CHAPTER 4

Policies to Increase Supply

MACROECONOMIC POLICIES are designed to encourage growth in aggregate demand and to ensure full utilization of our resources without accelerating inflation. However, there are limits to what demand management policies by themselves can do in achieving these objectives. It is therefore necessary to supplement such policies with programs that will promote the efficient use of human and material resources and thereby increase productive capacity. This microeconomic approach has received less emphasis than monetary and fiscal policies in the past. Nevertheless more efficient markets and greater effective supply can complement increases in aggregate demand to bring about larger gains in employment and real growth with less inflationary pressure.

In Chapter 1 we discussed the sources of the recent productivity slowdown in the private sector. To some extent the lower rate of productivity increase and the accompanying decline in the growth of potential output are related to the impact of the Federal Government on various sectors of the economy. This chapter discusses some major issues and possible approaches to policy in several areas where Government is involved in economic activity: labor markets, the regulation of business, agricultural markets, and tax policy.

STRUCTURAL AND INDUCED UNEMPLOYMENT

Output and employment can be increased by improving the efficiency with which labor resources are utilized. Improvements can be accomplished by a redesign of public programs to reduce involuntary unemployment and by lessening the incentives that induce unemployment. Unemployment problems and proposed policies have been discussed in some detail in recent *Economic Reports*. This section summarizes some of the major issues regarding structural and induced unemployment, focusing on policy measures intended to generate a more efficient use of the Nation's labor resources.

An examination of policies to reduce unemployment requires an understanding of the kinds of unemployment and their causes. *Frictional unemployment* arises from the normal operation of the labor market; *cyclical unemployment* is the result of a less than full utilization of productive capacity due to a recession; *induced unemployment* is a consequence of implicit and explicit subsidies built into public programs; and long-term or *structural unemployment* is caused by rigidities that create an imbalance between the skills and other characteristics possessed by workers and those demanded in the labor market.

FRICTIONAL AND CYCLICAL UNEMPLOYMENT

Frictional unemployment exists even in periods of very low overall unemployment. In a dynamic free-market economy layoffs occur as employers adjust their level of employment to such factors as changes in the relative demand for goods and services, changes in the relative efficiency of firms, and seasonality in production or consumption. In addition, workers leave jobs to search for better employment opportunities, and they enter and leave the labor force at will. These layoffs and quits facilitate the process of reallocating workers to more productive activities. Furthermore, when workers enter the labor force for the first time or reenter after having been outside the labor force for a time, they engage in a period of job search. There is usually a time lag in finding an acceptable job offer, in part because workers, regardless of the cause of their unemployment, may not accept the first offer they receive. These lags result in periods of unemployment that are generally short and are required if labor resources are to be used efficiently.

Other types of unemployment are likely to be socially wasteful. Much attention has been given to the hardships and waste associated with cyclical unemployment. Cyclical unemployment, the primary target of macroeconomic stabilization policy, will be eliminated when unemployment is reduced to a level where further increases in aggregate demand will affect primarily the rate of inflation, with little impact on employment and output. Policies to reduce cyclical unemployment are discussed in Chapter 1.

Yet even at what economists regard as full employment, some unemployment may exist in addition to that which is purely frictional. A part of this unemployment is a consequence of, or is induced by, public policy; and some is structural, the result of rigidities in the labor market that make it difficult for some persons to find a job and remain employed for a long period.

INDUCED UNEMPLOYMENT AND UNEMPLOYMENT COMPENSATION

Induced unemployment arises from incentives built into some public programs. One source of induced unemployment is the unemployment compensation system. Unemployment compensation has proved to be an extremely useful instrument for macroeconomic and income distribution policies. It serves as an important automatic stabilizer. Without the necessity for new legislation, additional benefits are paid as unemployment from job layoffs increases, thereby helping to maintain the purchasing power of the unemployed. The system also serves as a means of distributing the costs of a recession more equitably: it replaces part of the earnings lost as the result of a downturn in economic activity. For some, an important function of the system is to enable an unemployed worker to decline an offer during the early stages of job search if the wages are low and the working conditions poor compared with the worker's previous job.

Despite its highly beneficial effects, the unemployment compensation system has some undesirable consequences. The system tends to increase unemployment above the socially efficient level largely because workers and their employers do not pay the full cost of their increased unemployment. The implicit subsidies in the system are the result of the weak "experience-rating" in the payroll tax paid by employers and the favorable income tax treatment of benefits relative to earnings from employment. In principle, the employer-paid payroll tax that finances the unemployment compensation system is experience-rated. That is, the tax levied on an employer should vary in direct proportion to the benefits received by the employer's workers; and this in turn varies with the unemployment experience of the firm's workers. In practice, however, the difference between the maximum and the minimum tax rates is small, and for many employers a reduction in layoffs does not lower their tax liability. There is therefore an economic incentive during periods of slack work arising from cyclical, seasonal, or other factors for the employer to place workers on a job layoff, or keep them on the layoff for a longer period, rather than retaining them on the payroll. For this reason firms in seasonal and cyclical industries tend to be subsidized at the expense of those in more stable industries, and the extent of seasonal and cyclical variations in employment and output is increased.

The unemployment compensation benefits that workers receive are not subject to Federal payroll or income taxation. Employers and employees may view the system as a means of providing tax-free income to workers. The implicit subsidy tends to promote more and longer layoffs.

The failure to tax benefits also creates inequities among workers. The extent to which the benefits replace earnings net of taxes depends in part on the other income of the family. Because of the progressive tax schedule, for workers with the same earnings and work history the benefits will replace a larger proportion of after-tax earnings, the higher the income of other family members. This situation is clearly contrary to conventional notions of equity.

If unemployment compensation benefits were taxed as earnings and pretax benefits were raised so that average after-tax benefits for low-income workers were unchanged, the average unemployed low-income worker would be unaffected. Raising pretax benefits would also require an increase in the employer-financed payroll tax, and if the tax were fully experience-rated the tax increase would reduce the incentive for layoffs.

In recent years there has been extensive research by economists on various aspects of the unemployment compensation system. Although the estimated magnitudes of the impacts vary, the studies tend to arrive at the same qualitative conclusions. For example, they find that increased coverage of the work force and a longer duration of benefits tend to increase the unemployment rate and lengthen the duration of unemployment. In addition, the larger the unemployment compensation benefits relative to earnings net of taxes, the longer the duration of unemployment is likely to be. The requirement that recipients actively search for, be available for, and accept suitable employment appears to be unevenly administered. Some research suggests that more stringent enforcement of these requirements results in a lower State unemployment rate.

Reduction of the implicit subsidies currently built into the unemployment compensation system would lead to a more efficient utilization of labor resources. This may be accomplished by greater use of experience-rating of all employers in the payroll tax and by taxing benefits as if they were earnings. These changes would not reduce the effectiveness of unemployment compensation as an automatic stabilizer. These and other issues concerning the unemployment compensation system are to be studied by the National Commission on Unemployment Compensation, due to be established in accordance with legislation enacted in 1976.

