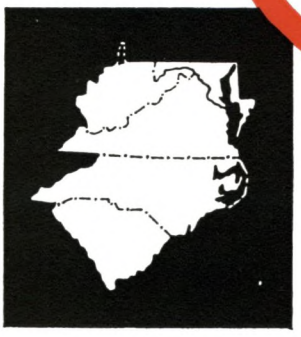
FEDERAL RESERVE BANK OF RICHMOND

# MONTHLY REVIEW

*The Economics of Incomes Policies*

*Coal Makes A Comeback in West Virginia*



Volume 58
Number 10

OCTOBER 1972

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# The Economics of Incomes Policies

Following the lead of several Western European governments, U. S. authorities have added in the past 10 years a new set of anti-inflation weapons to the arsenal of economic stabilization policies. Known as wage-price, or incomes, policies, such instruments have been designed to supplement and complement the basic macroeconomic tools of monetary and fiscal policy. In the early 1960's, incomes policies were introduced into the U. S. economy in the form of the wage-price guidepost formula, or average productivity rule, which suggested that hourly wage rates should rise no faster than the trend rate of advance of economy-wide labor productivity. More recently, of course, incomes policy instruments have constituted the nucleus of the President's New Economic Policy, initially in the form of the zero-growth wage-price freeze of Phase I and subsequently in the form of the 5.5 percent wage-adjustment criterion and profit-margin ceilings of Phase II.

Governments have resorted to incomes policies and other supplementary policy tools when monetary-fiscal policies seemed insufficient to achieve simultaneously society's basic economic goals of full employment and price stability. Primarily oriented toward the management of aggregate demand—and thus the control of demand-pull inflation — monetary-fiscal policies may be unsuitable for combating the type of inflation that arises from the cost or supply side of the market. Such cost-push inflation emanates from certain prevalent market imperfections and expectational forces that affect costs and aggregate supply. Market imperfections include: (1) monopoly power possessed by firms, unions, and other pressure groups; (2) impediments to the geographical and occupational mobility of labor and capital; and (3) inadequacies in the provision of information on job vacancies. If all markets were perfectly competitive, resources freely mobile, and job information widely available, there would be little need for incomes and other supplementary policies. In such an ideal economy, a general rise of wages and prices would not occur before full capacity was reached, and monetary-fiscal policy could attain both society's employment and price-stability goals by maintaining aggregate demand just at the point of full employment. The existence of market imperfections, however, drastically alters the picture. Such imperfections, by generating substantial upward pressure on wages and prices long before full capacity is reached, might make it impossible for monetary-fiscal policies alone to achieve simultaneously society's employment and price-stability goals. By decreasing demand, these policies can control inflation that arises from market imperfections but only at the cost of high unemployment. The same problem exists when cost-push inflation stems from expectational forces. That is, only by depressing the level of economic activity could demand-adjustment policy dispel those deeply entrenched inflationary expectations manifested in accelerating wage demands and spiraling prices. Thus, supplementary policies may be sought to help combat cost-push inflation when conventional instruments threaten to impose too high a toll in the form of unemployment.

Generally, three types of supplementary policies are available: labor market policies, institutional and legal reforms, and incomes policies. Labor market policies consist of manpower training and retraining programs, relocation subsidies, job information services, etc. Institutional reforms include actions aimed at breaking up monopoly elements and other structural-institutional impediments to the operation of the free market. Finally, incomes policies include those programs aimed at securing restraint in labor demands regarding pay and in business decisions regarding prices.

The purpose of this article is to examine the rationale for incomes policies and to explain how such policies are designed to operate. Accordingly, the article: (1) explains how wages and prices are determined in the absence of incomes policies; (2) indicates how those policies are supposed to work in altering inflationary wage-price behavior; and (3) assesses the probable future course of such policies in the light of criticisms that have been leveled against them.

**Models of the Wage-Price Mechanism** Knowledge of the mechanism of wage-price determination is essential if policymakers are to employ incomes policies to achieve anti-inflationary modifications in wage-price behavior. For purposes of policy analysis and prescription, the wage-price mechanism is often represented by a set of equations. In fact, several recent studies of the effectiveness of controls have employed variants of a two-equation model of the wage-price subsystem of the economy. These models specify the chief determinants of the rates of change of wages and prices. They also explain how cost inflation develops in the absence of wage-price policies and suggest how those policies might be most effective in arresting it. Comprising these models are a *wage equation* and a *price equation*. The wage equation identifies certain labor-market conditions and cost-of-living influences that determine wage increases. The price equation then expresses how these wage increases are transmitted into rising prices. An extremely simple version of this model is presented in the following paragraphs. It should be strongly emphasized, however, that the model is a severe oversimplification of a complex process and thus should be interpreted with some skepticism. Intended solely as an expositional device, the model purposely abstracts from many of the forces that influence wage and price changes in the real world. In short, realism has been sacrificed in the interest of expositional clarity.

**The Wage Equation** Many models of the wage-price mechanization show the rate of change of wages (w) varying directly both with the inverse of the unemployment rate (1/u) and with the past rate of price inflation ($p_{-1}$). Specifically, the wage equation is $w = a(1/u) + bp_{-1}$, where w and $p_{-1}$ are the respective rates of change (both expressed in percentages) of current hourly wage rates and the previous period's price level, u is the unemployment rate, and $a$ and $b$ are coefficients specifying how much unemployment and price inflation contribute to the rate of wage increase. In this equation the inverse of the unemployment rate (1/u) serves as a measure of the degree of excess demand or "labor shortage" in the labor market. Thus, the equation states that the tighter the labor market—i.e., the smaller the unemployment rate (or rather, the larger its reciprocal)—the larger the rate of wage increase. The coefficient $a$ attached to the unemployment variable expresses the degree of response of the rate of wage inflation to increasing pressure in the labor market. A low coefficient indicates that the rate of wage increase reacts only slightly to a tightening of the labor market. A high coefficient, on the other hand, indicates that the rate of wage increase is quite sensitive to declines in the unemployment rate. The larger the coefficient, the larger the increment in the proportionate rate of money wage change accompanying a given reduction in the unemployment rate. Determining the size of the reaction coefficient $a$ are several factors, including: (1) the dispersion of unemployment among separate labor markets; (2) the degree of trade union aggressiveness and bargaining strength; (3) the extent of dissemination of job market information; (4) the substitutability of capital for labor in productive processes; and (5) the mobility and flexibility of the labor force. Generally,

