capital and Employment* (London: Longmans, Green and Co., 1937), p. 36.

<sup>2</sup> In "Capital Intensity and Economic Growth" (*op. cit.*, p. 199) the writer termed this the "warranted" rate of capital widening; but since the concept is closer in spirit to Mr. Harrod's natural rate of growth than to his warranted rate, the terminology has been altered here to avoid confusion. Cf. R. F. Harrod, "An Essay in Dynamic Theory," *Economic Journal*, XLIX (March 1939), p. 30.

<sup>3</sup> Moses Abramovitz, "Resource and Output Trends in the United States Since 1870," *The American Economic Review*, XLVI (May 1956), p. 8.

tion). Let us assume, again for the sake of example, that our 65 million workers have an average productivity of \$6,000, implying a full-employment net national product of \$390 billion. If 9% of this net national product were saved, net saving would match net investment at \$35.1 billion, and the second requirement for full-employment equilibrium growth would be met.

We can put these conditions in the form of a simple equation

$$g \cdot c = s \cdot p \quad \cdot \quad \cdot \quad \cdot \quad \cdot \quad \cdot \quad (1)$$

where  $g$  is the annual percentage increment to the free labour supply,  $c$  is the optimum capital-labour ratio,  $s$  is the ratio of net saving to net national product at full employment and  $p$  is average labour productivity (net of depreciation).

The first condition requires that the operation on the left-hand side of equation (1) be carried out so that net investment is at the natural rate. The second condition is then represented by the equation itself. Inserting our assumed values we get

$$3/100 \cdot \$18,000 = 9/100 \cdot \$6,000$$

yielding net saving and investment for the current year of \$540 per worker, or \$35.1 billion for a labour force of 65 millions. Full-employment equilibrium growth requires that the two conditions hold continuously over time as the labour force, capital stock and rate of output grow.

The natural rate of capital widening is discussed more fully in Section IV; but one point must be stressed here. While variations in the rate of capital widening and variations in the capital-labour ratio each alter the level of investment, and therefore the level of aggregate demand, it is not a matter of indifference which occurs in a particular instance. If, for example, in a situation where equation (1) holds, but where the actual rate of capital widening falls below the natural rate, resulting in a deficiency of investment and aggregate demand, a rise in the capital-labour ratio would *not* be the appropriate solution. For this would mean adopting production techniques which raise the ratio at which *only a part* of each increment to the free labour supply is equipped with capital. Despite an equality of aggregate demand and aggregate supply, there would be a growing excess supply of labour.

Likewise, a variation in capital widening cannot serve as a substitute for an appropriate adjustment in the capital-labour ratio. If the ratio of capital to labour were too low for equilibrium growth, given  $g$ ,  $s$  and  $p$ , a rise in capital widening above the natural rate would soon result in a shortage of labour relative to capital equipment that could be cured only by an appropriate adjustment in the capital-labour ratio itself. Thus a necessary condition for full-employment equilibrium growth in addition to the saving-investment equality is that capital widening be at the natural rate.

This is the starting point for our analysis; but before we proceed we must clear up some difficulties. First, note that net capital formation is conceived to be a process of equipping increments to the free labour supply

at some ratio of capital to labour. What of the process of re-equipping the existing labour force when new techniques render old equipment obsolete? It will simplify our discussion considerably if we assume that such re-equipment of the existing labour force proceeds throughout the economy as old equipment is completely amortised in the accounts of business. Thus we ignore any discrepancies between amortisation and replacement, treating all of net investment as capital widening (in our sense of that term) and assuming that capital intensification takes place through replacement investment, though this simplification can easily be abandoned.

The process of re-equipping the labour force when innovations in techniques occur may, however, free some labour from participation in production with the existing stock of capital<sup>1</sup> (labour-saving innovations); in which case net investment is required to equip this increment of freed labour if it is to be employed. Alternatively, the process of re-equipping the labour force may require additional labour to staff the existing stock of capital (capital-saving innovations); in which case some of the increment to the labour force from population growth must be so utilised, leaving less to be equipped by net capital formation.<sup>2</sup>

Thus the natural rate of capital widening depends not only on the rate of population growth (assuming the percentage of the population that participates in the labour force to be constant), but also on the direction and rate of innovations in techniques. The direction and rate of innovation is shown by the movement of  $c$ , the optimum capital-labour ratio. A rise in this ratio implies labour-saving innovation, while a fall implies labour-using, or capital-saving innovation. The value of  $g$  depends then on the rate at which  $c$  is rising (or falling), as well as on the rate of population growth. It is because  $g$  includes labour freed by labour-saving innovation in addition to actual increments to the labour force that we refer to it somewhat ambiguously as the rate of growth of the free labour supply.

What determines the direction and the rate of innovations—*i.e.*, the movement of the optimum capital-labour ratio? We assume in accordance with elementary marginal productivity theory that  $c$  may rise as a result of a rise in real wage-rates or fall in interest rates and that  $c$  may fall in the opposite cases.<sup>3</sup> In addition, of course,  $c$  varies with the direction of tech-

<sup>1</sup> That is, the existing stock of capital in its changed form.

<sup>2</sup> Labour-saving and capital-saving refer to changes in the capital-labour ratio; not, as is sometimes the case, to changes in the labour-output and capital-output ratios.

<sup>3</sup> The influence of factor prices on capital intensity depends significantly on the competitive nature of product and factor markets. While the writer is by no means satisfied with his discussion of these relationships in his "Capital Intensity and Economic Growth" (*op. cit.*, pp. 201-5), the conclusion reached there was that changes in either interest rates or real wage-rates could alter optimum capital intensity. The definition of real wage-rates is very important in this connection, however. The definition employed here is the ratio of wage-rates to prices in general; not the ratio of wage-rates to consumers' goods prices only. We assume, that is, that when money wage-rates change they are altered for producers of equipment and producers of consumers' goods alike. And the prices of equipment are no more likely to move proportionately to wage-rates than are the prices of consumers' goods.

nological progress. Improvements in knowledge may be labour-saving, capital-saving or neutral, depending on whether they raise, lower or leave unchanged the optimum capital-labour ratio with given real wage-rates and interest rates.

$c$  may vary, then, as a result of market forces—market-induced innovations; or as a result of improvements in knowledge—invention-induced innovations. The higher is  $c$ , the greater is the investment required by a given rate of growth of the free labour supply ( $g$ ). In addition, however, the faster is  $c$  rising, the higher is the level of  $g$ .

Next we come to the very important relationship between  $c$  and  $p$ . The greater is capital per man, the greater is labour productivity. Thus while a rise in  $c$  raises the natural rate of investment and aggregate demand, it also raises aggregate supply. In the absence of improvements in knowledge the increase in supply will be less than in proportion to the increase in demand, since an increase of a given percentage in only one of the two factors of production will raise output by a smaller percentage under our assumption of constant returns to scale. On the other hand, invention-induced labour-saving innovation may well raise aggregate supply more than aggregate demand (though it need not). We shall see subsequently that a proper balance between market-induced and invention-induced labour-saving innovation is of some importance to equilibrium growth in a developed economy.

Aside from the influence of innovations, we assume that  $p$  depends on the length of the work week, since labour productivity in the model refers to output per man, not to output per man-hour.

Finally, we consider the relationship between  $c$ , the ratio of capital to labour, at which increments to the free labour supply are equipped, and the average capital-labour ratio for the economy. A changing composition of employment could alter  $c$  even in the absence of technological progress or changes in relative prices. And, depending on whether the more or less capital-intensive sectors exhibited the faster rate of growth of employment,  $c$  would be above or below the average ratio for the economy. If, however, expansion occurs at a uniform rate throughout the economy the discrepancy between the two ratios would be slight, being due only to the lag in adjusting the capital stock to the new techniques. For simplicity, then, we shall assume that discrepancies between the ratios are due solely to changes in the composition of employment. The importance of this relation is discussed in Section VI.

### III. TWO KINDS OF DISEQUILIBRIUM

We can distinguish two general categories of disequilibrium in growing economies. The first, which we shall label the *deficient supply case*, is typical of underdeveloped economies—*i.e.*, economies with low labour productivity ( $p$ ) and a low ratio of saving to output ( $s$ ) relative to the rate of population

growth ( $g$ ) and the optimum capital-labour ratio ( $c$ ). Capital widening at the natural rate generates an aggregate demand for goods and services in excess of full employment supply. Only if saving can be "forced" through inflation beyond its normal ratio to output can capital widening actually proceed at this rate. More likely, owing to a shortage of money capital (perhaps induced by anti-inflationary monetary-fiscal policy), capital widening falls short of the natural rate, and a part of each increment to the free labour supply remains unemployed. It is possible, of course, that instead of remaining unemployed the latter finds occupation in agriculture or in self-employment in the service industries, where it is not required that labour earn the market wage. This "disguised unemployment" is as symptomatic of disequilibrium growth as is explicit unemployment, however.

Thus we have the example familiar to students of underdeveloped countries of persistent unemployment that is not amenable to Keynesian remedies. Any attempt to raise aggregate demand through monetary-fiscal policy would simply be inflationary. What is required for equilibrium growth is a reduction in  $g \cdot c$  or a rise in  $s \cdot p$ .

The *deficient demand case*, on the other hand, is typical of developed economies—*i.e.*, economies where the values for  $p$  and  $s$  are high relative to those for  $g$  and  $c$ . Capital widening at the rate required by the growth of the free labour supply together with the saving function creates an aggregate demand less than aggregate supply, resulting in unemployment of *both* capital and labour. The redundancy of capital causes capital widening to fall below the natural rate, inducing the familiar cumulative downward movement of the business cycle. This is the well-known Keynesian case and, as was indicated above, we will be concerned exclusively with this case in developing our theory of growth in the subsequent sections of this paper.

#### IV. GROWTH AND CYCLES

Assume that initially capital widening is proceeding at the natural rate. If  $g \cdot c$  falls short of  $s \cdot p$ , however, this natural rate is not sufficient to generate aggregate demand equal to aggregate supply. The deficiency of demand gives rise to unemployed labour and capital, a decline of the rate of capital widening below the natural rate (because of the redundancy of capital), and a cumulative downward movement in output. There is no dearth of explanations in business-cycle theory for the termination of the downward phase, and we are not concerned here to choose among them. It is sufficient for our purposes to assume that for some reason or other the upward phase is initiated. Then the pool of unemployed labour enables capital widening to proceed in the upswing at a rate in excess of the natural one. At full employment, however, the rate must fall again to that governed by the

growth of the free labour supply, and we have at this point a Hicksian "constrained peak"<sup>1</sup> to be followed inevitably by another downturn.

We cannot be certain, of course, that each cyclical upswing will develop sufficient momentum to carry the economy to full employment. Over a long period, however, covering several business cycles, there would seem to be a tendency for capital widening to approximate the natural rate. At least we can say that the rate of capital widening cannot in the long run exceed the rate of growth of the free labour supply. And if from time to time the cumulative forces in the boom phase of the business cycle are sufficiently strong to maintain the excessive rate of capital widening until it is ultimately constrained by the limit of the available labour force, we will experience periodically a situation of full employment of both capital and labour. If, however, the additional requirement for equilibrium growth—that investment, as given by  $g \cdot c$ , be sufficient to match saving, as given by  $s \cdot p$ —is not fulfilled, these periods of full employment will be ephemeral, since capital widening even at the natural rate does not generate an aggregate demand equal to aggregate supply.

A long-run growth path just touching the peaks of "constrained cycles" would indicate a growth of output appropriate to capital widening proceeding at the natural rate, but at a capital intensity too low (given  $g$ ,  $s$ , and  $p$ ) to maintain aggregate demand equal to aggregate supply. The actual growth path would, of course, be a cyclical one falling below this "trend." The growth path that could be achieved with a capital-labour ratio high enough to fulfil the equilibrium condition described by equation (1) would rise more steeply, since more capital would be added with each increment to the labour supply. Alternatively, equilibrium growth could be achieved with a reduced  $s$ ; but this would mean a less rapid rate of growth of output—*i.e.*, a lower full-employment equilibrium growth path.