STRUCTURAL UNEMPLOYMENT

Even after the economy has returned to full employment some groups in the population may still have considerable difficulty finding and retaining employment. Unemployment among such groups may arise from the lack or obsolescence of skills, from regional mismatching of workers' skills and job requirements, and from wage rigidities. The mobility of workers and enterprises makes it likely that the decline in unemployment in the coming years will be fairly widespread across the country. Although regional growth rates of employment will differ, it is not likely that large depressed areas, like Appalachia in the 1950s, will emerge as a serious problem. The long-duration unemployment rate—the number unemployed 15 weeks or longer as a percentage of the labor force—was 2.5 percent in 1976. However with the approach to full employment, it can be expected to decline toward the prerecession level of about 0.9 percent.

A number of groups, however, including youths with little schooling, and in particular black youths, and older workers laid off during the recession who have had a long period of unemployment, may continue to encounter substantial problems in finding work. Policies that reduce the barriers that are chiefly reponsible for structural unemployment would do much to promote equality of employment opportunities. It is therefore useful to review current and proposed policies designed to expand job opportunities for persons with difficulties in finding and retaining employment. These policies include public service employment, job training programs, and an employment tax credit.

Youth Employment

Youths have much higher unemployment rates than adults (Table 34). Most of this higher unemployment, however, is frictional and arises from the frequency with which youths enter and leave the labor force. Labor force entry generally entails a period of job search during which the person is unemployed. Many unemployed youths are entering the labor force for the first time. Others are entering it again after leaving it for a time, frequently because of the dovetailing of schooling and work—or, for young women, the dovetailing of household responsibilities (including child care) and work in the labor market. In addition, in an attempt to gain experience in different types of employment youths are more likely than adults to quit a job and search for another. Thus, although the unemployment rate of youths in 1973, the most recent year of low unemployment, was substantially higher than that of adults, there was little difference in unemployment rates arising from the loss of a job.

The average duration of unemployment among youths is about half that for adult males: in 1973, 7.1 weeks for teenagers compared with 14.0 weeks for men aged 25–59. However, the long-duration unemployment rate—those unemployed 15 weeks or longer as a percentage of the labor force—was greater for teenagers: 1.6 percent compared with 0.7 percent for adult men aged 25–59.

Although teenagers are less likely to be employed than adults are, the number of youths who are neither enrolled in school nor working is not likely to be large when the economy is near full employment. Of the 15.8 million teenagers (aged 16–19) in the civilian noninstitutional population in October 1973, only 1.9 million (of whom 1.4 million were females) were not enrolled in school and not employed. Most of the female teenagers not in school and not employed were providing home care for their own children.

TABLE 34.—*Civilian unemployment rates under alternative definitions by age and sex, 1973*

[Percent]

Age and sex	All civilian workers [1]	Job losers and job leavers [2]	Job losers [3]
16–19 years, both sexes	14.5	4.7	2.8
20–24 years:			
Men	7.3	4.8	3.4
Women	8.4	4.0	2.1
25 years and over:			
Men	2.5	2.0	1.7
Women	4.0	2.3	1.7

[1] Percent of civilian labor force.
[2] Percent of civilian labor force excluding new entrants and reentrants.
[3] Percent of civilian labor force excluding new entrants, reentrants, and job leavers.

Note.—All unemployment rates are based on civilian labor force (as indicated in footnotes) for age and sex group specified.

Sources: Department of Labor (Bureau of Labor Statistics) and Council of Economic Advisers.

For some youths unemployment is involuntary, and they have considerable difficulty in finding and retaining jobs. This may be especially true for those who come from disadvantaged families and those with little schooling. An appropriate role of public policy has been to expand job opportunities, particularly for the youths who, on their own, would not easily find and keep jobs in the private sector.

Youths need to develop the skills, habits, and job-related experience in productive activities that lead to successful employment in the private sector. About 85 percent of all civilian employment is in the private sector; and as youths mature, this is where most will find jobs. The sheltered environment of prolonged public service employment appears to be an inappropriate mechanism for generating employment for youths. On a short-term basis, however, disadvantaged youths in particular may derive important training or educational benefits from the experience provided by public programs.

Substantial investments have been made in public programs to employ and train disadvantaged youths. In 1976, the Government financed at a cost of $563 million nearly 1 million job slots in local prime sponsor programs for the employment of disadvantaged youths in the summer. The Job Corps program provided training for 64,700 economically disadvantaged youths (the equivalent of 20,200 full-year positions) at a cost of $186 million in fiscal 1976. Under Title I of the Comprehensive Employment and Training Act, 2.1 million persons, the majority of whom were youths, received job training or work experience at a cost of $1.7 billion in fiscal 1976. These programs are preparatory to regular jobs in the private economy.

For youths, job opportunities in the private sector should be expanded to permit these young people to take full advantage of the training they have acquired in school or in special public training programs. Although aggregate job creation is largely the function of macroeconomic policy, there are significant impediments to attaining high rates of employment for youths even when the labor market for adults approaches full employment. The Federal minimum wage has been identified as one such impediment.

A substantial body of research suggests that minimum wage legislation tends to diminish employment opportunities for teenagers, but does not have a significant net effect on adult employment. Though estimated impacts vary, some recent studies suggest that a 10 percent rise in the ratio of the minimum wage to the average wage would decrease teenage employment by about 100,000 to 150,000. The reason is that many employers find it too costly to employ teenagers, particularly those with few skills, given the Federal minimum wage (currently $2.30 per hour in most jobs) and mandated payroll taxes and fringe benefits. Coverage under Federal minimum wage legislation has been extended substantially in recent years from 65 percent of the private nonsupervisory workers in 1965 to 87 percent in 1976. This extension of coverage, especially at a time when youths make up an increased proportion of the population aged 16 and over, has limited the increase in youth employment and labor force participation.

In recognition of the adverse effects of the minimum wage on employment, there has been an expansion in the number of exemption certificates which permit employers in certain circumstances to pay youths and the disabled a wage below the applicable minimum wage. In fiscal 1976 exemption certificates covering 800,000 persons were issued, of which three-fourths were for full-time students working part-time in their educational institutions.

The exemption program entails a number of problems, and the effectiveness of allowing more exemptions needs to be considered. The special applications that are required raise the administrative costs to the Government and employers. In addition, the program discriminates among employers of youths doing essentially the same job: a subminimum wage can be paid to a student working in a private university, but because of limitations on the number of exemptions it need not apply if a student is working in a comparable job in any other nongovernmental enterprise. The program also discriminates between youths in school and those out of school.

For these reasons, many believe the exemption program should be extended to all employers and to all youths regardless of school enrollment. This could be accomplished by incorporating a teenage differential into the minimum wage law. Alternatively some believe it would be more appropriate to let the Federal minimum wage lag behind the growth in average wages with the aim of promoting job opportunities not only for youths but also for partially disabled or low-skilled adults.

Long-Term Unemployment

For some adult workers who have experienced long periods of unemployment, reemployment opportunities may be limited even after macroeconomic policies have reduced the unemployment rate to nearly the full-employment level. The situation would be particularly distressing for those who had exhausted their unemployment compensation entitlement. Public service employment (PSE) and job training programs are often viewed as mechanisms for expanding job opportunities for persons with long-term unemployment. Thus far, however, these spending programs have had little net impact on employment compared to tax reductions that increase the deficit by the same magnitude. With appropriate modification of programs, however, the favorable effects could be larger.