**INCOMES POLICIES TO REDUCE THE RATE OF WAGE-PRICE INFLATION**

| Equations of the Wage-Price Mechanism | | | | | | Incomes Policies |
|---|---|---|---|---|---|---|
| **WAGE EQUATION** | Percentage rate of change of hourly wages | Coefficient linking rate of wage inflation to unemployment variable | Inverse of unemployment rate | Price-expectations coefficient | Past rate of price inflation | **WAGE POLICIES**<br>1. Replace wage equation with an official wage-adjustment standard.<br>2. Reduce size of price-expectations coefficient $b$.<br>3. Modify structure of labor market to improve its efficiency. Reduce size of coefficient $a$.<br>4. Tie wage increases to productivity via productivity bargaining. |
| | $w$ | $=$ | $a(1/u)$ | $+$ | $bp_{-1}$ | |
| **PRICE EQUATION** | Percentage rate of change of price level | | Percentage rate of change of wages | | Percentage rate of change of productivity | **PRICE POLICIES**<br>1. Freeze prices. Constrain $p$ to zero.<br>2. Raise rate of advance of productivity $q$. Includes productivity bargaining.<br>3. Profit-margin ceilings to insure that rate of price change $p$ varies in step with rate of change of unit labor costs. |
| | $p$ | $=$ | $w$ | $-$ | $q$ | |

the size of the coefficient will vary directly with the extent of unemployment dispersion, union aggressiveness, and information flows; and inversely with the degree of input substitutability and mobility.

Past rate of inflation ($p_{-1}$), the other independent variable in the wage equation, represents the lagged cost-of-living factor in wage adjustments, as workers seek to restore real earnings eroded by rising prices. It also serves as a proxy for anticipated inflation, as workers endeavor, via wage gains, to protect their earnings from expected future rises in the cost-of-living. This direct link between cost-of-living increases and wage increases is expressed in the last term of the wage equation. The price coefficient $b$ measures the extent of labor's wage reaction or response to increases in the cost-of-living. A coefficient of unity (one) signifies that wages respond fully to changes in the cost-of-living. Wages, in this case, are said to be determined in *real* (purchasing power) rather than monetary terms. On the other hand, a price coefficient with a value of less than unity signifies that the wage response to cost-of-living changes is only partial and incomplete. In this latter case, real wage rates will suffer partial erosion from inflation. Generally speaking, the magnitude of the price coefficient $b$ depends on the extent of the inflationary psychology of workers. The more conscious workers are of inflation and the more deeply rooted are their convictions that it will continue, the greater will be the weight they give it in formulating their wage demands. Thus, the stronger the inflationary psychology, the more sensitive and responsive are wage demands to rises in the cost-of-living, and consequently the closer will the price coefficient approach the value of unity.

The size of the price coefficient $b$ plays a crucial role in determining the nature of the path followed by wage-price inflation. Below some critical level of unemployment, a coefficient of unity (or greater) is associated with an explosive, accelerating inflationary process. As previously mentioned, a coefficient of one indicates a complete feedback of past price increases into current wage increases, thereby generating another round in the inflationary spiral. A coefficient of less than unity, on the other hand, implies a dampened, decelerating inflationary process. In the extreme case of a zero coefficient, the circular price-wage-price linkage would be severed, thereby quickly terminating the inflation.

Much controversy exists concerning the magnitude of the price coefficient. Many economists argue that in the long run, where expected and actual rates of inflation are identical, the coefficient is necessarily unity in value. According to these economists, except for temporary periods of discrepancy between actual and anticipated price changes, workers always bargain for *real* wages. Hence, expected price changes will be completely incorporated in current wage claims, i.e., money wage increases will respond fully to price inflation to maintain real wage rates. Other economists, however, argue—largely on the basis of empirical findings of econometric studies—that in both the long run and the short the coefficient is normally much less than unity. But some members of this latter group of economists now agree that there may be a critical threshold rate of inflation beyond which the price coefficient becomes unstable. At rates of inflation below this threshold there may be little worker recognition of or concern over price changes, in which case the price coefficient would remain stable. But when inflation exceeds the threshold rate for a certain period of time, the price coefficient starts to rise as workers assign increasingly greater weight to price movements in formulating wage demands. Moreover, the more pronounced and protracted the inflation, the faster the coefficient approaches its critical value of unity. In short, the magnitude of the price coefficient may depend on the severity and duration of inflation. Normally dormant at rates of inflation below the threshold of perception and concern, worker response to discrepancies between real and money wages becomes increasingly active when rates of inflation are high. Thus, the higher the rate of inflation, the stronger the money wage reactions to price increases as workers endeavor to protect the real value of their wage increases. In short, the more severe the inflation, the stronger the link, as measured by the magnitude of the price coefficient, between price and wage increases. Moreover, the longer the inflation has persisted, the more downwardly inflexible becomes the price coefficient, i.e., the more resistant and independent this coefficient is to subsequent declines in the rate of inflation.

**The Price Equation** Derived from a so-called full cost, or cost mark-up, model of business pricing policy, the price equation represents the second link of the wage-price mechanism. Full cost pricing is thought to be characteristic of many of the large, oligopolistic firms that operate in American industry. According to the mark-up model of the pricing process, businessmen set prices on the basis of a percentage mark-up applied to unit labor and unit material costs at some standard level of plant operation or capacity utilization. Included in the mark-

up are the costs per unit of output of non-labor and non-material inputs as well as the businessman's profit margin per unit of output.

In the cost mark-up formulation, several factors may contribute to price increases, including increases in standard unit labor and unit material costs and expansion of percentage mark-ups or profit margins. However, although rises in material costs and profit margins may exert significant upward pressure on prices in the short run, empirical studies have indicated that increases in unit labor costs are the predominant price-raising factor in the long run and often the paramount factor in the short run. For purposes of exposition, it is useful to assume that changes in unit labor costs alone influence prices and that both profit margins and unit material costs are constant.

If business profit margins, or mark-ups, and material costs both remain constant, then price changes will be strictly *labor cost determined*. In this simplest of pricing models, a rise in unit labor costs will be matched by an equiproportionate rise in prices as businessmen protect their profit margins by transmitting the cost increase into higher prices. In other words, the percentage change in prices (p) will equal the percentage change in unit labor cost (ulc), i.e., $p = ulc$. But since the percentage change in unit labor cost is equal to the difference between the percentage change of hourly wage rates (w) and man-hour productivity (q), the rate of price change (p) can be expressed by the *price equation*, $p = w - q$.