The various growth paths are illustrated in Fig. 1. Given  $s$ ,  $g$  and  $p$ , and a capital-labour ratio that is sufficiently high to equate aggregate supply with aggregate demand, output will grow along path  $A$ . If investment is not sufficiently capital intensive, output will grow along a path such as  $C$ , with at least some of the cyclical peaks representing full employment. But even the full-employment peaks are on a growth path,  $B$ , below the potential  $A$  path.  $B$  falls below  $A$  simply because the same growth in labour supply is accompanied by a slower growth of the capital stock. A reduction of  $s$  to the level required by equation (1) (given  $g$ ,  $c$  and  $p$ ) would place the economy on growth path  $B$ ; that is, it would eliminate the cycles without raising the long-run path of growth.

Implicit in the above analysis of the relation between growth and cycles are two ideas that are fundamental to the argument: first, that booms develop sufficient momentum to carry them to a ceiling and not beyond;

<sup>1</sup> J. R. Hicks, *A Contribution to the Theory of the Trade Cycle* (London: Oxford University Press, 1950), pp. 92, 95-8.

and, second, that the relevant ceiling is the limit of the available labour force. Professor Hicks' theory of the business cycle <sup>1</sup> fits very well into this picture, but other explanations are possible. It is sufficient perhaps for our purposes to point out that there does not appear to have been an accumulation of unemployment from one cycle to the next in the experience of advanced countries like the United States (with the notable exception of the 1930s). And while the explanation for the existence of this phenomenon in the past warrants more attention than has been accorded it, for the present and future we need merely point to the contracyclical policies of governments in advanced countries for justification of an assumption that capital widening

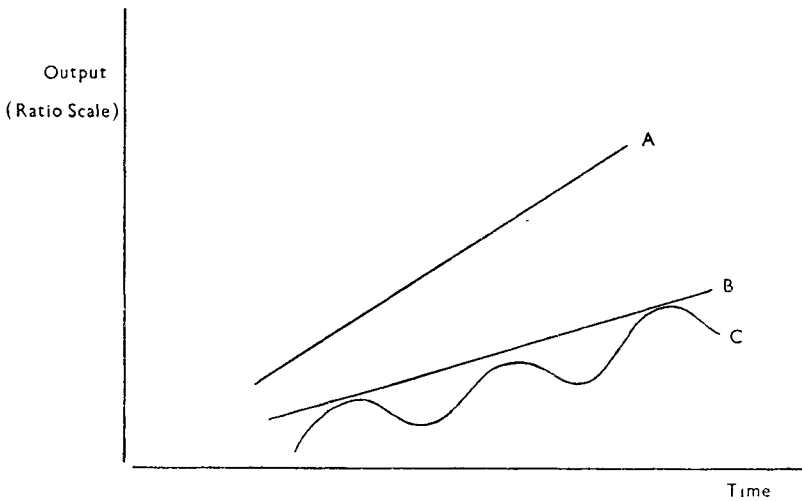


FIG. 1

proceeds in the long run at the rate governed by the growth of the free labour supply. For every effort is made to facilitate through monetary and fiscal policies the continuation of the boom to full employment of the labour supply at which point the brakes are applied. Thus, whereas the real underlying scarcity may be the supply of labour and the surplus, the supply of saving, halting the boom at full employment insures that the scarcity of labour never becomes explicit; and the subsequent depression insures that the potential surplus of saving likewise is never realised.

#### V. EQUILIBRATING ADJUSTMENTS

At this point we should consider the possibility that there will occur automatically equilibrating adjustments in  $g$ ,  $c$ ,  $s$  or  $p$  whenever disequilibrium is present. In the classical theory of economic growth the saving

<sup>1</sup> J. R. Hicks, *A Contribution to the Theory of the Trade Cycle* (London: Oxford University Press, 1950), pp. 92, 95-8.



function and the rate of growth of population were assumed to adjust to each other so as to maintain automatically a balanced relation between capital stock and labour supply. Diminishing returns due to the absence of resource-saving innovation at the required rate insured that profits would fall steadily over time; but reduced profits led to reduced saving and investment, lowering the demand for labour, its rate of remuneration and consequently the rate of growth of population. The end result was a stationary state, but during the growth process movements of wage-rates and profits insured full-employment equilibrium growth.

The classical theory thus lies within the broad framework of our growth model. It is more realistic, however, to assume that population growth is a given datum and that the full-employment saving-output ratio is relatively insensitive to changes in the rate of return on capital *except* as the latter affect the distribution of income. More specifically we will take  $s$  as given in the absence of changes in fiscal policy or in the relative shares of national income accruing to labour and capital. Finally, while we take  $g$  as given the ratio of saving to output at full employment, we permit the ratio to decline as output falls below the full employment level.

We have therefore eliminated the possibility of automatic adjustments of  $g$  and  $s$  to maintain equilibrium in the growth process as envisaged in classical theory.<sup>1</sup> We also rule out the possibility of equilibrating adjustments in  $p$ . Labour productivity depends on human abilities, the length of the work period, technical knowledge and the ratio of capital to labour. These, with the exception of the last-named, will be taken as independent of the other variables in our system. The relationship between changes in  $p$  and changes in  $c$  was discussed earlier, in Section II. There it was pointed out that in a given context of knowledge the change in aggregate demand resulting from a variation in  $c$  will always exceed the accompanying change in aggregate supply. Thus the movement of  $c$  dominates the result and determines whether the adjustment is equilibrating or not. The remaining question then pertains to the possibility of equilibrating adjustments in the capital-labour ratio.

In the deficient demand case the relatively scarce factor is labour and the relatively abundant factor is (potential) capital made available by saving.

<sup>1</sup> A modern version of the equilibrating adjustment in the classical system employs the familiar "Pigou effect" of falling prices on the saving function. The very special nature of the assumptions required for the operation of this equilibrating mechanism has been pointed out, *inter alia*, by Don Patinkin in "Price Flexibility and Full Employment," as reprinted in *Readings in Monetary Theory* (Philadelphia: The Blakiston Company, 1951), pp. 252-83. In addition to the various criticisms that have been levelled against the doctrine that wage and price flexibility can insure full employment, however, there appears to be one basic point that has been neglected. The "Pigou effect" requires that individuals believe each fall in the general price level to mean a permanent increase in the real value of their assets, thereby diminishing the rate at which they desire to accumulate wealth. This in turn requires expectations, held with considerable certainty, that price movements are never, or rarely, reversed—that price movements are overwhelmingly unidirectional. Expectations of this kind and certainty of this degree do not belong in a world of cyclical growth and change, however.

What is required is the adoption of techniques of production that use more capital per worker. This could come about in a given state of knowledge through a fall in interest rates or a rise in real wage-rates. What will be the direction of movement of wage-rates and interest rates when there is a chronic tendency towards deficiency of aggregate demand?

Note first that the failure of the labour supply to grow rapidly enough to warrant investment equal to saving results (paradoxically) not in a labour shortage, but in periodic unemployment. Real wage-rates, instead of rising and inducing the adoption of labour-saving techniques, are more likely to be depressed by the chronic tendency toward unemployment. The real underlying labour scarcity is not indicated in the market.

What about interest rates? There is no long-run "natural" level or direction of movement of interest rates in an economy characterised by chronic deficiency of demand. Periodic depressions serve to reduce saving below its full-employment level to equality with investment. The rate of interest becomes largely a monetary phenomenon in such a situation, which means that the movement of interest rates depends not on "natural" forces, but on monetary policy.<sup>1</sup>

How effective reductions in the long-term rate of interest would be in inducing labour-saving innovation is in any case a moot question. What is really important is not the long-term rate of interest on bonds, but the target rate of return on investment that managers of business have in mind as a minimum when they judge the feasibility of investment opportunities. The fact that the latter may be relatively insensitive to changes in the former has been variously explained; but one important possibility appears to have been neglected. Something like Keynes' speculative motive for hoarding may operate at the level of the entrepreneurial decision as well as at the level of the rentier decision. For when, in order to maintain the rate of capital intensification that saving makes possible, entrepreneurs must be induced by falling interest rates and rising wage-rates to accept lower rates of profit *per unit of capital* than their target rates, they may simply refuse to innovate; this despite the fact that their total profit would be greater if they substituted capital for labour. And their refusal would not necessarily imply perverse irrationality; for it may be based on an expectation that by postponing investment an opportunity to invest at the target rate or better will soon appear. The decision to wait, of course, actually destroys potential capital formation through the reduction of aggregate demand; but the elimination of this potential that could be only realised at lowered rates of return insures that in the long run the rate of profit is maintained. Thus, whereas for Keynes the villain was the rentier (under the assumption that entrepreneurs would always invest in opportunities that promised a net rate of return greater than the rate of interest), it may as easily be the entrepreneur who is responsible for the periodic withdrawals of the supply of capital.

<sup>1</sup> Joan Robinson, *The Rate of Interest* (London: Macmillan, 1952), pp. 4, 28-30.

We should relax the assumption that changes in knowledge are autonomous to allow for the possibility that market forces might guide industrial research in the direction of labour-saving invention. Again, however, the same market forces are required—a fall in interest rates or a rise in real wage-rates. Furthermore, even with the appropriate market influences the adjustment might not be equilibrating for an improvement in knowledge raises the possibility that  $p$  would increase more than  $c$ , thus intensifying the deficiency of demand.

The conclusion that emerges is that there are no automatic forces in a developed economy tending to adjust the capital-labour ratio to the value required for equilibrium growth. Rather, the equation of saving with the investment required by the growth of the free labour supply would be accomplished (in the absence of appropriate social policies or fortuitously appropriate technological progress) in precisely the manner that Keynes indicated—that is, by periodic depressions. Depressions must occur sufficiently often and be of sufficient severity to reduce saving in the long run to the level of investment required by the rate of growth of the free labour supply and the capital-labour ratio. As was indicated in Section IV, however, the adjustment through periodic depressions means growth at a slower rate than that which could be achieved with the equilibrium value of  $c$  in equation (1).

## VI. TECHNOLOGICAL PROGRESS AND SECULAR STAGNATION

Before proceeding further let us define more precisely the deficient demand case—the case we assume to be typical of developed economies. All that we have said heretofore is that there exists in this case a persistent tendency for aggregate demand to fall short of full-employment aggregate supply. This could result from a tendency for  $s$ ,  $p$  or both to rise; or for  $g$ ,  $c$  or both to fall.<sup>1</sup> Let us assume that there is a long-run tendency for  $g$  to fall (due to a declining rate of population growth), while  $s$  tends to remain constant. Furthermore, let us assume no independent movements of  $c$  and  $p$  in the absence of technological progress.

It should be noted that with these assumptions we have in its simplest form the context within which the argument for secular stagnation has been made.<sup>2</sup> An economy in which the rate of population growth is slowing while the saving-output ratio remains constant would require a persistent rise in the capital-labour ratio if a tendency towards ever more severe and frequent depressions were to be avoided. In the absence of technological

<sup>1</sup> Actually rising or falling values are not necessary. It is enough that  $g \cdot c$  be below  $s \cdot p$ . However, since in this case a once-for-all adjustment could correct any disequilibrium, it seems preferable to assume a persistent dynamic tendency toward disequilibrium.

<sup>2</sup> See, e.g., A. H. Hansen, "Economic Progress and Declining Population Growth," *The American Economic Review*, XXIX (March 1939), pp. 1-15. The gap between the  $A$  and  $B$  curves of Fig. 1 would seem to be an appropriate measure of "stagnation."

progress, however, a persistent rise in  $c$  would imply a falling rate of return to capital. The necessity of a falling rate of profit is avoided, of course, by having saving and the rate of growth of the free labour supply made compatible through recurrent depressions rather than through a rising ratio of capital to labour. Thus the "stagnation case" presents the dilemma of what might be termed the Marxian and Keynesian alternatives: a steadily falling rate of profit or depressions of ever-increasing severity.

The above argument abstracts from the influence of technological progress, however. The latter can affect each of the variables in our model. It can influence the saving function ( $s$ ) by creating a stream of new products to tempt consumers and to render existing stocks of durable goods obsolete, as well as by altering the relative income shares of capital and labour. It introduces new and more profitable techniques of production which may change the ratio ( $c$ ) of capital to labour at which investment takes place. Improvements in knowledge are likely also to raise labour productivity ( $p$ ), though they need not. Finally, the rate of growth of the free labour supply ( $g$ ) depends partly on the rate of labour-saving (or labour-using), which is in turn influenced by technological progress.