In terms of overall macroeconomic effect, the long-run job-creating impact of federally financed PSE programs appears to be quite limited. Initially most of the State and local government jobs funded by the program may represent a net increase in the number of jobs in comparison with what would otherwise exist. With normal attrition and the expansion in regular State and local government jobs, an increasing proportion of the funds are soon used to pay for job slots that would exist in any case. Preliminary estimates suggest, for example, that after 3 quarters about 65 percent of federally funded PSE jobs are net additions to employment; but after 2 years the net addition may be as low as 10 percent. Thus the funding for the other 90 percent of the jobs becomes essentially a form of Federal revenue sharing with State and local governments. Then the job-creating impact of a PSE program is little different from an expansion in revenue sharing.

Persons with prospects of finding a regular job in the private sector during the expansion in economic activity might be less inclined to search for a regular job if they are in a PSE job. On the other hand, adults with long-term unemployment problems are the ones who would appear to be the most suitable candidates for the more than 300,000 public service employment job slots currently funded by the Government.

Several factors make it difficult to target PSE programs toward persons with long-term employment problems. For example, State and local governments tend to hire the more able among the unemployed for federally funded PSE jobs. As a result, PSE participants are more likely to be persons in the prime age groups and to have more schooling than the average unemployed worker. This has the advantage of maintaining the current employment practices of State and local governments. Yet persons with these characteristics are also those who have the least difficulty in finding a job in the private sector. There is therefore a tradeoff between attempting to maintain State and local government employment practices and inducing these governments to hire persons with difficulty in finding a job.

The relatively high wages in PSE jobs also attract persons who are employable in the private sector. In 1976, for example, the average annual Federal contribution to wages and benefits in a PSE job was about $7,700 (some localities supplement the Federal contribution), over 50 percent more than a worker could receive in wages and benefits for full-time full-year employment at the minimum wage. It has therefore been suggested that these jobs be limited to persons with long-term unemployment, such as those who have exhausted their unemployment compensation entitlement, and that they be paid only the minimum wage or the subminimum permitted under Department of Labor exemptions (generally 85 percent of the applicable minimum wage). While the 1976 amendment to the temporary employment assistance program addresses in part the long-term unemployment aspect of these suggestions, it retains the requirement that the PSE jobs pay the prevailing wage. The need to keep wages low has been subject to some criticism. The payment of such low wages may adversely affect the efficiency of workers holding these jobs. Some are also concerned that a family could not be adequately supported on such low wages. However, the regular income maintenance system (AFDC, food stamps, medicaid) would provide supplementary support to low-income families which include a participant in a PSE program. In addition, a low PSE salary would permit a program with a larger number of participants for the same budget cost; as a result, more workers would gain job experience and fewer workers would be discouraged from taking a private sector job when employment opportunities improve. Indeed this approach would make it more explicit that creating jobs and reducing poverty are separate issues, since many persons with long-term unemployment may not be in families with very low incomes.

Job training programs are designed as a means of upgrading the skills of the structurally unemployed. These programs seem to promise a satisfactory solution to the structural unemployment problem. The evidence currently available, however, suggests that the experience has been disappointing. If adjustment is made for the probability that a trainee would eventually become employed without the program, the effects of the training programs on real wages and employment appear to be small. This outcome is not surprising since persons with good training characteristics and prospects would acquire the training on their own or on a job. Persons with few skills and a record of long-term unemployment are largely those for whom successful retraining is most difficult. Part of the problem may be in identifying the programs that are most likely to be successful for particular trainees.

The difficulties with past public service employment and job training programs should be considered before expanding the present programs. Much may be learned, however, from careful evaluation of the present programs and from small-scale experimental programs.

EMPLOYMENT TAX CREDIT

Employment tax credits have been suggested as a means of increasing employment during a recession or increasing employment opportunities for persons who experience structural unemployment. The purpose of an employment tax credit is to encourage the direct use of labor relative to capital and other inputs. Under different variants of such a program, in addition to counting wages as a regular cost of business, firms could claim a credit against their corporate income tax for some portion of the wages or payroll taxes paid for all workers on their payrolls, workers added to their payrolls compared to some base period, or workers drawn from designated groups in which high rates of unemployment exist. These approaches pose a number of problems.

One problem in using an employment tax credit as a countercyclical tool is that the largest effects on employment may not appear until the economy is well on the road to recovery. This delay could occur because the substitution of labor for capital and other inputs which the tax credit encourages becomes greater the longer the period of adjustment. To be countercyclical an employment tax credit would need some mechanism through which the subsidy gradually decreases as overall unemployment declines.

If employment in a recession trough is used as the benchmark, during a business cycle recovery an employment tax credit would tend to subsidize firms for increases in employment that would occur in any case. This effect might be ameliorated if employment prior to the downturn were used as the base. If firms anticipate a renewal of a countercyclical employment tax credit in the future, cyclical swings in employment—and hence in unemployment—would be intensified. An inequity would arise among firms—some receiving large subsidies through the tax credit and others, particularly those with stable employment, deriving no benefit from these subsidies. As a result of an employment tax credit, there would be additional disincentives to firms to maintain stable employment.

There are also difficulties in attempting to use an employment tax credit to expand job opportunities for particular groups. It is difficult, for example, to identify individuals with long-term unemployment problems, unless the program is limited to those having exhausted the unemployment compensation benefits available to them. Employers would have an incentive to hire the most employable persons in any group (such as aged or disabled persons and teenagers) which is eligible for the subsidy. Jobs may therefore go to persons who would not have difficulty finding employment in any case, even though they are members of a demographic group broadly defined as hard to employ. Moreover the narrower the group eligible for the subsidy, the greater the administrative costs to certify eligibility for the tax credit. Experience with the present tax credits for persons on welfare—for example, the WIN tax credit—suggests that an employment tax credit is not likely to expand substantially the job opportunities for persons with difficulty finding and retaining employment. The result could be to subsidize many jobs without achieving much increase in the employment of those individuals whom the program was intended to assist.

While superficially there is much appeal to an employment tax credit, the problems of implementation are great and the result is likely to be a less efficient utilization of labor resources.

SUMMARY

Macroeconomic policy is necessarily the primary mechanism for reducing the current excessively high unemployment. As the economy continues to recover, cyclical unemployment will decline. Much of the long-term unemployment, which currently appears to be structural, will also lessen as job opportunities expand. As a result of increasing employment the amount of job training will increase, since much training occurs through work experience.

Declines in unemployment beyond those attainable by macroeconomic policy may be brought about by reducing the incentives for unemployment currently built into the unemployment compensation system because of weak experience-rating of employers and the tax-exempt status of the benefits. These issues will be studied by the National Commission on Unemployment Compensation. Job opportunities for teenagers may be improved by allowing the applicable minimum wage to be lower in relation to average wages.

Public service employment programs are most likely to increase job opportunities for persons having difficulty in finding employment if eligibility is restricted to the long-term unemployed (for example, unemployment compensation exhaustees) and if the wage is low relative to wages in the private sector. Income maintenance objectives are more successfully addressed by the means-tested income transfer programs which focus on family income. The summer employment program may be helpful for disadvantaged youths by providing experience with a work environment and routine.