The price equation, $p = w - q$, merely states that businessmen ordinarily raise prices in order to protect profit margins when wages rise faster than labor productivity. As noted earlier, the difference between the percentage increases of wage rates and productivity is simply the percentage increase in unit labor cost, that is, $ulc = w - q$. Thus, according to this oversimplified version of the price equation, the rate of price inflation (p) is determined solely by the "pass-through" of labor cost increases into prices. More realistic versions of the price equation would contain terms representing the percentage changes in unit material costs and profit margins. Rising material costs attributable, say, to shortages of domestically produced materials and/or to currency devaluations or increases in foreign prices that raise the dollar price of imported raw materials are likely to have a noticeable impact on final product prices. Moreover, profit mark-ups may expand temporarily as firms exploit excess demand positions manifested by increases in the unfilled orders/capacity ratio, i.e., the backlog of unfilled orders relative to productive capacity. Yet, even in this augmented, more-realistic version of the price equation, changes in unit labor costs would play an important role.

**The Complete Price-Wage-Price Nexus** Together, the price and wage equations summarize the operation of the wage-price system, including the mutual determination of wages and prices, and the circular interaction process whereby wage increases are transmitted into price increases, which, in turn, feed back into wage increases, etc. The wage-price model also provides a framework that may be used for interpreting the rationale of incomes policies.

In this light, incomes policies are directed at altering the wage and price equations, thereby lowering the rate of inflation. Incomes policies may be subdivided into *wage policy* and *price policy,* corresponding to the particular equation the policy seeks to modify. The reader should be warned, however, that, because of the two-way interaction between the wage and price equations, this classification of policies is somewhat artificial. For example, price policies may be employed not only to affect the price equation but also to reduce the inflationary expectations term in the wage equation.

**Wage Policy** Wage policy refers to actions directed at modifying the wage equation in such a way that wage increases will be smaller than if no policy had been applied. Wage policy can take at least three forms. First, wage policy can replace the wage equation with an official wage-adjustment standard. For example, during the early 1960's, an attempt was made to obtain voluntary agreement by labor to substitute the constant guidepost criterion or average productivity wage-adjustment rule for the terms in the wage equation. This criterion stated that hourly wage rates should grow no faster than the economy-wide percentage trend rate of growth of average productivity ($\bar{q}$). In the current incomes policy, too, a constant wage criterion occupies a prominent position. Phase II guidelines call for wage rates to grow no faster than 5.5 percent, the sum of trend productivity growth, estimated to be about 3 percent per year, and an intermediate target rate of price inflation ($p^* = 2.5$ percent). Thus, although somewhat of an oversimplification, it may be said that policy attempted to replace the wage equation, $w = a(1/u) + bp_{-1}$, with the voluntary guidepost criterion, $w = \bar{q}$, in the early 1960's and with the Phase II criterion, $w = \bar{q} + p^*$, in 1972.

As a second means of lowering wage inflation, wage policy may be aimed at reducing the magnitude

of the price-reaction coefficient $b$ in the wage equation, thereby diminishing the price-feedback effect on wages. Although an objective of both the earlier guidepost program and the current New Economic Policy, reduction of the size of the price coefficient was not as urgent in the former episode as in the latter.

Problems of inflationary expectations and price-induced wage increases were not as severe in the early 1960's as in more recent years. The actual rate of inflation in the early 1960's was low; and consequently anticipations of inflation were virtually absent when the guideposts were introduced. Thus, the value of the coefficient $b$ was probably small and stable.

By mid-1971, however, the price situation was far different from what it had been in the early 1960's. Instead of a prior period of price stability, policymakers in 1971 were faced with a severe inflation that had been in process some seven years, with the rate of price increase accelerating over much of this period. Expectations of permanent inflation were widespread throughout the economy and clearly had a major effect on wage behavior patterns. The price coefficient in the wage equation, normally small in magnitude, was apparently approaching a critical value. The immediate objective of the President's New Economic Policy was to break the inflationary spiral and simultaneously reverse the upward movement of the price-feedback coefficient that was magnifying it. Since anticipations of price increases tend to be influenced by current and recent experience, the dampening of inflationary expectations required a slowing of the actual rate of inflation. Inflationary expectations were thought to be so firmly established as to be impervious to all but the most drastic action, which took the form of the 90-day wage-price freeze of Phase I. This is a good example of price policy interlocking with, and complementing, wage policy. In this case, the goal of reducing inflationary expectations and reversing the price coefficient in the wage equation required a strong price policy.

If the purpose of Phase I was to reverse the direction of movement of the price coefficient, the aim of Phase II has been to induce further declines in its magnitude. The plan for Phase II calls for decelerating inflation accompanied by steadily-subsiding inflationary expectations. Although no specific conditions have been set for the lifting of controls, policymakers are hopeful that Phase II can hasten the day when inflationary expectations will have vanished and the price coefficient will have receded to more nearly normal levels.

Finally, structural policies aimed at improving the efficiency of the labor market provide a third means of altering the wage equation. Such measures, which might include job-retraining programs, job-information services, and the provision of relocation subsidies, as well as actions aimed at curtailing the market power of labor unions, would be designed to reduce the magnitude of the coefficient $a$ attached to the unemployment term in the wage equation. A smaller unemployment coefficient signifies that any given reduction in the level of unemployment will be associated with a smaller rate of wage increase than before. If successful, structural policies would render wages less sensitive to changes in excess demand for labor and thus improve the trade-off between wage increases and unemployment.

Some economists, however, hold that structural policies should be distinguished from incomes policies, the difference being that the latter attempt to influence wage-price behavior without necessarily altering the institutional structure of the labor market. Although both structural and incomes policies are directed toward the alteration of the wage equation, a distinction is generally made between the two on the basis of whether or not they modify behavior without altering the institutional framework of the economy. More succinctly, structural policies attempt to eliminate or reduce monopoly power and other market imperfections, whereas incomes policies are aimed merely at inducing restraint in the exercise of market power.

**Price Policy** *Wage policy* seeks to reduce price inflation indirectly. In other words, wage policy operates directly on the rate of money wage increase (w) and then relies on the reduced rate of wage increase to affect the rate of price inflation (p) through the price equation, $p = w - q$. By contrast, *price policy* seeks to reduce price inflation directly by altering the price equation. Of course, the direct impact of price policy on the rate of inflation, if successful, will be augmented by strong indirect effects emanating from the wage equation. That is, not only would price policy lower inflation directly but also indirectly by reducing the price-feedback into wages and thus the wage pass-through into prices.