For simplification let us assume that the constancy of  $s$  is partly the result of technological progress so that this influence is already taken into account. We concentrate then on the impact of improvements in knowledge on production techniques and the consequent effects on  $c$ ,  $p$  and  $g$ . Furthermore, since labour productivity is likely to rise as a result of technological progress, it is actually upward pressures on  $c$  and  $g$  on which we must rely to preserve equilibrium growth in the "stagnation case."

Recall that the value of  $g$  is equal to the percentage rate of population growth plus the percentage rate of labour-saving (the rate at which  $c$  is rising). Upward pressure on both  $c$  and  $g$  from technological progress requires, then, that the latter be on balance labour-saving. But while steady labour-saving progress raises  $c$  steadily,  $g$  rises only if the rate of labour-saving is *accelerating*.

Let us consider two possibilities: first, a steady rate of labour-saving (a constant percentage increase of  $c$  over time); and second, a rising rate of labour-saving (the percentage increase of  $c$  accelerating over time). In the first case  $g$  would always be above the rate of population increase by the rate of labour-saving, but  $g$  would still fall steadily because of the declining rate of population growth.  $c$  would rise steadily, as most likely would  $p$ , the requirement for equilibrium growth then being a rate of labour-saving (rise in  $c$ ) rapid enough to match both the rate of decline in  $g$  and the rate of rise in  $p$ .

We have argued above (in Section V) that there is little likelihood that market forces will serve to induce the appropriate rate and direction of technological progress. For the underlying factor relationships—scarcity of labour and surplus of saving—are not likely to appear explicit because of the nature of the cyclical growth process. Booms terminate at or short of

full employment of the labour supply, while periodic depressions serve not only to eliminate the potential surplus of saving but also to create an illusion of labour surplus. Hence it is difficult to see any mechanism by which a developed economy would automatically produce that rate of labour-saving technological progress required for equilibrium growth. Nor is there any assurance, even in the presence of such a mechanism, that the rate of rise in  $c$  would exceed the rate of rise in  $p$  by the required amount.

Nevertheless, it is possible for autonomously determined technological progress to proceed at exactly the right speed and in exactly the right direction to insure equilibrium growth. Thus it might be argued that there is some rate of technological progress which, if it is sufficiently labour-saving without raising labour productivity too rapidly, will enable a developed economy to avoid the dilemma posed by the slowing of population growth and the failure of the saving function to give way. Let us examine this possibility more closely, however.

Since  $c$  must rise faster than  $p$  by an amount sufficient to offset the rate of decline of  $g$ ,  $c/p$  must rise steadily. We noted at the end of Section II that when expansion occurs at a uniform rate throughout the economy  $c$  is approximately equal to the average capital-labour ratio. To be consistent with our assumption of no independent movements of  $c$  or  $p$  and as a convenience in isolating the effects of technological progress we will assume initially such a uniform rate of expansion. In this case, then, a rising  $c/p$  means a rising ratio of capital to net output for the economy as a whole, since  $c$  is (approximately) the capital-labour ratio and  $p$  is the output-labour ratio. But the ratio of capital to net output is also equal to the reciprocal of the average rate of profit multiplied by capital's share of net output. That is

$$\frac{K}{Y} = \frac{K}{R} \cdot \frac{R}{Y} \quad (2)$$

where  $K$  is capital,  $Y$  is net output and  $R$  is capitalists' income. Thus, a rising ratio of capital to net output (which is required for equilibrium growth in the case under discussion) implies either a falling average rate of profit or a rising proportion of total income accruing to capitalists.<sup>1</sup> When we recall that Marx held that a rising rate of surplus value (which is roughly equivalent to a rising relative share of capital in income) could offset the tendency for the rate of profit to fall, it would seem that introducing a steady rate of labour-saving into the stagnation case can at best toss us from the Keynesian to the Marxian horn of our dilemma.

Which of the two ratios on the right-hand side of equation (2) rises as  $K/Y$  rises depends on whether it is predominantly technological progress or market forces that induces labour-saving innovation. In the extreme case where labour-saving innovation is induced by rising wage-rates and falling

<sup>1</sup> Professor William J. Fellner has stressed the importance of this relationship in his *Trends and Cycles in Economic Activity* (New York: Henry Holt and Co., 1956), pp. 254-7.

interest rates within a given context of knowledge the rate of profit must fall; and presumably capital's relative share must eventually fall as well, assuming that only improvements in knowledge can in the long run prevent the elasticity of substitution from falling below unity.<sup>1</sup> If, however, labour-saving innovation is due solely to technological progress both the rate of return on capital and capital's relative share must rise.<sup>2</sup>

Thus a steady rate of labour-saving technological progress will enable a developed economy to avoid the dilemma posed by a declining rate of population growth only under very special conditions. First, its labour-saving aspect (rising  $c$ ) must exceed its productivity-increasing aspect (rising  $p$ ) by just enough to match the rate of fall of  $g$ . If  $p$  rises faster than  $c$  the chronic deficiency of demand is accentuated.<sup>3</sup> If the excess of the rate of rise of  $c$  over  $p$  is greater than the rate of fall of  $g$  the economy is pushed into the deficient supply situation of underdeveloped economies. And, second, even after this requirement is met there remains the problem of getting labour to accept a steadily falling proportion of total income—*i.e.*, of accepting wage increases that always fall short of the increase in labour productivity.<sup>4</sup>

While we have argued against the possibility of automatic equilibrating adjustments in capital intensity stemming from the influence of market forces, we should not rule out the possibility that *autonomous* market influences will have an effect on  $c$  additional to that of technological progress. For example, steady upward pressure on money wage-rates by organised labour and monetary policies designed to lower interest rates gradually over time could supplement technological progress in inducing labour-saving innovation. In fact, there is some combination of market-induced and invention-induced labour-saving innovation that would maintain constant the rate of return on capital and the relative shares of capital and labour. This would imply, however, that the capital-output ratio is constant—*i.e.*,  $c$  and  $p$  are rising at the same rate—and we are back on the Keynesian horn of the dilemma.

<sup>1</sup> Cf. J. R. Hicks, *The Theory of Wages* (London: Macmillan, 1932), pp. 127–8.

<sup>2</sup> The effects on relative shares can be seen readily with the aid of the identity

$$r/w \cdot K/L = \frac{\text{Capital's share}}{\text{Labour's share}}$$

where  $r$  is the average rate of return on capital and  $w$  is the real wage-rate. In the absence of technological progress a rising  $K/L$  will require a falling  $r/w$ ; and as it becomes ever more difficult to find profitable ways of substituting capital for labour the rate of fall in  $r/w$  is likely at some point to exceed the rate of rise in  $K/L$  (an elasticity of substitution of less than unity), and capital's share will decline relatively. Labour-saving technological progress, however, raises  $K/L$  with no required change in  $r/w$ , implying a rise in capital's relative share. We ignore throughout this paper the effects on relative shares of changes in the degrees of competition in product and factor markets.

<sup>3</sup> Technological progress that raises  $p$  faster than  $c$  should actually be welcomed because it permits a steady fall in  $s$  without sacrifice of growth of output. The assumption here, however, is that  $s$  is not reduced.

<sup>4</sup> If labour attempts to maintain its share through upward pressure on money wage-rates, entrepreneurs may either innovate further in a labour-saving direction, thus creating the deficient supply situation with a growing surplus of labour (the adjustment Marx assumed); or more likely, they may simply raise prices.

We have yet to consider the case of a rate of labour-saving that accelerates over time. It is possible for the labour-saving component of  $g$  to rise as rapidly as, or even more rapidly than, the rate of decline of the population growth component of  $g$ . In this case a constant or even falling  $c/p$  is compatible with equilibrium growth, implying a constant or falling capital-output ratio. If this rising rate of labour-saving were market-induced and invention-induced in the right proportions, neither the profit rate nor labour's share in income need fall. Note, however, that in order to rescue us from the dilemma of the Marxian and Keynesian alternatives an appropriate combination of technological progress and market forces must create a stream of innovations that is not only labour-saving on balance, but that is more labour-saving (on the average) each year.

This may appear to be a tall order, and we hasten to add an important qualification. In the interest of simplicity we ruled out of our discussion any discrepancy between financial amortisation and replacement investment. It is possible, of course, that technological progress should increase the rate of obsolescence faster than provision for it is made in the financial practices of business. Depending on our choice of definition, we can treat this discrepancy either as a reduction in the ratio of net saving to output or as an increase in net investment. If technological progress is in this way to help extricate us from the stagnation dilemma it must ever widen the gap between replacement and amortisation; and while this seems unlikely, it is at least a possibility that should be mentioned.<sup>1</sup>

Relaxing the assumption that expansion is uniform throughout the economy complicates the question enormously, and almost anything can result. Note, however, that our argument in the simpler case required that  $K/Y$  rise at the rate of fall of  $g$  when equilibrium growth is achieved (since in this case  $c/p = K/Y$ , and  $c/p \cdot g = s$  is the condition for equilibrium,  $s$  being constant). In order for our argument to be upset, then  $K/Y$  must be prevented from rising when  $c/p$  is rising at the rate of fall of  $g$ . Since the effect of a changing composition of employment, taken by itself, could be to cause  $K/Y$  either to rise or fall in relation to  $c/p$  it would be only happy coincidence if its effect were in the latter direction and of sufficient strength to prevent  $K/Y$  from rising.

At this point we should also take into account the possibility that technological progress alters the saving function through its influence on relative shares. When invention-induced labour-saving innovation predominates the tendency is for capital's share to rise relatively, and as a consequence the saving function might also rise, accentuating the deficiency of demand. When, on the other hand, labour-saving innovations are predominantly market-induced the opposite effect on relative shares and the saving function is likely; thus mitigating any tendency for the rate of profit to decline or,

<sup>1</sup> For an excellent discussion of this point, see Howard R. Bowen, "Technological Change and Aggregate Demand," *The American Economic Review*, XLIV (December 1954), pp. 917-21.

alternatively, the severity of depressions. The reduction in the saving function implies a lower maximum growth path for the economy, however.

Finally, let us recall that we have lumped increasing and diminishing returns to capital and labour (taken together) with technological progress. This is a great convenience for our analysis, since the effects of increasing or diminishing returns within a given context of knowledge can be handled in exactly the same way as the effects of improvements in knowledge. That is, increasing returns raises  $p$  and may be labour-saving, capital-saving or neutral; while diminishing returns in symmetrical fashion lowers  $p$  and may be labour-costing, capital-costing or neutral. Thus, the relaxation of the assumption of constant returns to scale appears to raise no great analytical difficulties.

### VII. POPULATION GROWTH

We defined the "stagnation case" by assuming a falling rate of population growth. Obviously there is always some rate of population growth that will avert a tendency toward chronic deficiency of demand: if we reproduce ourselves rapidly enough we will insure that we are kept so busy providing for our growing numbers that *Keynesian* unemployment will never be a problem. While this solution appears to be a particular favourite of the popular business-men's journals, it would seem to be almost the worst possible from the standpoint of human welfare.<sup>1</sup> For the alternatives to a more rapid required rate of capital *widening* are more rapid capital *intensification*, implying a more rapidly rising output per man; a higher ratio of consumption to output,<sup>2</sup> perhaps accompanied by a more equitable distribution of income; greater leisure; or some combination of these.

Furthermore, the more rapid is the rate of growth of population, the more likely is a tendency toward diminishing returns to both capital and labour for any given rate of resource-saving technological progress. Therefore it is not enough to say that the progress of science will insure that our growing numbers will be fed. What is more relevant is the comparison of human welfare under conditions where capital formation (*widening*) and resource-saving technological progress serve only to maintain output per man with that under conditions where capital formation (*intensification*) and resource-saving progress serve to raise steadily labour productivity or, alternatively, to permit mankind ever greater leisure. It may be that some will choose greater numbers over greater welfare per person; but this choice should be made on its own merit, and not because of its effect on the saving-investment nexus. The personal view of the writer is that the "stagnation case" is a desirable state of affairs because of its inherent potentialities.

<sup>1</sup> For a forceful statement of the latter position, see J. J. Spengler, "Population Threatens Prosperity," *Harvard Business Review*, Vol. 34 (1956), pp. 85-94.