Thus far, training programs for adults with employment difficulties have not been shown to have more than very limited benefits and they have incurred substantial costs. The problems of structural unemployment and training mismatches that remain despite private initiatives appear to be very difficult to solve. Until we learn how to ameliorate these problems effectively, small-scale experimental programs and careful evaluation of present programs should be useful. The current large-scale public employment and training programs should not be expanded at this time.

Although it has much superficial appeal, an employment tax credit may create far more difficulties than it can resolve. The impact on employment is likely to be small, particularly in the near term, and new distortions in the use of resources as well as new inequities may emerge.

GOVERNMENT REGULATION

The Government regulates a substantial part of the economy in an effort to improve economic performance and promote individual welfare. Such regulation has created costs as well as benefits, and some anticipated benefits of regulation have never been realized. Regulation has also been difficult to reform or abandon, even when recognized as counterproductive, because elements of regulation frequently tend to satisfy certain special interests. Historically, some business enterprises have sought to avoid competition, and have sometimes been aided in doing so by regulation; other rules and procedures create vested interests and capital values which reform would endanger.

The motives behind efforts to regulate economic activity have generally been commendable, and the net effect of some Government regulatory activity has been positive. Unfortunately it often turns out that regulatory processes are not capable of achieving their intended goals or have generated greater costs than would result from the original problem. In some instances the problem prompting the adoption of regulation has passed but the regulations remain. In other cases the regulatory process has proved too inflexible to accommodate changes in the economy, and a previously beneficial regulatory activity may become ineffectual or harmful. In each of these instances reform of the regulations would lower the nonproductive use of Government resources and would free private resources for productive tasks. More important, some regulation is harmful as well as wasteful since it distorts the allocation of resources and thus lowers the potential output of the economy. The reform of such regulations would increase efficiency, thus making the economy better able to provide current consumers with goods and services and to ensure growth in output for the future.

A major purpose of regulation is to control prices charged and services rendered in industries considered to be natural monopolies, especially those in the transportation and public utility sectors, in order to prevent firms in these industries from exercising market power. The economic characteristics of these industries are such that it is more efficient for a single firm to supply the entire market. Price regulation is therefore usually accompanied by entry restrictions. Price and entry regulations have been extended, however, beyond the select cases where control of monopoly power justifies their implementation. They have been applied to many industries which seem capable of vigorous and healthy competition under less restrictive regulations: for example, trucking and airlines. In these cases it is appropriate to compare the results of price and entry regulation with the level of price and output that would be realized in a freely operating market.

If a regulated price exceeds the market-determined price, consumers will purchase less and output will be reduced. If a regulated price is below the competitive level, firms will provide less output than they would if they were not regulated. In both cases price and entry controls reduce the production of goods and services in the regulated markets. Resources are then reallocated to alternative uses which are less valuable to consumers. The result, coupled with the administrative costs of imposing and enforcing regulations, is to reduce efficiency and production.

Most regulatory legislation since the mid-1960s affects business activity in much more direct ways and in much greater detail than is true of simple price controls. The Federal Government has intervened in such matters as product quality, producer liability, conditions affecting the health and safety of employees, waste disposal, and equal employment opportunity. Much of this legislation is an attempt to deal with the problem of externalities—real costs or benefits that affect individuals other than those directly involved in a transaction. Economic efficiency requires that prices appropriately reflect the full cost to society of producing each good or service. External costs or benefits must be incorporated into each transaction, or internalized, for efficiency to be achieved. The internalization should be accomplished in the least costly manner. Unfortunately some of the regulations concerning health, safety, and the environment appear to be ineffective, and we bear their costs without enjoying much, if any, corresponding benefit. In other cases the benefits might have been achieved at a smaller sacrifice of other goods and services.

There are costs of extending regulation in a free-market economy that go beyond the direct impact on supply. First, the regulatory process itself uses public and private resources which could be used to produce other, more valuable, goods or services. Second, some regulatory procedures reduce the ability of industry to respond to changing supply and demand conditions and so create bottlenecks in regulated sectors of the economy. For example, the lag in implementing price adjustments to reflect the changing supply or demand conditions confronting public utilities can influence the timing of their investment decisions, causing shortages or excess capacity. Third, regulations which protect existing firms from potential competitors may reduce incentives for technological improvement and innovation. Fourth, the uncertainty introduced by the regulatory process itself will cause resources to be used in unproductive ways. Finally, if price controls lower the expected returns to new capital investment, capital formation will be retarded and the economy will grow more slowly.

The effects of regulation on supply can be organized into three categories: cases where the regulated price exceeds the long-run free-market price; cases where the regulated price is less than the long-run competitive market price; and cases where regulation increases the costs of production. Regulation reduces the flow of output from the regulated industry in all three categories.

REGULATED PRICE ABOVE MARKET PRICE

In a number of instances a government-dictated price has been established at a level exceeding the free-market price. This situation might arise from a public effort to ensure profitability and encourage investment in a new industry. Or it might develop from a private industry's securing legislative protection against "unfair" price competition from another industry producing a substitute product. Or it could occur when regulation prevents relative prices from responding to changes in supply or demand conditions. Regardless of the circumstances which bring about the excessive price, government price control can develop into a legal and enforceable means of attaining the goals of a private cartel.

The establishment of a higher price is usually accompanied by restrictions on entry or output as well. When a regulated price is higher than the free-market level, existing producers seek to expand output and new firms are attracted to the industry by the prospect of high profits. Alternatively, an excessive price may deter the withdrawal of firms and production capacity from an industry with declining demand. At the same time, consumers confronted by increased prices restrict their purchases. Because firms offer a larger supply than consumers wish to purchase at the regulated price, pressures are generated for the regulatory authority to limit entry and restrict expansion of output in order to protect the profits of the existing producers.

Restricting entry, however, will not necessarily result in higher profit rates. The higher expected profits per unit of sales encourage each firm to try to increase its total sales by using nonprice methods of competition, such as advertising and quality competition. Because these activities are costly, profits are dissipated. Under such circumstances competition leads to higher costs because price competition is precluded. Consumers may derive some benefits from such nonprice competition, but they are denied the opportunity to choose among alternative price-quality options, as they can in the free market, and thus are made worse off.

Motor Carriers

Trucking provides a good example of the economic costs of regulations that hold prices above the free-market level. In interstate trucking an antitrust exemption permits motor carriers to agree upon rates through rate bureaus, which are groups of truckers that function like private cartels. Rates tend to be set high enough to cover the costs of less efficient carriers. The result is higher prices to consumers. The Interstate Commerce Commission (ICC) regulates both the entry of new carriers and the expansion of route authority by existing carriers. These restrictions frequently require some trucks to drive extra miles on circuitous routes, prohibit access to intermediate points on routes, limit the commodities that can be handled by some carriers, and prohibit certain kinds of freight on the return trip. The result is excessive truck miles and unproductive consumption of motor fuel, labor time, and other resources.

Where more than one carrier gains a certificate to provide service, competition tends to occur on the basis of service quality—frequency of departure, faster delivery, and so on—rather than through prices. As a consequence trucks are often dispatched with smaller loads than they might otherwise haul. Equipment and labor costs are thus spread over fewer ton-miles and costs and prices are higher than necessary. The regulation of rates precludes price competition, and consequently the range of price-service options available to shippers is restricted. Those shippers who would have chosen less frequent service if it were offered at a lower price pay more for services they do not want. In markets where only one trucker has route authority, this process of rate setting may permit lower costs since the trucker, exercising his monopoly control, may reduce the frequency of scheduling, with the result that a higher proportion of trucks is dispatched fully loaded. However, because such a trucker has no competitors, he is unlikely to lower prices to fully reflect the lower-quality service.