There are several ways that price policy might try to reduce the rate of price inflation (p). First, policy might try to boost productivity growth (q), which would reduce the effect on prices of given rates of increase in wages and other cost elements. For example, the purpose of the National Commission on Productivity, appointed by the President in

1970, was to develop new ways to raise the rate of productivity growth. Incidentally, it should be noted that policies promoting *productivity bargaining*, i.e., union agreements to make productivity-enhancing alterations in work-rules in exchange for wage increases, could be classified as either wage or price policies.

Price policy could also take the form of ceilings on profit margins. By preventing unwarranted expansions of margins, such ceilings would insure that reductions in the rate of rise of unit labor costs would be transmitted, for the most part, into lower rates of price increases rather than into higher profits. Herein lies the rationale for the Phase II standard for maximum profit ceilings. This standard prohibits price increases that would raise profit margins above their base-period average, i.e., the average margin prevailing in the best two of the three years immediately preceding the wage-price program. It is true that the profit standards of Phase II permit moderate expansion of profit margins from their abnormally depressed levels of 1970. Under Phase II rulings, prices are allowed to rise roughly as fast as the rates of growth of standard unit labor costs and other unit costs. In addition, profit gains arising from the current above-average rate of productivity growth are permitted.[1] Such disparities between actual and longer-term average productivity usually develop in the early stages of business expansion and, together with the declining unit overhead (fixed) costs that accompany increasing volume, account for the normal, cyclical recovery of profit margins from their trough or recession levels. But this allowable moderate expansion of margins is not in conflict with the policy ceiling as long as profit margins are below their base period average.

Generally, an important principle of U. S. price policy has been the passive, limited one of preventing profit margins and profit's income share from exceeding their longer-term or base-period average levels. It has been recognized that if policy is to receive the support necessary to its success, it cannot be used to achieve a redistribution of income. Some observers, however, advocate more ambitious objectives for price policy. According to this view, incomes policies should have two goals: (1) reduction of inflation and (2) redistribution of income. But both the earlier guidepost program and the current incomes program were presumably intended to be neutral with regard to longer-term or base-period average income shares.[2]

**The Future of Incomes Policies** What are the longer-run prospects for incomes policies in the U. S.? Are such policies destined to become a permanent, or at least a recurrent, feature of the economic system? Will it be necessary to maintain some form of wage-price controls beyond the current Phase II period? Can one expect the social benefits (reduced inflation) resulting from the extension of such controls to exceed their social costs (reduced freedom and efficiency)? Is it likely that incomes policies will have any success in checking future inflation? These questions are currently the center of vigorous controversy and doubtless will continue to be hotly debated in the months ahead.

Unfortunately, debate over the effectiveness of incomes policies cannot be resolved by empirical evidence. For example, recent figures indicate that there has been some moderation of the inflation rate over the past year. Were controls responsible? Or is the slowing pace of inflation just the delayed result of a slack economy? It is impossible to say. The trouble is that no one can know precisely what would have happened to inflation in the absence of controls. Moreover, even if it were possible to separate the impact of controls from other forces affecting inflation, it would still be too early to declare incomes policies a success. A policy might appear to have a substantial short run impact, yet prove to have no lasting influence. And so, unresolved by the record, the debate continues.

*The Case Against Incomes Policies* A large group of observers are opposed to incomes policies on the grounds that such policies: (1) interfere with the market mechanism, thereby creating a distorted, inefficient pattern of resource allocation as well as a structure of inflexible, disequilibrium prices; (2) divert talent, time, and effort away from productive pursuits into the socially unproductive task of com-

[1] Since April, the Price Commission has published industry trend rates of productivity growth ($\bar{q}$) to be used by firms in computing rates of increase in unit labor costs reported in requests for price hikes. As computed, these increases in unit labor costs ($w - \bar{q}$) will exceed those actually incurred ($w - q$) if the actual rate of productivity advance ($q$) exceeds the trend rate ($\bar{q}$). Thus, when productivity grows faster than its trend, prices will tend to rise in greater proportion than actual unit labor costs, and profit margins will expand accordingly.

[2] The policy rules have been consistent with constancy of longer-run or base-period distributive shares. Constancy of labor's long run relative income share requires that real wage rates grow as fast as trend productivity. Alternatively, expressed in money rather than real terms, constancy of labor's share requires that the proportionate rate of increase of money wages ($w$) equals the sum of the growth rates of trend productivity ($\bar{q}$) and the price level ($p$), i.e., $w = \bar{q} + p$. In terms of the simple price equation, U. S. incomes policy criteria call for prices to increase no faster than the difference between the growth rates of hourly wages and trend productivity, or $p = w - \bar{q}$. But the policy rule, $p = w - \bar{q}$, automatically implies the condition of labor share (and thus non-labor share) constancy, $w = \bar{q} + p$.

plying with the policies; (3) create uncertainty; (4) restrict basic personal and economic freedoms, e.g., freedom of choice and freedom of contract; and (5) entail an administrative or bureaucratic burden in the form of the additional staff necessary to administer the controls. Of these criticisms, the first seems to be the most significant. The critics point out that a wage-price guideline in the form of an economywide standard, if effective, is tantamount to freezing the structure of relative wages and prices. Such arbitrarily imposed structural rigidity is contrary to principles of economic efficiency, which call for the pattern of relative wages and prices to vary in response to dynamic changes in tastes, technology, and resource supply.

Moreover, opponents of incomes policies contend that such policies, in addition to being harmful, are totally unnecessary as anti-inflationary instruments. Thus, the *monetarists* argue that inflation is primarily a monetary phenomenon, fully controllable by proper regulation of the growth rate of the money stock. Monetarists reject the explanation of cost-push inflation, which is a chief rationale for incomes policies, and deny the existence of cost-push linkages running from monopoly power to price inflation. Monetarists maintain that a viable cost-push or market-power explanation of inflation must imply an ever-increasing degree of monopoly power; otherwise, monopolists could not continually inflate prices but would instead merely effect a one-time upward adjustment of prices to the level consistent with full exploitation of monopoly potential. This implication is rejected by monetarists as contrary to the facts, which show little evidence of increasing monopoly power.

A second group opposed to incomes policies, the *neoinflationists,* also deny the necessity for such policies. Neoinflationists argue that chronic inflation, if accurately anticipated and fully adjusted for via purchasing power guarantees in all contracts, is not a major social menace. In the opinion of neoinflationists, the social cost involved in fighting inflation far exceeds the cost of inflation itself. Accordingly, the government should abandon the policy objective of price stability and jettison the incomes policy instrument associated with it.