<sup>2</sup> Not in this case at the expense of future levels of consumption.  
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## VIII

It should be emphasised in conclusion that the results obtained above stem from the application of our theory to the deficient demand case of growth disequilibrium. The principal reason for this emphasis is simply the desirability (in the eyes of the writer) of a general slowing in the rate of population growth throughout the world. As development proceeds throughout the less-developed areas saving-output ratios should rise and, it is hoped, rates of population growth will fall. Thus, all economies should eventually develop the growth characteristics of developed economies. In the meantime, however, there are economies that face problems of an entirely different nature. And it is even possible that future technological progress will raise the rate of labour-saving so rapidly that even "developed" economies will be faced with a chronic shortage of capital and surplus of labour, despite a slowing rate of population growth. In this case many of the above conclusions would be reversed; but our analytical framework would appear to be still valid and useful.

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Mr. POWER. When we ask what are the long-run determinants of economic growth, we are in effect asking for a theory of economic growth, and it is about this that I am going to speak primarily.

The basic determinants of economic growth are : First, the growth of the supply of productive resources; second, the growth of knowledge; and, third, the extent to which we utilize our resources and knowledge potential. I think that the second, the growth of knowledge, is unquestionably the most important. Education and research represent the most effective means by which we can raise the long-run rate of economic growth. But the economist has no special competence to advise as to how to promote more education and research. In analyzing the problem of economic growth, he ordinarily takes as given the stream of improvements in knowledge so as to direct his efforts to a study of other means to raise the rate of growth. Of our supply of resources, natural resources, cannot be augmented. We can and we must discover how to use more fully and efficiently our natural resources, but this, of course, again depends on progress in knowledge.

Increasing the labor force more rapidly, assuming that this means a more rapid rate of population growth, would achieve a more rapid rate of growth of output, but at the expense of a less rapid rate of growth of output per capita. It makes little sense to promote economic growth at the expense of economic progress.

This leaves us with capital as the productive resource, whose increase in supply, together with growth in knowledge, serves as the main engine of economic progress. The stock of capital in the United States has increased about ninefold over the past 75 years while the labor force has grown much more slowly. The resulting increase in capital per worker, together with improvements in knowledge, has enabled net national product per capita roughly to quadruple in the 75-year period.

This is not a bad performance. It falls considerably below, however, what we might have achieved. Our most conspicuous shortcoming has been our failure to maintain a rate of capital formation which fully utilized our saving potential. Within this 75-year period there occurred numerous depressions, some of which were quite deep and prolonged. Each of these depressions was characterized by a sharp drop in capital formation and saving, below the normal full-employment saving propensity of our economy. Had we been able to use our full saving potential, given the growth of the labor force and the stream of technological progress, we could have raised output per capita at a much more rapid rate. But this would have required raising the capital-labor ratio more rapidly within a given stream of knowledge, implying a falling rate of return on capital. We would have utilized our full growth potential, then, only if businessmen would have been willing to accept a falling rate of profit. Instead, long-run capital formation and saving were reduced via recurrent depressions to the rate which the labor force and the technological progress made possible with no significant decline in profit rates.

The CHAIRMAN. Mr. Power, have you made a study of the long-time pure interest rate?

Mr. POWER. Here I am basing this statement on Fellner's data, and I think last April Mr. Fabricant in an interchange with you made the same point. I think they way I phrase it here—no significant decline

in profit rates—makes it a fairly safe generalization. Fellner seems to feel that there has been some slight decline over this 75-year period, but it was nothing like the revolutionary change that Marxist economics would suggest, or classical or Keynesian economics.

The CHAIRMAN. With increased capital per worker, assuming knowledge to be constant, you would expect a diminishing margin of productivity and thence a lower interest rate.

Mr. POWER. Yes. I am not holding knowledge constant. I am holding the stream of improvement in knowledge as given. Within that stream of improvement in knowledge we did have a significant change in proportions in the direction of higher capital to labor ratios. If they had been required to move even faster in the direction of higher capital-labor ratios within that same stream of improvement in technological progress, this would have implied a falling marginal productivity of capital.

The CHAIRMAN. This was prevented because of improvements in technological processes which raised the level of the marginal productivity curve.

Mr. POWER. This is the answer that Mr. Fabricant has given last April and Mr. Fellner gives. I would say that is a great part of it. But the question still is there. What would have happened if we had invested at our full employment saving potential over the period? What if those depressions had not occurred. Then we would have had to accumulate a great deal more capital with the same growth in the labor force and the same stream of technological progress. I would conclude that the rate of profit in the long run has been prevented from falling by the stream of technological progress, which has been laborsaving, and the depressions. I don't mention here World Wars I and II. Certainly, they slowed down the rate of capital formation during those periods.

The CHAIRMAN. You think that the rate of technical progress has been greater for capital than the rate of improvement in technical efficiency for labor?

Mr. POWER. I think that technological progress has had a laborsaving bias. It would be difficult to explain why the rate of profit had not fallen if it had been neutral between capital and labor.

This picture is one of long-run growth disequilibrium, characterized by a chronic relative surplus of saving and shortage of labor. In any period the rate of investment which matches full employment saving tends to exceed the rate of investment which is appropriate to the growth of the labor force and the capital-labor ratio, the latter being given by existing production techniques. Thus, only so long as there is redundant labor can investment proceed at the rate which matches the saving propensity. When full employment of labor is approached, investment at this rate threatens to create an acute scarcity of labor. Usually before this point is reached, however, the growing relative shortage of labor is reflected in wage increases.

The CHAIRMAN. Mr. Power, this paragraph is not obvious to me upon first reading. I wonder if you would be willing to elaborate on it.

Mr. POWER. I am not sure exactly what you have in mind, but perhaps it is this. Each cyclical peak, with the exception of 1937, in the past 60 years, has been characterized by approximate full employment.

So we come to the end of the boom just at the time—with the exception of 1937, of course, when we were trying to rise out of the deepest depression in our history, and we never got anywhere near full employment before we turned down—but, typically, growth is retarded just at the point where labor begins to become relatively scarce. The rate of investment which is possible with redundant labor suddenly is no longer possible as you run out the string of the labor supply. At that point, then, investment has to slow down to the natural rate of growth of available labor. This is a slower rate of growth, one which can't be maintained. This is almost the same thing as Mr. Harad's warranted rate of growth and his natural rate of growth. The warranted rate of growth which could be maintained and justify investment is too rapid for the natural rate of growth, so that once you reach full employment you have to slow down. You can't go faster than the natural rate of growth, and this can't be maintained.

The CHAIRMAN. Are you saying that investment will equal savings only when the index of unemployment is high?

Mr. POWER. I am saying that investment cannot continue to equal full employment saving, which is something like 12 percent of net national product, as a rough estimate. If we used a capital-labor ratio of 3 to 1, this would imply that output could grow and capital could grow at roughly 4 percent a year if there were no other constraint. But if the labor force is growing at only 1 percent a year, then here is the obvious constraint. The only way you can continue to accumulate capital at a very rapid rate would be to capital-intensify very rapidly and change techniques in the direction of a higher capital-to-labor ratio. This is the only way higher investment with a slowly growing labor force can proceed. If it can't, and the full employment saving cannot occur, we have a Keynesian type of depression. Depression serves the role of eliminating the saving that could not be invested.

The CHAIRMAN. It is not completely clear.

Mr. POWER. This is spelled out more completely in the longer written statement, and also in the reprint of the article I gave you.

We are at the point, just to remind you, where the relative shortage of labor suddenly becomes explicit. Let me say just one more word about that. Full employment implies that a factor is becoming scarce. It is becoming fully employed. At that point saving is at its highest. There is no constraint on the saving side so far as capital accumulation is concerned. The high rate of saving at full employment can accommodate the most rapid increase in capital.

The CHAIRMAN. Normally it is thought that during the period of the boom that the rate of investment generally exceeds the rate of saving and the difference has come from the creation of credit by the banking system, creating credit balances which business will use for longtime purposes.

Mr. POWER. Yes.

The CHAIRMAN. This makes possible the increase in the price level for capital goods which generally occurs during this period. You subordinate that and place the emphasis instead upon the ratio of capital to the labor force, is that right?

Mr. POWER. Yes. I agree that the actual rate of investment in the boom exceeds the saving propensity. But of course as it does, it

simply raises income and raises the disposition to save along with the higher incomes. So when you reach full employment level of income, if you could stay there at an equilibrium, this would imply a very high disposition to save which would accommodate a very high rate of investment. It is just at that point that the growth of the labor force is down to its natural rate which is considerably lower. It is difficult to explain otherwise why each cyclical peak except for 1937 has reached approximate full employment. Why have not some petered out earlier, if there is some other constraint?

May I proceed at this point of full employment?

The CHAIRMAN. Yes.

Mr. POWER. Conceptually one of three things could happen. Businessmen could respond to the wage increases by substituting capital for labor. This would correct the growth disequilibrium and permit investment and output to continue their boom rates of growth. But this means adopting techniques of production that are less profitable than the ones in effect. The rate of return per unit of capital would fall. Hence the second alternative is that businessmen would cut back on their investment plans rather than maintain high investment at lower rates of return. The decline in capital formation via its accumulative effects on demand, output, employment, and income destroys the excess saving that could have been invested only at lower rates of return. But the disequilibrium is not cured in this case. It reasserts itself again at the peak of the next boom when the real underlying shortage of labor again makes itself felt.

But it is the third possibility that appears to come closest to what actually happens. Instead of permitting profits to be squeezed by rising wages, businessmen simply raise prices. Thus real wages are prevented from rising as they should to reflect labor scarcity. Then the monetary authority, failing to recognize in wage-price inflation a symptom of labor scarcity, but viewing it rather as a classical case of excess demand inflation, permits money and credit to tighten and interest rates to rise. Since wage-price inflation precludes an adjustment to the resource supply imbalance a decline in investment and the ensuing depression would have to come soon anyway, but the monetary authority hastens the decline.

This is almost perfect illogic. Raise the interest rate, the price of capital, when labor becomes scarce.

The CHAIRMAN. Is it your feeling that in these times, in order to permit a greater ratio of capital to labor the interest rate should be lower?

Mr. POWER. I am coming to that in the very next paragraph, and I will say a word about that in addition. I should add, however, in fairness to both businessmen and monetary managers, that it may be true that they haven't much choice. So long as we are on a cyclical growth path, the real underlying resource supply relationships remain most of the time beneath the surface. Only ephemerally at the peak of the cycle does the scarcity of labor become explicit. At this point it is too late suddenly to alter techniques of production in response to market forces. So the adjustment to this disequilibrium occurs by a depression which destroys the surplus saving and creates a temporary artificial labor surplus.

I would say, in answer to your question, what is needed is not suddenly a low rate of interest at the peak of the boom. I don't think this would suffice. I think production techniques change very slowly over time as old equipment is amortized and replaced. But what is needed, if we want really to have a more rapid rate of growth, is a more rapid rate of accumulation of capital relative to labor, which would mean moving within a given stream of improvements in knowledge in the direction of changing the proportions more toward higher ratios of capital to labor. This puts downward pressure on the marginal productivity of capital which could be made easier for businessmen who have to make investment decisions if the long-term rate of interest could be kept low. We cannot adjust techniques of production cyclically.

The CHAIRMAN. Does it boil down to this: What you are saying is that we need a secular decrease in the interest rate in order to absorb the increased quantity of capital per worker that saving would bring forth.

Mr. POWER. If we want to have a more rapid rate of growth. If we want to grow as the Rockefeller Bros. report and others suggested at 4 or 5 percent. Usually this is calculated from the saving-output and capital-output ratios and while this is applicable for India, where capital and saving is the ultimate constraint, it is not applicable to the United States. We have to bring in the question of how fast the labor force is growing and how fast is the rate of labor saving. Only if the rate of growth of the labor force and labor saving were rapid enough to accommodate a 4- or 5-percent growth in the capital stock could we grow at 4 or 5 percent. This would require more rapid labor-saving innovation, substituting capital for labor, than we have seen in the past.

In the concluding paragraph I make a comment on this. The conclusion is that if we want to raise the long-term rate of growth we probably need a faster rate of labor-saving improvements in knowledge than we have known in the past. In other words, we need to alter the stream of improvements in knowledge, speed it up and alter it more in the labor-saving direction. The alternative is to make explicit in the market the real labor scarcity and saving surplus. This may be very difficult to achieve.