A comparison of the transportation of small parcels with large or bulky shipments illustrates the advantages of multiple price-service options. Shippers of small parcels have several options. The scheduled airlines carry small packages as baggage at substantial prices but with a guarantee of delivery the same day. Some air freight firms collect packages at various cities, fly them first to a central sorting location, then on to their final destination each evening, and provide overnight service at slightly lower prices than those charged by the scheduled airlines. Intercity bus lines and special firms that deliver small packages use surface transportation to furnish delivery service at even cheaper rates. Finally, the U.S. Postal Service offers slower but widely available parcel delivery. The advantage of having multiple options is that shippers of small parcels may choose between various degrees of service at different prices. Although shippers of large or bulky freight have some flexibility, many are chiefly limited to motor carriers, where the range of price-service options is much more limited because of regulation.

The problems of excess capacity, higher prices, and too few price-service options would be reduced if entry into the trucking industry were not restricted. Unlike public utilities, trucking does not exhibit scale economies.

Thus price competition is not likely to result in a single survivor—a monopolist. In trucking, fixed costs are low and except for Government restrictions entry is relatively easy. Competition, not monopoly, would be the natural condition in the trucking industry if it were not for Government regulation.

Recent research has demonstrated that common carrier truck regulations cause large losses in production and efficiency. Freight rates in countries that do not regulate motor carriers are significantly lower than rates in countries like West Germany and the United States where regulation is strict. Excessively high motor carrier rates cause some shippers to substitute alternative modes of transportation, or to provide their own transportation services. These responses to regulation reduce economic efficiency.

The motor carrier reform legislation submitted by the President to the last Congress would have increased both price competition and entry into the trucking industry. The legislation proposed pricing flexibility, subject only to later ICC review, which would allow individual carriers to raise or lower their rates as much as 15 percent annually, and it would eventually remove the lower limit on price changes entirely (as long as the price was not set below direct costs). The legislation also proposed eliminating the antitrust immunity that currently protects the collusive rate setting through rate bureaus. Barriers to entry would have been reduced by lifting the hauling restrictions on certain existing carriers and by liberalizing the criteria for route certification. Entrants could no longer be barred simply because the proposed service was already provided by existing carriers. This legislation would constitute a major step in the reform of regulation inhibiting the efficiency of the motor carrier industry.

Airlines

In the airline industry, restrictions on price competition have likewise led to higher fares and emphasis on nonprice methods of competition. In intrastate markets in Texas and California carriers are subject to Federal safety regulations but are free of Federal restrictions on fares and routes. In these markets prices have been consistently lower than prices in federally regulated markets which have similar characteristics.

The regulated air carriers have not earned unusually high profits as a result of regulation restricting price competition. Potential profits have been dissipated through advertising and service competition—most visibly in the form of in-flight stereo, free meals, and other amenities. Less visible but more expensive forms of nonprice competition are capacity increases and scheduling additional flights. More frequent departures and a higher probability of obtaining a seat on a preferred flight do yield benefits to consumers, but recent studies have shown that the cost of operating the additional flights is considerably greater than these benefits. The popularity of air charter flights illustrates the willingness of many consumers to accept the inconvenience of less frequent service, less flexible scheduling, and fewer amenities in order to purchase less expensive air travel. Increased flexibility permitting adjustments in prices to meet market demands, liberalized entry into specific air routes, and the removal of antitrust immunity would help assure a wider range of consumer choices for air transportation and lead to lower air fares than would otherwise occur.

The need for reform in air transportation is compelling and is now generally acknowledged. The 94th Congress considered reform bills submitted by the President, various members of the Congress, and the Civil Aeronautics Board. None of the proposals recommend any change in the safety standards enforced by the Federal Aviation Administration; they all focused on economic regulation. Each of the proposed bills would place greater reliance upon competitive market forces. Each recognizes that increased pricing freedom must be accompanied by a significant lowering of regulatory barriers to entry if truly competitive performance is to be assured. The current issue appears to be not whether a change needs to be made, but rather how far and how quickly it should proceed.

REGULATED PRICE BELOW MARKET PRICE

At a regulated price below the competitively determined market price, consumers want to purchase more output than producers are willing to supply. The result is a shortage: more is demanded than will be supplied at the regulated price. A shortage means that some potential customers who place a value on the product higher than its cost of production are unable to purchase it because the low price has discouraged its manufacture.

Price ceilings also require that nonprice methods be used to decide who is to get the limited supply that is available. Although the monetary price to those fortunate enough to meet the nonprice criteria for purchasing a regulated commodity or service may be lower, all those who want to purchase it, but cannot, must pay a higher price, corresponding to the price of the best substitute product. They are forced to seek more costly substitutes to satisfy their demand, or else to do without. In addition, because the costs of nonprice rationing—waiting in line at a gas station, for example—are sometimes substantial, the realized price paid by those who do meet the criteria may be greater than the free-market price would be, even though the monetary price is lower. As a rule, nonprice rationing methods are less efficient and more costly than price rationing.

Natural Gas

Price controls on natural gas provide an illustration of the losses resulting from a price fixed below the competitive market-clearing level. The Federal Power Commission (FPC) regulates the price of gas sold to pipeline companies for resale across State boundaries. Since the regulated price is below the price in unregulated intrastate markets, most new gas has gone to the intrastate markets. As a consequence there has been a shortage in certain areas where gas must cross a State line to get from producer to consumer. Many businesses and institutions have had to substitute more expensive energy for natural gas in the past few years; and where natural gas is critical for some industrial uses, work stoppages and unemployment have also resulted. Few residential customers already subscribing to gas service have encountered problems, but some new applications for gas service have been denied. Since 1972, as an example, no new customers have been accepted by the Columbia Gas System, which serves consumers from Virginia to Ohio and New York. Recent forecasts indicate a growing shortage of natural gas to meet the contract requirements of pipelines for gas deliveries to local distributors and portend future problems even for residential customers.

The economic costs of the natural gas shortage emerge in various forms. First, under the nonprice allocation system that has been devised by the FPC, distribution companies are allocated gas on the basis of a set of FPC-approved priorities. This allocation system does not directly consider the relative cost of switching to an alternative energy source or the relative productivity of natural gas in alternative uses. The gas that is available may therefore not be going to its most productive uses. Second, natural gas is underutilized as an energy source in favor of more costly alternatives because gas producers, responding to the artificially low prices, undertake less exploration and development than would occur in an unconstrained market. During the last decade total annual additions to natural gas reserves declined slightly, while demand was increasing steadily. Third, because intrastate sales of gas are not controlled by the FPC, producers prefer to sell as much gas as possible at the higher prices prevailing within the producing States. As the controlled price of natural gas has lagged behind the rising price of alternative fuels, this problem has become more serious. About two-thirds of the natural gas reserves committed to markets went to interstate markets in the late 1960s, but this fraction had declined to less than 20 percent by 1975. The unregulated price of natural gas in gas-producing States is sometimes lower than the price of equivalent energy in nonproducing areas, where businesses occasionally cannot obtain gas at any price. Moreover, for some industrial processes, natural gas is less costly to use than alternative fuel sources which could supply the equivalent energy. As a result firms may find it advantageous to move from regions served by regulated natural gas to regions where supplies are available. Instead of being based on true relative locational advantages, this migration to gas-producing States is induced because the regulated price of gas is held below the competitive level.