A third group, the *antimonopolists,* argue that incomes policies are unnecessary because procompetitive policies can stem inflation with greater efficiency and smaller social cost. Unlike monetarists, antimonopolists believe that market restrictions and monopoly power, especially that wielded by trade unions, are important contributors to inflation. Antimonopolists also point out that the government itself tends to promote inflation via legislation that establishes minimum wages, agricultural price supports, subsidies, quotas, tariffs, and other protectionist measures —all of which interfere with the effective functioning of the market. Contrary to the neoinflationists, antimonopolists believe that the social costs of inflation are high enough to warrant strong anti-inflationary policy.[3] But price-wage controls are not the proper components of such a policy, claim the antimonopolists. Instead, policy should aim at the complete eradication of monopoly elements, government subsidies, trade restrictions, and other structural-institutional impediments to price stability.

*The Case for Incomes Policies* Advocates of incomes policies include two groups: those who think such policies should be temporary and episodic and those who maintain that such policies should be permanent. Generally in sympathy with the free-market philosophy, the first group maintains that price-wage policies are justifiable only as a short run measure to be applied in specific crisis situations. This group believes that the Phase II machinery should be maintained just long enough to eliminate inflationary expectations and to improve the wage-price performance of the economy. After these goals are accomplished, the controls should be dismantled. While agreeing that *prolonged* application of wage-price controls may cause serious maladjustments, distortions, and inequities, this group does not think that these problems will be serious if the policy application is limited to the short run.

Others, however, think that price-wage controls are indispensable. They argue that inflation has become so firmly embedded in the economy that it cannot be contained effectively without permanent controls. This group cites an impressive array of psychological, institutional, and structural factors supposedly rendering the economy more inflation-prone than formerly. The list includes: the exaggerated wage and job expectations of young workers (who constitute a growing proportion of the labor force); the truculence with which workers now press their wage demands; and the fragmentation of society into numerous competing factions, each motivated by feelings of discontent and inequity to seek enlargement of its relative income share. Additional forces which, it is claimed, may be amplifying the endemic inflationary bias of the economy include: the increase

[3] Neoinflationists and monetarists could, of course, believe that reduction in monopoly power would be socially beneficial for reasons other than its potential for reducing inflation.

in union monopoly power;[4] the greater willingness of unions to exercise the market power in their possession; certain changes in the age-sex composition of employment; and shifts toward services in the output-mix. Both of these latter two forces are expected to have an adverse effect on future productivity trends. Proponents of permanent price-wage controls also point to other, short run influences expected to intensify inflationary pressures in the months ahead, including the anticipated large deficits in the Federal budget and the large number of key labor contracts to be negotiated next year. All these reasons, it is claimed, necessitate the continuation of anti-inflationary controls to reinforce other policy weapons.

Advocates of incomes policies do not deny that such policies are a "second-best" approach to the problem of inflation control. They recognize that the restoration of competition in markets would help to reduce inflationary pressures. But they think that such an ideal procompetitive policy would be politically or technologically impossible to achieve in the foreseeable future. Thus, in view of the unavailability of a "first-best" procompetitive policy, a "second-best" incomes policy must be relied upon.

[4] The alleged increase in union monopoly power is attributed to certain factors that augment union strike capability, such as availability of unemployment compensation and food stamps to striking workers and the increasing relative importance of fixed or overhead costs in manufacturers' total cost structures, which raises the potential loss to employers of any strike-induced shutdown.

*Prognosis* It appears probable that, over the next decade, incomes policies will be employed from time to time as inflation flares up. Permanent application of such policies seems unlikely, however. A large segment of the public probably shares the same pro-market sentiments and antipathy to controls harbored by the opponents of incomes policies. Consequently, this segment of the public would be unwilling to assent to or tolerate permanent controls. But the public also opposes inflation and expects policymakers to combat it. Given the two constraints: (1) society's full employment target and (2) the structural-institutional imperfections of the economy, policymakers will continue to experience difficulty in fighting inflation with monetary-fiscal policy. A further complication is that policy may be operating in an environment characterized by increasingly sensitive inflationary perceptions and expectations. In principle, one solution to the policy dilemma would be to eradicate market imperfections, thereby eliminating a constraint to the effective use of monetary-fiscal policy. Such a strategy, however, is likely to be rejected as involving too severe a political cost. Therefore, a feasible alternative will be to resort to incomes policies. Thus, a future marked by the periodic recurrence of wage-price controls would seem to be a distinct possibility.

*Thomas M. Humphrey*

## Appendix

### THE INFLATION-UNEMPLOYMENT TRADE-OFF

Not only is the two-equation wage-price model useful both in describing the linkages of an inflationary wage-price interaction process and in interpreting the rationale of incomes policies, but it also serves to specify the set of inflation-unemployment "trade-offs" available to the monetary-fiscal authorities. To simplify the discussion, the time lag on the price variable in the wage equation is ignored. The trade-off relation may be derived by substituting the unlagged wage equation into the price equation and then solving for the inflation rate (p). The resulting equation, $p = -q/(1-b) + [a/(1-b)](1/u)$, which contains all the inflation-determining relations inherent in the underlying wage and price equations, indicates the trade-offs or "menu of policy choices" between inflation (p) and unemployment (u) attainable via monetary-fiscal policies alone. In other words, the equation specifies the set of alternative inflation-unemployment combinations available to policymakers armed only with monetary-fiscal weapons. If the set of trade-offs is favorable, incomes policies would be unnecessary. In this case the monetary-fiscal authorities could purchase successive reductions in unemployment at the cost of only slight additional inflation. An unfavorable menu of trade-offs, however, may warrant the use of incomes and other policies designed to improve the set of inflation-unemployment combinations attainable via monetary-fiscal policy.