The CHAIRMAN. Isn't it true that you would get a faster rate of labor-saving improvements with a reduction in the interest rates?

Mr. POWER. I think so, and with upward pressure by real wage rates on profits. The trouble here is that the attempt by the market to register the growing labor scarcity as you approach full employment becomes dissipated in price increases. So the real wage rate, which is the real price of labor, and which would really affect the factor proportions, does not get to rise as it should, and the effect is dissipated in price increases. Since prices are increasing, this leads the monetary authority to let the interest rate rise, which, of course, discourages laborsaving innovation.

The CHAIRMAN. I suppose some would object to this argument of yours on the ground that if you lower the interest rate it would be said that the rate of saving would diminish. What is your feeling about that? Do you believe the supply curve of capital is positively inclined so that a reduction in the rate would reduce the rate of saving?

Mr. POWER. I don't know whether it is positively or negatively inclined. My suspicion is that the inclination in either direction is not very great. It does not much matter. The supply of saving is primarily a function of the level of income and responds only slightly, and I am not sure in what direction, to interest rates.

The CHAIRMAN. This is one of the most clouded questions really in economics.

Mr. POWER. I agree, but what studies have been made do not suggest any particular strong direction of inclination. On the other hand, we do know that saving responds quite sharply to the level of income.

The CHAIRMAN. To the level of income?

Mr. POWER. Yes.

The CHAIRMAN. Thank you very much.

Dr. Smithies.

#### STATEMENT OF ARTHUR SMITHIES, HARVARD UNIVERSITY

Mr. SMITHIES. Mr. Chairman, I apologize for not having a prepared statement.

The CHAIRMAN. You are in the position that Senators are in generally.

Mr. SMITHIES. I would have had one but for two reasons. The first is that another committee of the Congress has preempted my time, but most important is that this subject is full of cloudy questions, to use a phrase you just used, and I am not sure I would have been prepared to commit my views to writing.

The CHAIRMAN. Unfortunately, your views will be taken down by the reporter.

Mr. SMITHIES. I might say I am not taking any initiative on this. In reflecting on what I was going to say, I naturally began with your work, Mr. Chairman. In that connection, I am sorry to say that it has not been more extensively referred to in the statistical part of these hearings.

The CHAIRMAN. Now you really are buttering me up, because this is one of the suppressed pains of my life.

Mr. SMITHIES. I was not really trying to butter you up; I was trying to contribute to the spread of knowledge. It seems to me that it is very important to relate your work and the subsequent work based on it, such as a recent article by Robert Solero, and to what the National Bureau of Economic Research has done. The National Bureau of Economic Research does not seem to realize that what it has been doing is closely related to what you were doing.

The CHAIRMAN. I am very glad this is on the record.

Mr. SMITHIES. What the National Bureau has essentially been doing has been using a linear production function, seeing how much production you would have gotten with that and with no technical change and dividing those results into the total figures. I would regard the form of your production more sophisticated than that of the National Bureau.

The CHAIRMAN. In the second form it was. In its original form when we had some of the exponents arbitrarily equal to unity that was a restrictive formula. Then there was a young chap at Cornell by the name of Durand, who pointed out the restrictive nature of this

first equation and recommended instead that the exponents of labor and capital should be left free to be determined from the data and not restricted to having their sum equal to unity. This is theoretically a big improvement over the first form.

Interestingly enough in all the empirical studies we made, the sum of the exponents was approximately equal to unity, and we seemed to get a simple linear function. But we did not assume it.

Mr. SMITHIES. The point I want to address myself to is this productivity trend that seems to emerge both from the National Bureau work and from the application of your function to data other than yours. I gather also that there is no real disagreement or not very much disagreement, if any, between you and the National Bureau with respect to your period.

I have here Fabricant's total productivity index, and this line of manufacturing is pretty flat over your period. Here we did have a period where manufacturing production could be explained largely in terms of fact or inputs. But most of the other investigations are using other sectors of the economy and other periods which seem to require a pronounced productivity trend to explain the facts. I find it necessary to resort to this trend particularly disturbing. I found it disturbing to think of the existence of the trend when I was listening to Mr. Power's remarks, because if a trend in productivity that can't be attributed to factor supply accounts for half the product, and you want to alter the rate of growth, it is very hard to decide how to go about it. This is the main reason why I didn't feel inclined to commit my views to writing.

I would like to speculate on one or two possible explanations of the productivity trend.

The CHAIRMAN. By productivity trend, you mean the output per combined dose of labor and capital?

Mr. SMITHIES. The output that cannot be explained by application of your production function.

The CHAIRMAN. It cannot be explained arithmetically.

Mr. SMITHIES. Yes.

The CHAIRMAN. That puzzled me for many years, and it still puzzles me.

Mr. SMITHIES. It seems to me it is the most puzzling part of the whole problem.

The CHAIRMAN. Mr. Power would say it is the second factor, growth of knowledge, and third, the application of knowledge.

Mr. POWER. I think that is most important. I would agree.

Mr. SMITHIES. The big question is what policy measures is this trend amenable to. There are various possibilities. There may be a hidden factor involved that is not incorporated in the function. One possible hidden factor is the human factor and the accumulation of capital in human beings.

The CHAIRMAN. If I may break in, if that applied to labor in the same proportional degree as it applies to capital you would still have a reduction in the rate of interest.

Mr. SMITHIES. Yes.

The CHAIRMAN. Whereas what Mr. Power is saying is that there has not been a rate of reduction in the rate of interest and the presumption, therefore, is that the reduction of the rate of interest has



been averted by a greater increase in the technical efficiency of capital than in the technical efficiency of labor; is that right?

Mr. POWER. Plus the fact that we have not accumulated all the capital equal to our saving potential.

The CHAIRMAN. The increase in the efficiency of a standardized dollar of capital has been greater than the increase in the efficiency of a standardized manpower of labor.

Mr. HOOVER. If I might intervene for just one moment—it only introduces a difficulty. We all separate out this productivity factor with respect to its effect on the total value of capital. We do that because we just simply lose our moorings if we don't. As a matter of fact, this is just a convenient conceptual device that we use. We can't with certainty say what is happening to the whole corpus of capital in valuation as this productivity changes. We avoid this because it is so difficult once we have reached this assumption.

The CHAIRMAN. Excuse me, Mr. Smithies.

Mr. SMITHIES. I say this is one possibility, human investment. When I look at the statistics, I begin to wonder about that. I am as much in favor of general education as anyone, but the advocates of a cause nowadays seem compelled to say that it will contribute to economic growth, just as a few years ago it had to be important for national security. I wonder whether general education does affect the upward trend of productivity rather than the level. For instance, in this chart of Fabricant's, that has communication, transportation, mining, manufacturing, and farming—if education was a very important overriding factor producing the trends, you might expect more uniformity in these trends. Again the productivity has gone up particularly rapidly in the recent postwar period when the educational system has been getting into bad shape. I don't see how you can attribute the rise in productivity in the postwar period to general education. I think we might be too facile by saying increase in our general education—and we will get the growth up.

The CHAIRMAN. Of course, the quality may have been deteriorating, but certainly the quantity of education has been increasing. There is no doubt about that. The percentage of people of high school age who finish high school—I hesitate to give the figures—I think it was something like 10 percent 50 years ago, and it is now close to 80 percent.

Mr. SMITHIES. I was taking the last decade. Could one correlate the increase in productivity with any educational trend of the last decade? I would have thought the reverse. There are differences among sectors in the whole period. They seem to be very pronounced. This is just one of my doubts about the relation. It is very virtuous to say, as Mr. Power and I both say, that education is the thing. But when one looks at the facts, I don't quite see a demonstration. To avoid misunderstanding; these skeptical remarks relate to the possibility of accelerating growth trends through general education—however desirable that may be on other grounds. The contribution that technical training can make to productivity may be quite a different matter.

Let me make a distinction I was making before. This country, from my observation, has always operated at a very high level of ingenuity. This tends to explain differences between this country

and other countries. When it comes to the trend in productivity, I find it hard to associate it very closely with education. I would fully agree, if we let the educational system deteriorate badly productivity will probably suffer.

I must hurry on. There are possibilities of explaining the trend in terms of noncost factors, such as Marshall's increasing returns, widening the market, and so forth. I am not sure that is altogether consistent with the rapid increases of productivity that occurred in the postwar period. The market was wide all the time. There were no new possibilities of division of labor but there was a very rapid increase in productivity. So Marshall's increasing returns and external economics do not sound completely convincing for the recent period.

Thirdly, there is a cost factor that I think is missing from the net capital series. I was reflecting on this as I was coming down in a jet aircraft from Boston this morning. The conversion of the airlines to jets involves an enormous capital cost. But these capital series might well reflect no increase in the capital in the airlines at all. One has to think in terms of gross investment rather than net investment. It seems to me that a change in the productivity may not just come out of the air. It may not be attributable to something that is hidden, but may well be attributable to capital expenditures. But capital expenditures are required to make over the existing equipment rather than to produce net additions to it.

I would think that a high level in gross savings is of particular importance from the point of view of the increase in productivity, even though the amount of net savings performed, according to the statistics, may be very small indeed.

As I say, I hazard these random remarks about what might explain this discrepancy between the results you get by your technique and the actual figures. It seems to me this is the unexplored area that I feel the committee must address its main attention to.

Finally, could I just make one general remark—whether or not you can explain growth by factor supply or whether there is something called productivity quite independent of factor supply. It seems to me one can have two broad approaches to the longrun problem of growth. The situation may not be the same in different periods. It seems the dominating force in growth may be growth in the supply of resources or it may be a vigorous demand. Of course, both factors must be present; but at different periods, their selective importance may change. The general point of view of Malthus, for instance, was that with high and expanding levels of effective demand savings and investment will more or less look after themselves. The Ricardian point of view was the reverse of that. As I reflected on these matters, I tend to come to the point of view that if we can keep reasonably full employment and also reasonable savings ratios, things may be all right, whereas undue emphasis on the Ricardian approach may lead us into serious trouble.

The CHAIRMAN. That is almost exactly the conclusion Mr. Power comes to.

Mr. POWER. If I may comment. I agree there is this difference between Malthus and Ricardo. But let us remember they were both able to ignore the underlying resource problem, because they had

this theory about the response of labor supply to capital accumulation. You could not get saving and capital accumulation going ahead too fast for the labor supply, without bidding up wages and then causing the labor supply to respond. We don't assume that any longer. We take the labor supply, the population growth, as being independent. That impasse may be there. Malthus was able to concentrate on demand and not worry about an expansion of demand leading suddenly to some imbalance on the supply side which could not easily be overcome, because he had built into the model an automatic device by which the supply imbalance was corrected.

Mr. SMITHIES. I didn't mean to get too much into the details. I think there is a very important difference in approach, whether you keep demand up or whether you try to stimulate the savings ratio. You can't go too far with this. For instance, a Latin American country tends to have plenty of demand but quite an inadequate rate of savings. As Malthus himself would suggest, saving is indispensable, but he took the view that the saving more or less emerged out of the profits that arose from a high level of demand rather than from policies designed to increase the propensity to save. I think this is a long-run trend matter. Mr. Power, I think, is talking about the cause of cyclical fluctuation. I think there is quite a marked distinction in one's approach to the problem of growth. I have been recently thinking more of underdeveloped countries than about this country. I have come to the conclusion myself that even in the underdeveloped countries one possibly ought to put more emphasis on removing unemployment in them than on belt tightening and increasing the saving or the present level of income. The most potent method of increasing saving one can think of is to remove unemployment and have the people working rather than eating up the Nation's savings.

The CHAIRMAN. I spent a little time in the Middle East a couple of years ago, and the great unutilized resource is time.

Mr. SMITHIES. Time.

Mr. HOOVER. In this connection it might be worth noting that rather extraordinarily three and perhaps four economists here seem to be in general agreement that the saving will pretty well take place if investment opportunities exist and that the amount of actual saving and investment being equal that takes place is probably not primarily dependent on the height of the interest rate. It is rather the income level that determines it. This would not always be so, but it seems to me that we have that much common agreement or something approaching it to go on. The problem is whether or not you can keep this full employment demand in operation without inflationary effects or without either the actual monetary authorities or some built-in characteristics of our system that halts that full employment demand.