Last year the FPC announced a threefold increase in the regulated price of "new gas" (gas coming from wells on which drilling commenced after January 1, 1976). FPC efforts to raise the price ceilings can contribute to economic growth, but any long-term solution to the natural gas shortage necessitates legislative action to eliminate price controls. Although increased prices will undoubtedly affect residential consumers, one should not ignore the current costs to consumers caused by regulation-induced misallocation: those which are now hidden in the prices of goods and services produced with higher-cost energy sources, and those which primarily burden residential consumers who are unable to obtain gas supplies at any price.

REGULATIONS THAT DIRECTLY AFFECT COST

A free-market economy cannot allocate resources efficiently unless prices reflect all of the costs of producing and consuming each good and service, and unless buyers and sellers have adequate information on which to base their market decisions. If the external costs that spill over to outsiders are ignored, the price of a good or service will be too low and consumers will buy too much. The output that is purchased will entail a greater social cost of production than the benefits that its consumers will derive. The effect would be similar to a direct subsidy of certain economic activities: economic decisions would be distorted toward the production and consumption of the subsidized product. In addition, if producers or consumers have inadequate information, market decisions will not necessarily reflect relative costs. The more prominent cases of Government efforts to correct for spillover costs and inadequate market information in recent years concern health, safety, and the environment.

Unfortunately, in many instances it is extraordinarily difficult to estimate the external cost of private decisions or the public benefits which would stem from policies to alter those decisions. Errors in estimating either the benefits or the costs can result in programs which are socially more costly than the externalities they are attempting to correct. The inadequacy of information frequently means that these decisions must be made in the presence of considerable uncertainty.

Several problems hinder the development of efficient regulations that will correct for external costs and inadequate information. The appropriate degree of pollution removal or reduction of risks to health and safety must be determined. Eliminating absolutely all pollution or risk to health and safety would be so expensive that it would preclude other national goals. By analogy, in their private lives individuals rarely try to lessen the risk of incurring injury or contracting disease to the technologically feasible minimum. People recognize that the incremental benefits of health and safety are limited and must be balanced against having more resources available to satisfy other needs. In those instances where the private sector is unable to generate a socially efficient amount of information, there is scope for Government research and dissemination of data. Finally, whatever is chosen as the target of environmental cleanup or health and safety improvement should be achieved at the minimum sacrifice of other goods and services.

Electric Power

Regulations have been imposed on the generation of electric power in an effort to internalize the spillover costs associated with air and water pollution. Although it is difficult to measure the benefits, these goals have clearly been expensive to achieve. Investments to meet air and water standards are estimated to add about 10 percent to the total capital expenditures in electricity generation. If the regulations are set properly, they should improve the efficient operation of our economy. The methods adopted for this task, however, have not always been consistent with another objective of cost internalization—achieving it with maximum efficiency.

For example, because certain types of power plants are required to prepare environmental impact statements and have been hampered by frequent legal disputes, considerable delay has occurred in the construction of some electric generation plants. The spasmodic and still evolving development of environmental regulatory policy can create an atmosphere of uncertainty and increase the risk attached to new construction projects for generating power. The uncertainty of regulatory policy can have particularly severe effects on the building of power plants because they involve long commitments and have little flexibility once they are constructed. Hence the caution that utility companies have shown in planning the expansion of future capacity is not surprising. However, the delay in getting power plants under way may cause a switch to alternative types of generating plants which, though less efficient, can be constructed more quickly as demand pressures intensify. The absence of confidence in the stability of environmental regulations may thus lead to a less efficient and more costly mix of generation capacity in the future.

Occupational Health and Safety

Government efforts to improve health and safety conditions in and around the workplace provide another example of the difficulty of using direct regulatory efforts to achieve social goals. The Federal Occupational Safety and Health Act of 1970 mandates the Federal Occupational Safety and Health Administration (OSHA) to assure "so far as possible every working man and woman in the Nation safe and healthful working conditions." Under the act each employer is required to comply with the standards promulgated by OSHA. These standards are intended to furnish for each employee a job which is "free from recognized hazards that are causing or likely to cause death or serious physical harm."

Without OSHA's standards employers would remove work-related hazards whenever the benefits to them of doing so would exceed the incremental costs. If employers confronted the full costs of illness and injury from poor working conditions by having to pay higher wages, or incurred other costs that varied directly with the dangers to health and safety in workplaces, they would tend to operate at an efficient level of occupationally related health and safety. For a number of reasons, however, employers do not actually face the full costs of injuries and illnesses, and some of these costs are borne by others than the injured or ill employees.

The workers' compensation system does not fully reimburse workers and the rest of society for the loss in earnings and the additional medical and rehabilitation expenses that arise from job-related injuries and diseases. Two reasons for this failure are the extraordinary difficulty of estimating the private and the social cost of work-related injuries and diseases and the problem of establishing efficient methods of internalizing these costs. The society at large pays part of the costs of occupational illness and injury through other transfer programs—for example, social security disability, medicaid, and vocational rehabilitation. In addition, the workers' compensation insurance premium paid by the individual employer does not vary in direct proportion to the benefits paid out to its injured workers. Employers are not given the incentive to respond optimally even to those losses for which the system provides direct compensation. Finally, wage differences may not fully adjust to otherwise uncompensated hazards present in the workplace if workers are not well informed of the actual risks that they face, or do not have enough mobility to avoid risks for which they do not feel fully compensated.

A system of health and safety standards is one mechanism for further internalizing accident and illness costs borne by parties other than employers. To implement an efficient system of health and safety standards, the Government needs detailed knowledge about the many different causes of accidents and disease and the relative costs in different firms of alternative methods that may reduce them. There are important differences in the risk of injury and damage to health among occupations and employers—and perhaps also among employees. For administrative and legal reasons, however, it is difficult to impose different standards on different employers. Because of these problems any system of health and safety standards will inevitably be arbitrary and inefficient to some extent. OSHA has usually mandated "engineering controls" for reducing workers' exposure to hazards, rather than allowing firms and employees to determine for themselves the least-cost means of achieving health and safety goals. Given the diversity among firms, the application of engineering standards requires more information, is less likely to result in uniform treatment, and thereby entails higher costs than performance standards or "injury fees" for the same reduction in injuries.

In situations where sufficient information exists to permit a reasonably precise estimate of the social loss from work-related injuries and diseases, health and safety objectives can more efficiently be achieved through the use of performance standards or injury fees, rather than by mandating particular means of reducing injuries. Performance standards levy charges against firms according to the incidence and severity of all job-related injuries, or to increases in injuries above some predetermined level. If information permits, the fees could be tailored to the frequency and seriousness of accident or illness and might be incorporated in a workers' compensation system. These charges should be large enough to fully compensate those directly harmed and to cover the external costs as well. Individual firms would be left to seek least-cost methods of reducing accidents and disease, and they would adopt them to the point where the costs of reducing accidents and illness exceeded the charges levied on the occurrence of accident and illness.