The trade-off between inflation (p) and unemployment (u) depends on the size of the bracketed term $[a/(1-b]$ attached to the unemployment variable in the trade-off equation. The larger this term, the worse the trade-off, i.e., the larger the increment in the rate of inflation necessary to achieve a given decrement in the unemployment rate. The reader will note that the magnitude of the bracketed term $[a/(1-b)]$ depends crucially on the price-expectation coefficient $b$ from the wage equation. The nearer the price-expectation coefficient is to zero, the lower will be the value of the bracketed term; and the lower the value of the bracketed term, the less sensitive will be the inflation rate to reductions in the unemployment rate. If both coefficients $a$ and $b$ were low, the policymakers would be confronted with a favorable trade-off, because it would be possible to engineer a reduction in the unemployment rate via monetary-fiscal policy without generating much

additional inflation in the process. However, the inflationary potential of any policy-induced reduction in the unemployment rate rises rapidly when the price coefficient deviates significantly from zero. For example, a rising price-expectations coefficient may have been largely responsible for the rapidly deteriorating trade-offs confronting the authorities during the roughly three-year period immediately prior to the imposition of Phase I controls in 1971. The closer the price coefficient $b$ is to unity, the more unfavorable the trade-off. In the limit, as $b$ approaches its critical value of one, the bracketed term $[a/(1-b)]$ becomes infinitely large and the inflation rate (p) becomes indeterminate. At this point, the trade-off vanishes. In short, if $b$ equals one, it is impossible to decrease the unemployment rate by increasing inflation. In fact, since the inflation rate in this extreme case is infinitely sensitive to changes in unemployment, attempts to reduce the latter via monetary-fiscal policy will only serve to provoke explosive, ever-accelerating inflation. Some economists now believe that, in the long run the price-expectation coefficient becomes unity, and thus there is no permanent trade-off between inflation and unemployment.

Justification for incomes and structural policies becomes quite compelling when the economy is rapidly converging on a position of zero trade-offs at high (socially intolerable) levels of unemployment. In this case, conventional macroeconomic weapons, by themselves, are helpless. Attempts to use monetary-fiscal policy to lower unemployment will only serve to provoke explosive inflation. Thus, incomes policies and structural policies must be utilized to twist the inflation-unemployment relation in a more favorable direction, thereby permitting monetary-fiscal policy to operate more effectively in achieving acceptable rates of inflation and unemployment, at least in the short run.

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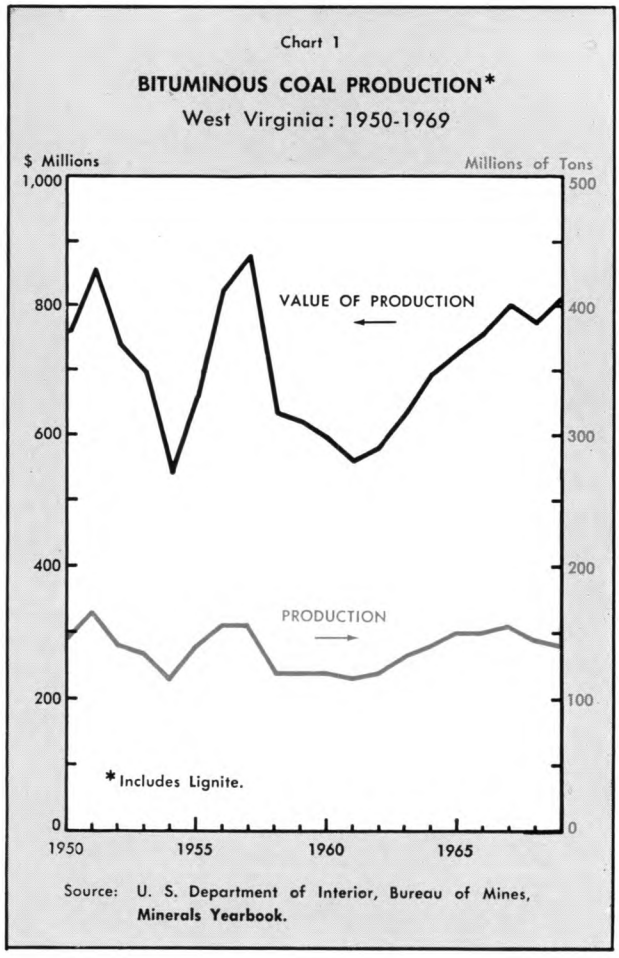
# COAL MAKES A COMEBACK IN WEST VIRGINIA

During the 1950's and early 1960's, U. S. consumption of bituminous coal waned, and the number of workers employed by the industry dropped drastically. In West Virginia, where coal mining accounted for nearly one-fourth of all workers on nonagricultural payrolls in 1950, the state's economy was particularly sensitive to changes in the coal industry. Average daily employment in the state's bituminous coal industry declined from 121 thousand in 1950 to approximately 43 thousand in 1961. The value of annual production fell from $854 million in 1951 to $559 million in 1961.




Since 1969, however, this downturn has been reversed; and consumption has been increasing, primarily because of the rising demand of electric utilities for coal. Employment in the West Virginia coal industry, moreover, has been relatively stable during the 1960's. Indications are that these trends should continue in the near future, as the demand for electric power rises and coal remains a readily available energy source. Although coal mining today accounts for a much smaller share of West Virginia employment and output than it did in 1950, West Virginia remains the nation's leading producer of bituminous coal, which is in increasing demand. The coal industry, therefore, continues to be an important factor in West Virginia's economy.

**Production** After reaching a peak of 176 million tons in 1947, annual bituminous coal production in West Virginia fell irregularly to 113 million tons in 1961. Rising steadily from the 1961 low to 153 million tons in 1967, coal production again fell in 1969 to 141 million tons. During the 1950's, the value of production was subject to even greater fluctuations than total production because of varying shifts in coal prices. Except for a slight decline in 1968, the value of production increased at a regular rate after 1961. Throughout the period from 1947 to 1969, West Virginia was continually the leading U. S. bituminous coal producer; and in 1969 the state produced over one-fourth of the nation's total output.

The largest coal producing counties are Kanawha, Boone, Logan, Wyoming, McDowell, and Monongalia—each producing more than 10 million tons in 1970. With the exception of Monongalia, all are located in the southern and central portions of the state, where the largest proportion of West Virginia's coal is mined. Monongalia is located in an important, but smaller, coal mining region on the

Pennsylvania border. McDowell had the largest output in 1970 with 16.5 million tons, and Logan was second with 13.3 million.

In recent years, approximately 90 percent of West Virginia's bituminous coal production has been derived from underground mines, with the remainder attributed to surface mining techniques. The latter type includes strip mining, which faces a rather uncertain future in the U. S. because of recent attacks by environmentalists and proposed legislation to limit this form of mining. However, West Virginia would not be affected as greatly by such legislation as a number of other states where strip mining is relatively more important to total production.