Mr. SMITHIES. I would like to say, finally, that if one is basing the problem of putting up our rate of growth of 5 percent, I don't have any prescription of how to do it, and I am not very confident about it. It seems to me there has been a remarkable stability in growth rates in the past and it may be very hard to get it up.

In that connection in a paper I wrote for this committee 4 years ago, I rather deplored the attitude toward the rate of growth statistically expressed. It may be better policy, I think, to settle for 3 percent or

whatever we normally have, and look after the allocation of resources within that total rather than increasing the total.

The CHAIRMAN. Mr. Hoover, do you have any comments?

Mr. HOOVER. I would like to introduce again what I fear is simply a complication, and that is if we ask what the long-term movement in the real rate of interest is, it is difficult to answer. There is not an easily detectable trend in what is ordinarily known as the real rate of interest. The answer which Mr. Fellner had given that there was a slight tendency for it to move downward, would raise a question about it now, whether momentarily at least this has not been reversed. How long this will continue is another matter. I would like to raise the question whether or not there are various ways in which we could define what the interest rate is, and what its movement is. If we look at it in terms of the interest rate that is charged on Government securities and so on, or on any ordinary investment that pays a fixed return, it is one thing.

The CHAIRMAN. I had always assumed that the basic rate of interest was the yield on Federal securities because this supposedly is risk free. Then you have risk differentials.

Mr. HOOVER. Yes. I think that is in general what practically all of us have done. You get in some complicated problems if you try to think of interest in another sense. For example, if you take the yield that one can get by investment in stocks at the present time or you take earnings of stocks, and then you compare that with the rate which is generally given for earnings on net worth of corporations, you will get a wider margin at the present time between those than at almost any other time of which I am aware. At the present time, for example, an investment in stocks would yield around 3 percent. The earnings rate might be 4½ percent or something like that. But we have a rate of 12½ percent on something that is called the net worth of corporations. That again may partially be a question of whether or not this is a proper estimate of net worth statistically or not. Again it raises the question, if corporations are in effect asking 12 percent or something like that before they make investments, there is an unbelievable gap between what people get by investing their money in stocks and what corporations are supposedly earning on either new investments or on their whole net worth.

I mention it primarily just as a problem rather than trying to show its cause.

Mr. POWER. I think this is a very important point. A key interest rate or key interest rates which are not given enough attention are those internal target rates of return of the large corporations. They do a substantial part of our capital investment. In deciding on an investment decision, the typical large corporation will look over the figures at the finance committee level, or somewhere, cost, anticipated revenues and so on, cost saving, labor saving, whatever is involved in the capital expenditure, and this must meet a target rate of return which—I think perhaps you were thinking of 12 percent after taxes—really they operate on a before tax rate of return which is 25 or 30 percent. This is a very high return on capital to require. This is the supply of capital concept they use in their investment decision. A rate of interest that high, that really effective rate of interest in determining their capital intensity decision, certainly biases their decision against

laborsaving much more strongly than if they used a low interest rate. These are the effective interest rates they use.

It is also significant that these internal target rates of return are not sensitive to monetary policy. Monetary policy can affect the pure rate of interest you are talking about, the rate on Government bonds, but Du Pont, General Motors, and the other large corporations do not shift their internal target rates of interest, which are the operative ones in determining investment decisions, with the shifts in prices of Government bonds. This is one of the most important reasons that investment is not as sensitive as we economists would like it to be to monetary policy.

Senator BUSH. I am really confused about the use of the term "interest rate" when you speak of internal target interest rate of a corporation. Are you talking about the rate of desired return on investment when you use the term "investment rate?"

Mr. POWER. I don't think "desired" is the right word. "Required" is the right word. They will not invest ordinarily unless the project is expected to pay that required minimum rate of return or better.

Senator BUSH. Rate of return.

Mr. POWER. Rate of return on capital. In economics traditionally we have assumed that the interest rate governing in the market was the one that was required. Classical economics, and Keynesian economics—Keynes himself—assumed that entrepreneurs would invest as long as their expected rate of return was greater than the interest rate that ruled in the market. That was the supply price of capital concept, the test that had to be met, the interest rate that ruled in the market. For these big corporations, the one that serves exactly the same function, is their own internal budgeting rate that they use for their own calculations. It serves the same function as theory has assumed in the past that the external rate did.

Senator BUSH. I just wanted to be sure that we make a distinction between interest rates and rate of return on investment. They are two entirely different things, as I have always understood them. Is that not so?

Mr. POWER. The actual return of investment is also different from the required minimum return on investment. For the corporations it is the required minimum return on investment that serves exactly the same function as the interest rate. This is the test that has to be met in assessing the possibilities and making the decisions about this particular investment.

Senator BUSH. That is true. I still want to make the point, and maybe I don't need to, but I rather got the impression in this discussion you talked about a desired rate of return in corporate practice as though this was an interest rate return, which it is not, as I see it.

Mr. POWER. I said this required rate of return serves the same function and takes the place of an interest rate for these corporations. It serves the function of their own internal interest rates in making decisions about capital expenditures.

Mr. HOOVER. To pick up this same point Mr. Power developed—excuse me.

Senator BUSH. The point I have in mind, I am sure you realize, when you figure out a desired rate of return on investment in a corporation or business enterprise, you are figuring a whole lot of risk in that which does not exist in connection with interest rates that

might be obtained on the issue of debentures or mortgage bonds of that every company itself.

Mr. POWER. I agree. I see you are talking about the amount. Thirty percent has to be cut in half because of the corporate profits tax to begin with. There are these large risk factors. So it might be that when all these things are taken into account, 30 percent is not abnormally high. It might be that this relates closely to something like 4 or 5 percent for Government bonds. But it is still true that 30 percent does not drop to 28 when the rate on Government bonds goes from 4 to 3 $\frac{7}{8}$ . It is not sensitive and does not move. It is rather insensitive.

Senator BUSH. I agree.

Mr. POWER. In my written statement I suggested as a proposal that one way we could get the required profit rate that businessmen insist on down gradually over time would be to reduce the corporate profits tax gradually. This is a possibility. This would have to be coupled with some other means. I thought maybe you would like that.

The CHAIRMAN. Don't suggest that to Senator Bush too strongly.

Mr. POWER. The other part of the package would be some means to assure this would be passed on and not simply absorbed because then it would not be effective.

Senator BUSH. It might be a desirable objective but I don't look on it as a probability at the present time. I am sure my friend would be the first to vote for a good sharp reduction in corporate taxes.

Mr. POWER. It is a package, as I say, and I hope you will look at that proposal.

Senator BUSH. Thank you, Mr. Chairman. I just wanted to make sure—possibly I misunderstand the discussion, because my hearing is not very good in this room—but there certainly is a very vast difference between lending interest rates and the rate of return on investment. That is all I wanted to make sure, that we were not getting those two in the same category.

The CHAIRMAN. Not only a great difference, but a puzzling difference.

Mr. HOOVER. Very much so.

Senator BUSH. I don't think it is at all puzzling.

The CHAIRMAN. If you get a required yield of 12 percent, you can borrow capital for 4 $\frac{1}{2}$  to 5 percent. I am puzzled. I would note that it is explainable purely by risk.

Mr. HOOVER. Indeed the extent to which this is realized return means that this return was net of risk.

Mr. POWER. Certainly Mr. Lanzillotti's studies have shown that the actual rates tend to be above the target rates. I don't know what they base this risk on.

The CHAIRMAN. I do not think there is too much risk in the investment of corporate surplus by General Motors or Du Pont or General Electric. It may not be as riskless as Government bonds, but it seems to me to be unriskey.

Senator BUSH. That is not what these gentlemen are talking about. They are talking about the decision of General Motors to stop making so many Chevrolets and make a Corvair, which is a small car. They have to invest in a whole lot of new equipment, millions and millions of dollars, and they are taking a real risk on making that shift.

The CHAIRMAN. On product?

Senator BUSH. Yes. But that is where the capital investment comes in. That is where the 30 percent should not be confused with interest rates at all.

The CHAIRMAN. Do you think this so-called high rate is simply due to the introduction of new products? What about improved capital to produce old products?

Senator BUSH. It may be due to both, certainly. The one target rate of return might be much higher than the other, depending on the relative risks involved, which are a very important consideration.

The CHAIRMAN. Risks in the second case would not be as great as risks in the first.

Senator BUSH. You do not know. It would depend entirely on market conditions. That is a dangerous assumption. You cannot possibly guarantee that.

Mr. POWER. There are different attitudes toward risk and one could judge that they have a conservative attitude toward risk.

My own feeling is that in addition to risk, there is a speculative element in these target rates of return. They have been able to get high rates in the past. Whenever the rate of profit expected on investment tends to fall off, they decide that they would rather not invest. They postpone investment plans rather than take something less than what they have been able to get in the past on the speculation that if they wait something will come along which will pay their high target rate of return. It always has in the past.

This means, however, that any time the rate of profit tends to fall off generally in the economy, then investment plans are postponed. They wait with their saving. Actually, the ensuing recession destroys the saving from profits.

The CHAIRMAN. Suppose these firms were much smaller and more competitive instead of oligopolistic, would they have as high a target rate then? Would not the general expectation be lower and would they not make equal investments at lower rates of return or greater investments at the same rate of return?

Mr. HOOVER. It is indeed a serious question.

I want to point out, too, as we all know, what economists in general thought of the addition to interest rates for which risk could account. You know the argument, that on balance there was not anything there, but in general I suppose the assumption was that it might have been no more than 1 percent or 2 percent or something like that. But hardly twice the amount of the interest rate itself.

Here we are faced by a situation, by certain statistical concepts, in which you have a rate of return on investment double or better of the interest rate on bonds.

The CHAIRMAN. Mr. Knowles has a question.

Mr. KNOWLES. Mr. Smithies, you raised this point about the influence of education on productivity and progress. I am looking at Dr. Fabricant's paper here in which he shows for fiscal output per man-hour two separate figures:

One is where he weights the figures, which is on page 301; the one figure physical output unweighted is 1.2 percent. Per weighted hour it is 2 percent. It is a difference of approximately 20 percent.

It seems to me that in interpreting this, his weights are the average wage rates in each of the industries which go into this aggregate. Therefore, they are, according to his explanation, a proxy for differences in quality or skill of the workers in those industries, assuming that the wage rates are proportional to the skill. So the difference of four-tenths in his calculations, if his assumption about the correspondence between the wage rates and skills is correct, must be a measure of a difference in output per man-hour which is accounted for by a change in the quality of labor over the period.

This would mean that approximately 20 percent of the increase in output per man-hour is due to an improvement in the quality of the labor force, and that when this is taken out you get the lower figure.

In other words, if you adjust the labor force for changes in quality, it looks like a larger labor force, in terms of quality, plus the raw man-hour, and hence, the output per man-hour rises more slowly.

If you look at the various periods here and on the table on page 329, the difference between these numbers for vast periods varies from about 13 percent to 25 percent. It is generally about three-tenths to four-tenths of a percent in points in the total, and depending on the period, this amounts from 13 to 25 percent per year. This means that each year somewhere 25 percent improvement in productivity is due to the improvement in the quality of the labor force which would seem to me to be education and improvement in the quality of labor, which is a very high proportion of responsibility indeed.

If I read his figures correctly, the situation is stronger than this. If I read Fabricant's interpretation correctly, that is. Because this is based on the average wage rate in each of a fairly large aggregate of industry.

Each of these industries is a pretty big chunk. It doesn't take recognition of changes of quality in industry or between industries which are smaller breakdowns of these fairly large chunks.

I assume from this he has such as electrical machinery. There would be a series of different subgroups that make different types of electrical equipment and whose wage experience might have been different. If he had used a set of weights, he himself says, for individual qualities of labor rather than use the weights by industry, as he did do, he then would have obtained an increase in the labor force which was larger.

In other words, this gap between the weighted and unweighted figures would have been larger by some significant amount. So we might say that probably over this period the rate of improvement in productivity, measured as output per man-hour, ignoring the capital for the minute, must have been at a minimum 13 or 14 percent of the yearly change and might be as high as somewhere between 25 and some upper number. We don't know quite what that is. It might have been 30 or 40 percent.

This would seem to me to indicate what we did about the improvements in the skill of the population—technical improvement in technical skill and trying—plays a very large role indeed. It seems to indicate if you could do something about this, you might have a very large influence on productivity. That is one interpretation.