The present state of knowledge is not sufficient to extend this approach to all problems in relation to health and safety. It is frequently difficult to identify the causes of a disease, and the link between health and working conditions is difficult to establish. Many occupationally related diseases appear long after exposure to their causes. The charges might follow so long after the hazardous conditions had caused harm that they would not play much part in decisions affecting the health of employees. The assignment of liability is further complicated because firms may disappear as time passes or avoid responsibility in other ways.

Information problems and the long latency of many occupational diseases make it very difficult to estimate costs and therefore the level of exposure that society is willing to tolerate. In addition, even if these problems were resolved it would be hard to embody the results in an operational system of levying the appropriate charges and internalizing the costs. These same difficulties confront the engineering standards approach. But for occupational health objectives there is often a correct preference for standards that prohibit or severely limit exposure, rather than for an injury fee approach that might allow substantial exposure. In the presence of considerable uncertainty, the desire to err in the direction of too much health and safety may require a standards approach. Where the relevant information is available and the risks involved are not excessive, the use of performance standards may be a more effective means of achieving desired levels of safety and health. Because of the substantial externalities that may be involved, and the difficulty of generating private sector financing of basic research, an important role for Government lies in financing research relating to occupational disease.

IMPLEMENTING REGULATORY REFORM

In spite of the widespread recognition that reform of certain Government regulatory policies could yield substantial economic benefits, there remain major obstacles to achieving reform. Compared to those who would benefit by reform, those who would be hurt are fewer; but they are also likely to be more aware of the losses that they would incur. Many potential losers are well organized and have an effective system for communicating their views to policy makers and the public. On the other hand, the beneficiaries of regulatory reform (especially the ultimate consumers of products of the regulated industries) are numerous, and the benefit per individual is usually small. Beneficiaries of reform are less likely to understand their stake in regulatory reform, are not usually organized, and generally have little success in effectively communicating their views to decision makers and the public.

Those in a position to lose from regulatory reform are not always the ones who have gained from prior restrictive economic regulations. In a well-functioning market, the sales price of capital assets reflects the future earnings stream they are expected to generate, appropriately discounted to account for delay in the receipt of those earnings. The value of regulated industries' assets are likely to be elevated sufficiently to reflect the expectation that regulation, and its associated benefits to existing firms, will continue in the future. Consequently current stockholders of such industries who purchased shares after regulation was introduced are unlikely to earn more than a normal return on their investment. When regulatory reform threatens to alter the economic environment on which they based their future profit expectations, they will naturally resist.

In many instances income distribution considerations are cited in support of holding regulated prices below free-market levels. Allowing prices to rise, however, may not affect low-income consumers more adversely than higher-income consumers. There are substantial differences in consumption patterns among households at the same income levels, and the effects of deregulation on family well-being are likely to differ greatly. For these reasons it is preferable to use the regular tax and income transfer systems, rather than price regulations, to achieve society's income distribution objectives.

Another problem facing regulatory reform is the difficulty often encountered in bringing regulatory reform initiatives before the full Congress. Individual congressional committees, responding to the pressures described above, are sometimes reluctant to consider significant reform bills. Thus, although there is a growing consensus that regulatory reform is needed, the process of achieving it may be hampered by fragmentation of individual proposals. It may therefore be desirable for policy makers to address a number of regulatory reform issues simultaneously. Such an approach was contained in the proposed *Agenda for Regulatory Reform* submitted by the President to the 94th Congress. This proposal would have required the Administration to introduce legislation to effect major regulatory reforms over a 4-year period. Another provision would have ensured congressional action by placing the Administration's proposals before the full Congress after a specified time if similar proposals were not reported out of committee.

SUMMARY

Major policy initiatives are required to address the kinds of regulatory problems described above. Two types of efforts are needed. First, the statutes under which some agencies operate need to be modified. This approach is particularly applicable to the independent regulatory agencies which have jurisdiction over specific industries. The principal goal should be to eliminate regulations that inhibit competition, prevent innovation, and otherwise distort the allocation of resources. Second, the quality of agency decisions under the existing regulatory statutes needs to be improved. This approach appears particularly suited to those regulatory agencies which deal with matters of health, safety, and the environment.

Several specific reforms deserve consideration in 1977. First, reform that increases rate flexibility and eases entry restrictions in the airline and trucking industries would reduce the costs imposed by prices set in excess of competitively determined free-market levels. The reduction in the quantity of resources absorbed unproductively would increase the ability of the economy to produce more goods and services of all types, including those of the regulated sector.

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Second, the economic costs generated by price ceilings could be reduced by the elimination of many price restrictions. Decontrol of natural gas prices is the most urgent need. This would increase economic efficiency and, by increasing supply, move us toward greater energy self-sufficiency.

Third, regulations related to health, safety, and the environment need to be carefully evaluated. These regulations are aimed at some important though elusive social goals. But some generate hidden economic costs that are being ignored, and some may not be effective in achieving the goals of their enabling legislation. A sound comparison of the realized benefits against the total costs generated by each of these regulations is necessary to ensure that the regulatory goals chosen by society are desirable and are achieved at the least possible cost.

AGRICULTURAL POLICY

Farm programs over the years have reduced real GNP by imposing a variety of restrictions on pricing, production, land use, and trade in farm commodities. Some of the most important of these restrictions have been eliminated in recent years, but others remain. In 1977 major pieces of farm legislation will expire, and there will be pressures to return to past approaches which have caused an inefficient allocation of the Nation's agricultural resources. This section reviews the progress made in farm policy, the threat to that progress, and the direction we believe that future farm policy should take.

THE MOVEMENT TO MARKET-ORIENTED FARM PROGRAMS

Beginning in the 1930s the pursuit of income protection for farmers led to programs which have raised average farm prices above competitive market-clearing levels. These programs have produced the general consequences of price-increasing regulation discussed in the preceding section: the regulated price induces more output and less consumption than would otherwise have occurred, and the excess production and capacity generate pressures to restrict output.

For grains and some other commodities the regulated price has been supported by Government acquisition of commodities. The existence of excess capacity is then revealed in the accumulation of stocks of commodities held by the Government. To prevent stock accumulation, schemes have been tried under which a relatively high price was paid for commodities used domestically, while exports were made at a lower world price. If sufficient quantities could not be exported at world market prices, export subsidies have been paid—notoriously in the case of wheat, when subsidies were paid during the period of the Soviet purchases of 1972. In addition, subsidized exports have been made through the Food for Peace program and through subsidized credit to foreign purchasers. Domestic food consumption has been subsidized through the school lunch, food stamp, and other special programs. Because no demand-increasing approach has been able for long to equate demand and supply at support prices, there was continued resort to production control schemes. Measures taken to restrict production have included: acreage allotments and marketing quotas for the major crops; Government purchase and slaughter of sows and baby pigs in the 1930s; payments to farmers to turn cropland to less productive use under cropland adjustment, conservation reserve and cropland conversion programs; and, more recently, requirements to "set aside" cropland acres as a prerequisite to participation in price support programs, supplemented by diversion payments to induce further reduction in crop acreage.