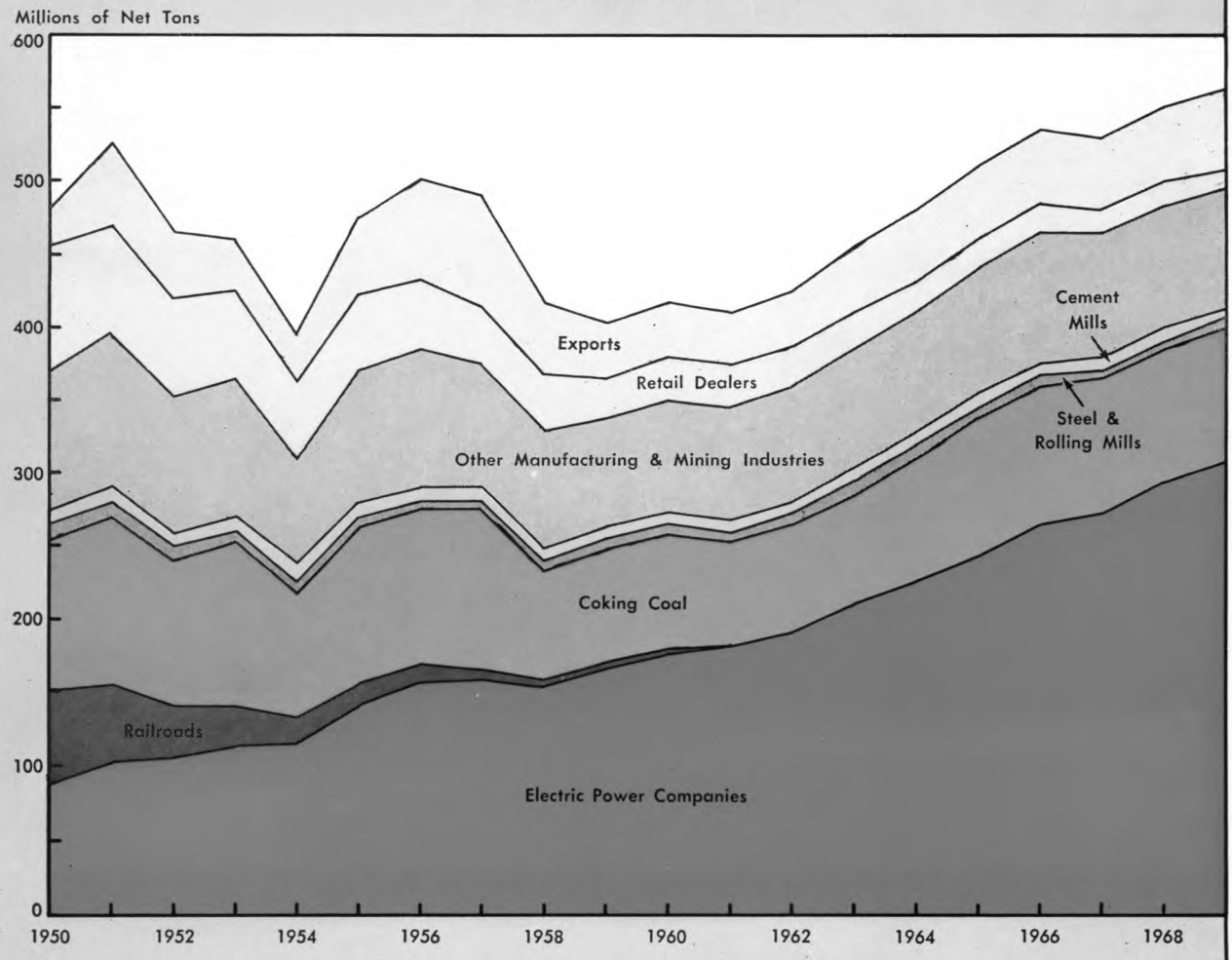
At the end of 1970, 948 companies operated 1,350 mines in the state. Of these 1,350 mines, 900 were underground operations, and of this number 527 employed less than 15 men. The number of underground operations has decreased in recent years, although these mines continue to produce by far the largest share of West Virginia's coal output. Strip mines have been increasing; but, as pointed out above, they are still relatively less important in West Virginia than in a number of other mining states.

**Demand and Uses** The pattern of U. S. coal consumption has undergone major changes over the

Chart 2

**COAL CONSUMPTION AND EXPORTS**

United States: 1950-1969




Sources: National Coal Association, **Bituminous Coal Facts**; U. S. Department of Interior, Bureau of Mines, **Minerals Yearbook.**

Table I

**BITUMINOUS COAL PRODUCTION***
**West Virginia: 1950-1969**

| Year | Production (Thousands of Net Tons) | Value of Production (Thousands of Dollars) | Average Value Per Ton† (Dollars) |
|---|---|---|---|
| 1950 | 144,116 | 754,370 | 5.23 |
| 1951 | 163,310 | 853,894 | 5.23 |
| 1952 | 141,713 | 741,421 | 5.23 |
| 1953 | 134,105 | 693,594 | 5.17 |
| 1954 | 115,996 | 541,370 | 4.67 |
| 1955 | 139,168 | 653,388 | 4.69 |
| 1956 | 155,890 | 824,043 | 5.29 |
| 1957 | 156,842 | 875,587 | 5.58 |
| 1958 | 119,468 | 635,201 | 5.32 |
| 1959 | 119,692 | 621,003 | 5.19 |
| 1960 | 118,944 | 597,222 | 5.02 |
| 1961 | 113,070 | 558,525 | 4.94 |
| 1962 | 118,499 | 578,293 | 4.88 |
| 1963 | 132,568 | 634,794 | 4.79 |
| 1964 | 141,409 | 693,572 | 4.90 |
| 1965 | 149,191 | 726,096 | 4.87 |
| 1966 | 149,681 | 753,851 | 5.04 |
| 1967 | 153,749 | 800,683 | 5.21 |
| 1968 | 145,921 | 775,720 | 5.32 |
| 1969 | 141,011 | 807,811 | 5.73 |

*Includes Lignite.
†Average value per ton is taken as value of the coal at the mine.
Source: U. S. Department of the Interior, Bureau of Mines, Minerals Yearbook.

last 20 years, as can be seen from Chart 2. In 1950, the categories of electric utilities, coking coal, other manufacturing and mining industries, and retail dealers each accounted for approximately one-fifth of the U. S. total. By 1969, the electric utilities' share had risen to over half; and the shares, as well as total consumption, of the other three had fallen. Coal-burning locomotives, which were once responsible for the railroads' leading demand for coal, have virtually disappeared. Despite the declines in these four areas, however, the electric utilities' rising demand managed to bring U. S. coal consumption in 1969 to its highest level since 1948.