Mr. SMITHIES. I am afraid I can't quite follow this argument, Mr. Chairman. I will have to think about it and I will communicate with Mr. Knowles if I may.

The CHAIRMAN. If this be true, and I am inclined to think it is partially true, it seems to point to the necessity of providing added educational opportunities for sections of the population which now do not have these chances; namely, to Negroes, in New York, Puerto Ricans, to children from the mountains, to women, the groups in the population whom we believe to have at least normal or nearly normal latent abilities, but which are not permitted to exercise these abilities because they don't have educational opportunities.

Mr. KNOWLES. It may also mean that industrial retraining programs which sometimes have been thought of, shall we say, as public relations operations rather than something which seriously affects the efficiency of enterprises, may indeed be the most profitable investment you can make, if these figures are taken seriously and interpreted the way I have. I am not quite positive myself this is correct. I believe it is.

If I read Mr. Fabricant correctly, it would seem to me to indicate that some investment in retraining programs, and industrial training programs and adult education—our labor force is going to be adult, they will have to continuously keep up to date with the latest techniques—these kinds of programs actually do pay. In the aggregate they pay. Whether they will pay for an individual enterprise or not is a calculation which is different. In some cases it may; in some cases it may not.

From the standpoint of the community, since these are aggregate numbers, it is obvious for the economy as a whole they obviously pay quite substantially.

If I may make another point about the discussion of the capital earlier, I think from this discussion it should be made clear that one of the problems in understanding the role of capital and capital formation is that capital is multidimensional. You have a series of dimensions to measure when you measure capital. If we put in place a given amount of plant and equipment, as long as the plant and equipment is there and usable at all, and is not totally junked, it is capable of producing with some set of inputs. But as the time goes on, it gets more and more costly relative to the new techniques to use it.

So it is the efficiency relative to the new declines. It is still capable of producing. It is still part of the capital of the economy. Therefore, what you are measuring is really how much capital you have on the one hand, and on the other hand you have to have some way of determining what its average technical age is because this determines its effective size in cost terms.

Of course, the decision as to whether to use the capital or leave it idle depends on its relative cost position. This depends on its relative age.

If you look at the period since 1920 from the figures that have been produced on capital stocks, where you get both gross capital stock before depreciation and net, and look at the ratio between these two numbers, it is apparent that some of the explanation of low pro-

ductivity rates at the end of World War II is because the capital stock was relatively old.

If you go back through the discussions of the time, you hear continuous outcries of out-of-date equipment that we have to replace. It appears in discussions of the problems of the time and not merely in the numbers.

If you come up to date when productivity during this period rose very rapidly, it was also true during this period that the average age of the capital stock fell sharply. You find that the net value rises sharply from something under 50 percent of gross up to 65 percent, according to one series that we have.

So what you are doing here is having a period in which not merely the stock of capital went up but its average age declined sharply, and hence its average technical efficiency rose sharply, so the capital went up much more than the raw numbers would indicate.

One of the reasons why sometimes I am convinced some of these correlations give us trouble, and it might affect study of production functions precisely, our measure of capital stock did not have some apparatus in most of these cases to take care of changes. There are more dimensions than this. This is one of the simplest ones. It is perhaps more complicated because the depreciation of capital stock is not the same as the schedule which makes financial sense in the tax law.

This may mean that our measure of both net and gross capital stock are off and the ratio is off somewhat. This affects our notions of what rates of growth we have in both our available capacity and what it has contributed to the rate of growth of the economy. Hence, it may be biasing our notions of what we could achieve in a rate of growth of the economy as a whole.

Maybe it is true that rising the rate of growth from the long-term rate of something like 3 percent to the recent rate of 4 percent is something which is unusual and can only be accompanied by a rapid lowering of the average age of capital, a process that obviously has limitations; if this is true, you have a problem.

On the other hand, there may be other ways of approaching it. This means that the problem is somewhat more complex than looking at the changes in the gross capital stock.

Mr. ECKSTEIN. I would like to ask two questions: First, a technical question of Professor Power and then a broader question of the panel as a whole.

In your paper you are very much concerned about the existence of a labor shortage at the top. Is this really such a serious matter?

Is it empirical evidence so clear when you consider that you can transfer labor from one sector to another?

It has been brought out in agriculture. Especially in recent years the bulk of the growth of employment has been in service trades and retail and wholesale trade. Wouldn't it be a fair generalization to say that manufacturing, which after all is, where a lot of labor force is gotten by capital by taking it from somewhere else?

Mr. POWER. You are suggesting that there is a chronic tendency toward underemployment in other sectors of the economy, in services and agriculture. I think you are quite right.

Incidentally, at the same time that we have 3 or 4 percent unemployed in the economy as a whole, there are pockets of high unemployment that persist. We don't have the industry mobility or geographical mobility that would enable us to get unemployment down to a much lower level, say 1 or 2 percent at the peak of the boom.

I think really one of our great shortcomings is in not providing better labor market information and better incentives to mobility of labor so that we could help to eliminate some of these pockets, as well as doing some rehabilitation by retraining labor for new industries in areas where there are these pockets. Once you have solved that, with our high saving potential and rate of capital formation this makes possible, there will still be the chronic tendency for capital formation, if it uses the full saving potential, to run ahead of the growth of the labor supply. But that would be an aid of immeasurable value.

Once again, however, at 1 or 2 percent unemployment, the labor shortage would become acute. Then, what is needed is not transferring from some industries to others and shifting about geographically, but you need fact or substitution, the substitution of capital for labor at a more rapid rate in order for growth to continue at that rate.

Mr. SMITHIES. I must say I disagree with the notion of full-employment ceilings in explanation of the depressions of the United States. I don't think labor shortages had anything to do with the 1929 depression. I don't think it had anything to do with the 1937 depression. I don't think it had anything to do with the postwar depressions.

This theory of the labor shortage explanation of the downturn is applicable to other countries. I feel it is quite inappropriate to explain American business cycles.

Mr. HOOVER. If I might intervene for just a moment, this is exactly my feeling. Indeed, if one thinks back, I don't think you can ordinarily remember a situation in which there was a really tight labor situation except in association with war or something like that.

Comparing our own situation, where even at the height of a boom we have 3 or 3½ percent, and compare it with the kind of labor shortage that you do, indeed, have in the European countries, where you have 1 percent, or in general anywhere you have perhaps 1 percent unemployed, but 1½ percent of jobs that can't be filled; then, as far as our own economy is concerned, I don't think you can make out much of a case for the tightness of the labor supply. Eventually, it could become tight but it rarely has.

Mr. POWER. This is the whole point as to what eventually could be. It is in terms of dynamics and not in terms of any particular static situation. It would be difficult to explain, it seems to me, and I would like to hear both you gentlemen's explanations, of why business cycle peaks, except for 1937, have all brought the economy to somewhere between 3 and 5 and sometimes under 3 percent unemployment.

If there is some other constraint, why have some not stopped at 8 percent? Why has not unemployment cumulated over cycles so as to build up a growing supply of unemployment? Why is it that in each succeeding boom almost without exception the unemployment of a preceding recession has been approximately wiped out.

I don't mean acute labor shortage. I think in my paper I said before this point is reached, ordinarily wages do begin to rise. When you get 4 percent unemployment overall, you are down to 1 or 2 percent in many industries and areas.

We reach full employment gradually and unevenly. The labor shortage begins to be felt more acutely in some areas than others. That is not the central point. The central point is that the capital accumulation rate, which proceeds up to that point and is draining down the redundant labor, cannot obviously continue when the redundant labor runs out without changing techniques of production.

You will have to begin accumulating your capital at higher ratios of capital to labor. That cannot be done suddenly. The fact that the unemployed labor is drawn down during this period suggests that the capital accumulation is equipping workers faster than the available labor is growing.

Obviously, when you run out the string, you can't continue. So in a dynamic sense it seems to me it is fundamental, and in your sense, Mr. Hoover, ultimately it will be reached. You don't quite get there. But it evidently comes up before you reach a really acute labor shortage.

Mr. SMITHIES. I think the economy normally operates with near full employment with fluctuations.

I don't agree with the theory of shifting to laborsaving devices. The rate of technological change may be sufficient to permit absorption of the savings. The theory hinges on this rigid notion you have, of a full employment ceiling.

Mr. POWER. I would say I put this theory in simple form. I don't mean it to be that rigid except for exposition purposes.

Mr. ECKSTEIN. My other question is very broad. Let me preface it that I share Mr. Smithies' mystification about what it is that really makes us grow. I also share some of the sentiments expressed about extreme difficulty of achieving growth rates which deviate much from historical trends.

If you assume that, we do have to be seriously concerned about the growth of the Russian economy and we do have to look ahead to 1970 and beyond.

The CHAIRMAN. 1984.

Mr. GOLDSTEIN. Just looking at the figures, if the American rate of growth were something of the order of close to 4 percent, the day when their trends surpass ours is fairly remote. It is decades away. If our rate of growth is 1 or 2 percent, it is a good deal closer.

For the purpose of the argument, if we assume something of the order of 4 were at least acceptable, what would it take to keep the American economy growing at 4 percent?

Senator BUSH. That is a nice question, gentlemen. It ought to be very easy for all of you.

The CHAIRMAN. He is rejecting 5 percent and 3 percent.

Mr. POWER. If no one else wants to jump in first, I will. I hope I waited a reasonable time.

It seems to me that it is going to be difficult for us to achieve a 5-percent rate of growth. Four percent is a little easier. In raising our long-term rate of growth above what it has been in the past, it seems to me to be very difficult unless we see some rather substantial

and revolutionary changes. One would be a rather revolutionary rate of increase in improvements in knowledge, scientific progress, which can be applied to production. It would have to be strongly labor-saving in its bias because of our underlying resource supply situation.

I think that someone suggested a little earlier, I think Mr. Smithies, that the way we allocate our resources can be very important.

This statistical figure we get of 4 or 5 percent includes a lot of what most of us would consider to be fairly trivial output in terms of real value. I think that we can, if we want, with a 3-percent rate of growth, so reallocate our productive resources so that we could match the Soviet Union in any particular several fields of endeavor which were important. We could keep up with them in missiles, education, and scientific advance. We could keep up with them in the growth of military potential. We could keep up with them in the growth of important items in the standard of living.

Of course, to do this we might have to give up some frills. Certainly, conceptually this is possible.

That is two remarks.

Senator BUSH. Did I understand that the first one was an increase in knowledge?

Mr. POWER. Yes.

Senator BUSH. And the second was allocation of resources?

Mr. POWER. Better use of 3 percent growth potential rather than knocking ourselves out with the 4 or 5 percent.

Senator BUSH. How would you go about making a better allocation of our resources?

Mr. POWER. This would take a book about the size of Mr. Galbraith's. The CHAIRMAN. Would a revival of puritanism help?

Mr. POWER. I think it perhaps would. I think that would help a great deal.

I don't think we can be too proud of our state of morale when we hear on all sides that we can't afford to tax ourselves more heavily to meet international obligations and our obligations to match the Soviet Union or anyone else in what we think is important. Because these taxes at the margin and additional taxes at the margin would hit on consumption which is, I think, on any standard pretty trivial.

Senator BUSH. You mean that we could safely increase tax income for the Government even though it did have some effect on consumption?

Mr. POWER. Let me turn that around.

If we couldn't, then there really is something wrong with our morale. If there would be too loud outcries and there would be social discontent and people would not put forth effort and so on, then we would need a little bit of puritanism back in our souls in order that our morale could stand higher taxes in order to meet the obligations we face.

Senator BUSH. I think you have a very excellent point. I am afraid there may be a little something wrong with us.

Mr. HOOVER. Purely technically, I am convinced our economy could have a rate of growth of 4 percent or even somewhat more than that. So I don't personally believe that it depends on increased knowledge and so on, highly desirable as that is.

I believe there is a substantial margin of improvement by which the rate could be increased from the 3 or 3½ percent that it historically has been to 4 or 4½ percent, or momentarily even somewhat higher than that. That doesn't give us anything to answering the real \$64 question about what we can do to bring this about. But a little better monetary management would improve the situation.

I am not even implying a criticism of the monetary authorities when I say that. I am only pointing out that this is a factor. The better your monetary management, the more closely you can come to raising it another half point. There are various other ways that it could be done.

The point that has been made, of course, if we devoted our productive capacity to staples or improving our national security and so on: undoubtedly, we could increase our productivity in those fields and probably in terms of statistical measurements it even would show a rather substantial increase.

But the problem of how we can do that within our system is a more difficult one. One of the reasons, I am convinced, that the growth rate is slowed up is because of the difficulty of getting the right relation between wages and prices. But this is not an easy thing to do.

If there is an alternative of a complete reinstitution of OPA, one shrinks with utter horror from that, and quite rightly. But when you see the kind of problem we meet in connection with the steel strike, which is the kind of problem you meet in this connection of how much your economy can expand, it involves the problem of prices and wages. It is in this area of monetary management, the proper relation between wages and prices—"proper" is not a good word, but the relation—that is involved, and then the question of what kind of things are you willing to do within your system to gain another half or perhaps a full percentage point. This is a real problem and perhaps dilemma, I should say.

**Mr. SMITHIES.** The difficulties arise because of our desire to retain our present form of organization. If we were prepared to meet the Russians on their own ground and if we were prepared for the state to undertake all activities private enterprise was not prepared to undertake, if the state would train all technicians that were not trained privately, there is no reason why we should not meet them on their own ground.

The skepticism that we have about increasing the rate of growth is on the assumption we are going to do it within the framework of a private enterprise economy. I think in that connection there are some rather serious limits to the amount of saving you can impose on a private enterprise economy either through taxation or other means. I think a private enterprise economy does essentially derive its dynamism from producing consumption goods.

I don't see how a private economy can go on building steel mills whose products could be used to build other steel mills. The rates of discount are too high for that. You have to have expanding consumption and the need to have consumption expanding is to put some limits on the rate of saving and the rate of accumulation that would be possible. Therefore, I don't think we can or should attempt to match the rate of growth that can be achieved by a totalitarian regime.

It seems to me we ought to recognize that we have values we want to preserve and the economic price is worth paying for them. Therefore, I deplore the habit of talking about matching the Russian rate of growth entirely.

Nevertheless, I accept the possible need for increasing the rate of growth up to 4 percent, or possibly 5 percent. I don't think there is anything very original to suggest about how to do it except the things that are fairly well known.

One thing that I would suggest, that I have suggested whenever I have had opportunity before, is that we have selective credit controls so that the capital doesn't run to waste in large automobiles. This would help things a great deal. Get the capital in the right place where it would contribute.

There are possibilities of reforming the tax system by allowing accelerated amortization, and things like that, which might spur the introduction of technological improvements.

I think the Government may be able to do a great deal in the research and development area.

One of the most spectacular examples in recent years of increase in productivity is in agriculture. All the research has been done by the Government. It seems to me that the Government need not be too skittish about getting into the industrial area from a research point of view if you want to speed up the rate of growth. In fact, the Government has contributed very greatly to industrial activity, through research and development for defense purposes.

I think another area is in the realm of competition.

I would suggest keeping the economy under steady exposure to competition from imports. That would, one way at least, assure the rate of growth doesn't stagnate.

I think if the rate of growth is to be stimulated, the Government has to be fairly active in the public works field, the kind of public works that the chairman of this committee would approve of.

Finally, I think if we want to keep the rate of growth up at a reasonably high level, we can't be too concerned about the problem of inflation. We must probably submit to inflation from time to time and probably upward trend in prices. If we put complete stability of the price level as the dominant objective, I doubt if we can keep up with an accelerated rate of growth.

Senator BUSH. You mentioned the question of selective credit controls?

Mr. SMITHIES. Yes.

Senator BUSH. Do you care to expand that a little bit? We had some discussion about that here yesterday. I raised the question of consumer credit controls, notably installment credit, such as we have had during periods of war in the form of standby authority for the Federal Reserve Board, and whether that was not worthy of consideration in these hearings. There was some agreement on that.

I wonder if you would like to comment on that.

Mr. SMITHIES. Yes. I would like to illustrate by the 1955-56 experience.

It seems to me that the automobile boom of those years was a serious handicap to the economy. A great deal of capital went into consumers' durables that could have gone into producer durables.

This particular episode brought about a general restrictive monetary measure which precipitated the recent recession.

Senator BUSH. In other words, is it fair to say, to paraphrase your statement, that the overuse of installment credit at that time resulted in the stringency and too much borrowing which in effect resulted in overbuying and thus brought about the recession?

Mr. SMITHIES. It resulted in the situation that the Government felt it had to control.

When the Government only has the instrument of general credit controls to stop things with, it not only stops buying in the consumer market, but it stops the investment and retards capital formation that Mr. Power is so properly interested in. Unless we have a more selective area of instruments I don't think we can keep growth growing and at the same time iron out the fluctuations.

Senator BUSH. It resulted in the Government putting on the brakes to the extent that it slowed it down too much?

Mr. SMITHIES. Yes.

It seems to me that is what we are doing in the last 2 or 3 years. We have only had the general brakes on. We put them on to stop inflation. But we stopped economic growth in the bargain.

If we are going to have reasonable price stability and economic growth, I am quite convinced we have to have a more selective array of controls.

Senator BUSH. I am very much interested in that.

This is something I have been talking about for more than a year.

I am very glad to have you express your views. Do you want to express your views?

Mr. POWER. I would endorse what he has to say. I don't think this will solve all the problems, but what he has to say is sound.

Mr. HOOVER. While I certainly agree with the proposition that at various times the monetary authorities had to slam on the general brakes for the whole system, or though they did at any rate, largely because of something that was happening in a particular area—too much installment buying of cars or sometimes it has been the belief that the stock market had been going up too rapidly, all sorts of things like this—I agree with the problem.

I am not sure that the prescription of what to do would have the effect which we would desire. I am not dogmatic about this. I am rather inclined to say, yes, under certain circumstances I think installment buying might be restricted and so on. Only I think now if we actually did it, we might well find that it didn't produce just the results we had hoped.

In other words, how effective it would be, I wouldn't want to say. One of the reasons is this: I have had a lot of experience with this both in this country and abroad, in which you attempt a selective control, but the rapidity by which you can figure out ways to get around these is really startling.

Mr. SMITHIES. I agree.

Senator BUSH. I do not think any of us would think this would be the cure-all for the situation. But it would be an additional tool in the hands of the Federal Reserve authorities. They have various controls over credit, particularly over bank credit and stock exchange credit.



Here is a field of credit extension that moves ahead very rapidly—and has been in the last few months—over which they have no control at all. If they want to exercise any control over that, they have to exercise it through the money supply and the bank credit. Whereas, if they had the other tool, it might possibly be a more orderly way to approach the situation. That is the thought that has been going through my mind for a year.

I am very glad that you gentlemen are able to endorse it in some way.

Mr. FRUCHT. I am concerned with this question of adequate savings to promote growth. If it is true that voluntary savings are inadequate to give us a rate of growth to supply us with the resources of capital formation that we think we ought to have, then it strikes me that there are two essential ways to obtain these.

One way is to provide for savings. You create funds by which investors can bid resources away from consumers. This is an inflationary route to increase growth.

An alternative way is for the Government to run substantial surpluses which represent reduced consumption. To the extent that they represent reduced investment, this doesn't gain us anything.

It strikes me that if in the free market the public has decided not to save as much as we think it ought to save, and if, furthermore, through the political process the public is not prepared to pay the taxes or obtain reduction of Government expenditures that would create these savings, then I wonder how in a free society we can justify imposing outside of market process and basically outside the political process a higher rate of savings to the public.

Having made that point, I would like to come then to the question of installment controls. If the problem is inadequate voluntary savings on the part of the public, I grant you that one very easy way to produce savings is to say to the public, you have to cut back your spending here but not over there. I wonder again whether we are encircling the free market and free political choice by precluding the Government from arranging a given volume of expenditures on consumption the way the public wants to arrange it; in other words, whether or not we are deducting the problem of making a legitimate public choice as to how much sacrifice to make and as to where the sacrifice has to be.

I wish you would comment on this, Mr. Hoover.

Mr. HOOVER. To answer as best I can your last question first, it seems to me quite plain that if we do control installment buying, and which under certain circumstances I think I would favor with the note of skepticism I have already expressed, if we do it we have indeed limited free choice to this extent.

Then, of course, there will always be the question of, if we do this, will we be sure that we will not have still further lowered the rate of expansion because we may conceivably have lowered demand for consumer goods and not of that purchasing power for other consumer goods or investment decisions be made.

Again, under certain circumstances it would be the thing to do, I think, but it is not absolutely automatic that the funds which had been going into the purchase of automobiles will be available or will be used for other consumer purposes or go into saving made possible by investment decisions.

That is my answer to your last question.

Mr. FRUCHT. Would you grant, Mr. Hoover, that there are alternative ways to secure reduction in consumption, alternative to the use of installment credit?

Mr. HOOVER. Yes, I think there would be.

Again I think there is no doubt that a totalitarian state has a great advantage in that, if you take, for example, the very fancy sanatoriums in the Black Sea which I have visited, in Soviet Russia, which are available primarily for the managerial element in the Soviet economy to use, those did not have to meet the test of consumer sovereignty nor did they have to get through any legislature. Some one in power simply made a decision. So long as resources were available, they would be used, regardless of whether consumers might have preferred something else.

The Soviet Government can make any decision it likes and in this way there is never any difference between the amount of saving and investment, or I should say the potential saving and investment in an economy of that sort.

I would say there are possibilities within our own economy which exist outside the necessity for compulsory additional savings, as I believe the three of us brought out in various ways.

Under certain circumstances, there is often more willingness to save than ability on account of the lowering of the income level. As to why the income lowers at one time or another, this is a matter of the business cycles and so on. Sometimes people would really be willing to save a lot more than investment opportunities exist for them to do.

Mr. POWER. Coming to that point that Mr. Hoover just ended on, I would really disagree with your premise, that there is not sufficient voluntary saving.

I think that a full employment saving-net national product ratio of about 12 percent—11 or 12 percent—is not far off from what we actually have. That means after allocating the government sector to consumption and investment so we have social consumption and investment.

Mr. FRUCHT. There is the problem of ex-anti and ex-post.

Mr. POWER. If there is no serious disequilibrium situation developing, this is proper. Taking that 12 percent and multiplying it by the reciprocal of the capital output ratio of somewhere between 2.3 and 2.4, you get possibly from the voluntary growth of saving a rate of growth of 5 percent easily. This comes out to about 5 percent. The problem is not that saving cannot accommodate a 5-percent rate of growth; it is that the resources complementary to capital are involved.

Our natural resources are fixed in supply. We have to have a rate of resource-saving innovation in techniques, at the rate of 5 percent a year. Save resources at that rate in order to match the growing factor, capital, with the static factor, natural resources.

The labor force is growing today at the rate of 1 percent. A capital stock which can grow, saving which can accommodate a growth of 5 percent, with only a 1-percent growth in labor force, means that labor saving must go ahead at about 4 percent a year. This is pretty rapid. Here is where the real constraints are.

Mr. FRUCHT. I am a little bit confused by the distinction between savings and labor supply effects.

Would you grant that if savings increased, some labor would be released from the consumption sectors?

Mr. POWER. This would be a once-over change. It doesn't change the growth of labor supply. I am talking about determinants of longrun growth and not what we can do one year. It is the dynamic rates of growth of these things over time.

Mr. FRUCHT. We can shift. If we can shift the propensity to save down or the disposable income to national income down one way or another, we can provide more labor for capital formation.

Mr. POWER. Yes; but where will you find the labor to staff this, unless you change techniques sharply in the direction of using less labor per unit of capital equipment?

If you will expand plant at 5 percent and the labor force is growing at 1 percent a year, you have a staffing problem unless you change techniques rather rapidly.

Mr. SMITHIES. Let me make one remark.

You implied in your question that consumer credit controls meant interference with a free market. The market we now have is not a market ruled by consumer sovereignty of the textbooks. It is highly imperfect. These consumer credit institutions were not built in heaven. I don't see any ideological reason why you can't control them.

The CHAIRMAN. Thank you, gentlemen, very much. We have our next meeting on Monday in this room.

(Thereupon, at 12:10 p.m., the committee recessed, to reconvene Monday, September 28, 1959.)

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