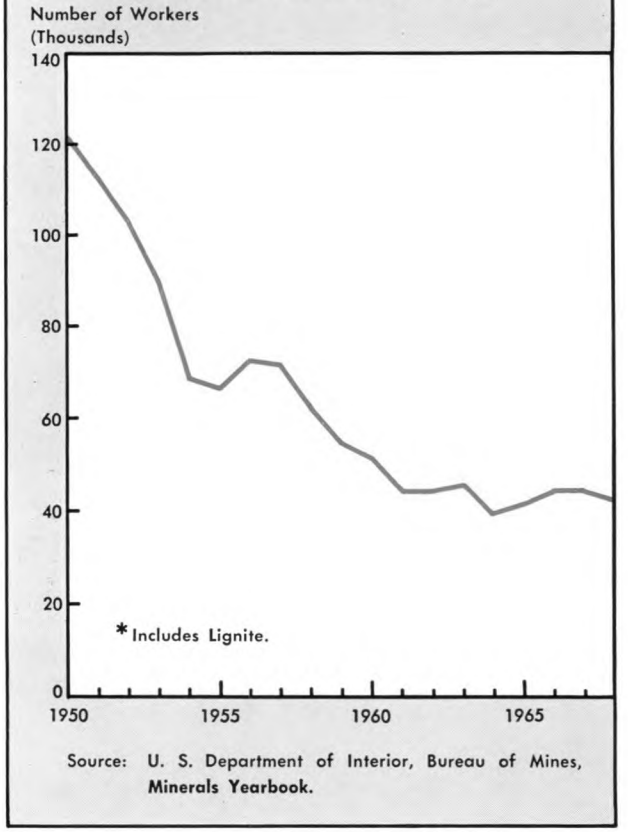
Although not comparable to the electric utilities' increase, exports of coal also rose during the 1960's. The West Virginia coal industry, which produces a relatively high-quality coal, has benefited in particular. Much of the exported coal is used by foreign steel industries for coking, which requires a high-grade coal. West Virginia's ability to produce a high-quality coal also accounts for the state's large share of the U. S. steel producers' market for coal.

The upward trend in the utilities' demand for coal can be explained by the increasing demand for power and the relatively low cost and high availability of coal. A rise in the demand for electrical power was foreseen during the fifties, but coal was not then considered a likely future energy source. The coal mining industry had relatively low productivity, and atomic power plants were being planned to replace coal-burning power plants. Because of automation and a number of other factors, however, the coal industry is now competitive with other fuels. For instance, atomic energy, which once seemed a far superior source of fuel, has recently encountered problems, such as fears by the public of thermal pollution and radioactivity. Also, current cost estimates for the projected atomic power plants are far higher than original cost predictions. Coal, therefore, appears likely to continue as a leading source of electrical power in the near future.

A number of manufacturers still operate coal-fired power plants, and coal remains the fuel used by many homeowners in their heating systems. In addi-

Chart 3

**BITUMINOUS COAL EMPLOYMENT***
West Virginia: 1950-1968




Source: U. S. Department of Interior, Bureau of Mines, Minerals Yearbook.

Table II

## EMPLOYMENT, PRODUCTIVITY, AND EARNINGS IN BITUMINOUS COAL INDUSTRY*
### West Virginia: 1950-1969

| Year | Average Workers Per Day | Average Tons Per Man Per Day | Average Hourly Earnings |
|---|---|---|---|
| 1950 | 120,888 | 6.41 | † |
| 1951 | 111,886 | 6.66 | $2.25 |
| 1952 | 102,996 | 6.97 | 2.32 |
| 1953 | 88,985 | 7.78 | 2.51 |
| 1954 | 60,011 | 8.86 | 2.51 |
| 1955 | 66,231 | 9.38 | 2.57 |
| 1956 | 71,996 | 9.65 | 2.81 |
| 1957 | 71,201 | 10.05 | 3.01 |
| 1958 | 62,437 | 10.66 | 3.02 |
| 1959 | 53,847 | 11.68 | 3.28 |
| 1960 | 51,062 | 12.07 | 3.27 |
| 1961 | 43,611 | 12.99 | 3.26 |
| 1962 | 43,763 | 13.57 | 3.21 |
| 1963 | 44,534 | 14.44 | 3.29 |
| 1964 | 39,308 | 15.31 | 3.41 |
| 1965 | 41,008 | 15.90 | 3.60 |
| 1966 | 43,769 | 15.96 | 3.67 |
| 1967 | 44,064 | 16.01 | 3.85 |
| 1968 | 42,471 | 15.77 | 3.90 |
| 1969 | ** | ** | 4.17 |

*Includes Lignite.

†Series not available prior to 1951.

**Series for 1969 not available.

Sources: U. S. Department of Labor, Bureau of Labor Statistics, **Employment and Earnings**; U. S. Department of Interior, Bureau of Mines, **Minerals Yearbook**; U. S. Department of the Interior, Bureau of Mines, **Mineral Industry Surveys.**

tion, numerous future possibilities for the use of coal are being explored by the industry. Among these are the production of a synthetic gasoline; sewage treatment; and, surprisingly, a potential role in the campaign against air pollution.

**Employment and Productivity** Employment in the West Virginia coal industry reached its peak in 1940 when over 130 thousand men were employed. By 1961, this figure had dropped to approximately 43 thousand, where it has remained for the past 10 years. In addition to slack demand, the primary cause of the drop in employment was the expanding mechanization within the industry, which resulted from low productivity and wage pressures. Average hourly earnings rose from $2.25 in 1950 to $4.17 in 1969. Despite this rising hourly wage rate, coal has remained competitive because rising productivity, which increased nearly two and a half times between 1950 and 1968, has partially offset rising wage rates, thereby keeping labor costs (a major component of price) from rising. Because of the adaptability of the industry, coal mining in West Virginia can now anticipate a far brighter future than was envisioned just 10 years ago.

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## BANKING IN THE CONSUMER PROTECTION AGE

*William F. Upshaw*

*Banking in the Consumer Protection Age,* which first appeared as a series of *Monthly Review* articles, reviews the development of consumer protection legislation in the United States, with particular emphasis on the Truth in Lending Act and the Fair Credit Reporting Act. In addition, important legislation involving bank credit cards is examined, and the work of the National Commission on Consumer Finance is discussed. Reprints of *Banking in the Consumer Protection Age* are available upon request from Bank and Public Relations, Federal Reserve Bank of Richmond, P. O. Box 27622, Richmond, Virginia 23261.