The typical result of these programs was a reduction in food output, or at least in domestic consumption, and inefficiency in the allocation of resources. Establishment of domestic prices above world market levels required measures inconsistent with our overall trade liberalization objectives. Food prices were more stable, but at the cost of higher average prices than if prices had been unregulated. Apart from efficiency losses, costs to the nonfarm public included many billions of dollars in direct payments to farmers. In 1968–70, annual budget outlays for farm programs averaged $5 billion, and Government payments amounted to over one-fourth of total net farm income. Over the years the program benefits were largely capitalized into land values, so that they accrued primarily to owners of farm real estate.

Reductions in some crop support prices in the mid-1960s began a reorientation of farm policy toward unregulated market prices, and since 1972 increases in world market demand have permitted an almost complete abandonment of restrictive features in U.S. farm programs for major crops. Reforms which only a few years ago were considered a practical impossibility have now been put into effect. At the same time, extreme price increases following the sharp reduction in U.S. and world carryover stocks of grains in 1972–73 have renewed interest in measures to stabilize prices. This concern for stability, together with a desire for farm income protection, could open the door to a return to past restrictive approaches.

THE THREAT TO MARKET-ORIENTED POLICIES

Farm programs differ from other regulatory activities in that regulated prices and means of controlling production are more often specified in legislation. Consequently the features of farm programs tend to be a more direct political issue, and more subject to sudden change in approach, than is the case in the regulation of most other industries. Farm policy will be considered by the Congress in 1977 because much of the legislation authorizing current programs will expire, including the Agriculture and Consumer Protection Act of 1973, which covers the major crops. The machinery set up under the 1973 act allows the separation of farm income support from price stabilization measures to a greater degree than was possible under preceding programs. Farm income support can be provided by means of deficiency payments, which are based on the difference between a legislated target price and the market price or support price received. Farmers in the aggregate cannot increase their payments by expanding output, since payments are limited to a given base production. Thus although this approach could be very costly to taxpayers if the target prices were high enough, it can provide farm income support without Government stock buildup and without restricting food supplies. To date, the strength of world markets has kept market prices above target prices, and therefore no deficiency payments have been made, although payments for rice are a certainty in fiscal 1977.

Recent weakness in the price of grains, especially wheat and rice, has rekindled farmers' interest in price support programs. The threat of declining farm incomes, coupled with appeals for policies to promote food price stability by means of grain reserves, could lead to higher support prices and hence a turn away from full-production, market-oriented policies.

The United States has proposed an international system of food grain reserves of limited size which would not be used to defend any particular price band. An alternative, but one which would also involve important issues in international policy coordination, could be a unilateral domestic buffer stock of grain, which would be built up when prices are low and sold when prices are high. This idea fits in naturally with Government storage of grain acquired to support prices. The main new elements would have to do with whether the stocks would be open-ended in size or would specify maximum quantities to be acquired, and the rules for placing stocks on the market to moderate price increases.

While a publicly owned buffer stock can reduce price fluctuations, it involves substantial costs and risks. The principal risk is that support prices and resale prices as well as quantities to be acquired and released will tend to be determined by political criteria. The result, if past history is a guide, will be to stabilize prices in a range which on the average is above competitive market-clearing levels. Such regulated prices would probably return us finally to the acreage restrictions, production controls, and export subsidies which have characterized past farm programs.

THE FUTURE OF MARKET-ORIENTED POLICIES

Farm policy should not only resist bringing back the restrictive grain and cotton programs of the past, but should also move toward market orientation for the commodities where price-increasing measures remain effective. Commodities covered by effective price supports include milk, tobacco, and peanuts. Price supports for milk used to manufacture other dairy products are currently resulting in substantial Government purchases of powdered milk, cheese, and butter, and they require import controls to keep out foreign dairy products attracted by the high prices. The existing programs for tobacco and peanuts rely on economically objectionable production controls. Rights to grow and market these crops have become valuable assets. Even with stringent controls on peanut acreage and tobacco production, the support prices are high enough to result in Government stock accumulation.

Milk and some fruits, vegetables, and nuts are marketed by large cooperatives under the auspices of Federal marketing agreements and orders. Apart from those for milk, there were 47 orders and agreements in fiscal 1976 covering farm products valued at $3.7 billion. Regulation in these cases does not establish prices by legislative or executive action but grants powers to producer groups sufficient to influence prices paid to them. To attain "orderly marketing," flows of products to market during peak production periods are cut back or diverted from fresh to processing uses or to export markets. The result is a higher price for fresh products for domestic uses. The quantitatively most important case is the higher price established for milk sold in fluid form compared to milk for other dairy products. Size and grade standards have in some instances been used to reduce flows of imports, notably of winter tomatoes from Mexico. While most producers' associations have found it difficult to control total supplies, they have in some cases—notably for hops and celery—been able to do so and thereby to raise prices.

Farm policy, besides avoiding production controls under commodity programs, should actively promote efficient food production in other ways. Perhaps the most important means is basic agricultural research, the benefits of which are difficult for private business to capture. Another is to make sure that efficient food production gets appropriately weighted against other social goals, for example by insisting that more stringent environmental or safety regulations do not impose greater additional costs than their expected additional benefits.

The goal of eliminating excessive price instability can be served by more promising means than direct market intervention. Provision of timely and accurate production and market information is a valuable service which may be inadequately supplied by the private sector because of the difficulty of capturing the benefits. By fostering efficient futures markets, which assist commodity producers and users in risk management and which translate the market information that exists into price signals easily interpreted by and readily available to market participants, Government may play a useful role. Domestic price stability would be furthered by reducing protectionism and increasing market orientation abroad. Adjustment to world supply and demand fluctuations would then not occur as disproportionately as it does now in the United States. Freer trade in agricultural products is a chief U.S. goal in the Multilateral Trade Negotiations currently under way, which suggests that the United States should resist undermining its position by protectionist measures to favor our own domestic producers. Bilateral negotiations may also prove useful. The 5-year grain sales agreement with the Soviet Union, which covers shipments of wheat and corn after October 1, 1976, may reduce the year-to-year fluctuations in Soviet grain imports and is a step toward making the grain export policy of the United States steadier and more predictable. In all of these respects agricultural policy can promote price stability without the risks inherent in direct intervention in commodity markets.

Farm programs also influence the efficiency of resource utilization in agriculture by helping farmers bear the risks of crop failure caused by bad weather, pests, or disease. For most commodities, production risk is paid for by consumers in the higher prices needed to induce people to undertake risky activities. For grains and cotton, current legislation provides free insurance through disaster payments when bad weather prevents planting or when a harvest of two-thirds or less of normal production on allotment acreage is realized. These payments totaled about $840 million in 1974 and 1975 together. The economic arguments favor replacement of the disaster payment scheme by an expanded system of nonsubsidized general crop insurance. Subsidized crop failure encourages farmers to use marginal land too intensively, contrary to the conservation goals of agricultural policy, and could reduce the output of our agricultural resources in the future.

Farm programs offer both opportunities and pitfalls in the effort to make the most of our agricultural resources and thus increase real GNP. Opportunities offered by the commodity price boom of recent years were used to establish a potentially valuable legacy of a full-production policy for agriculture. The challenge is to use whatever new opportunities present themselves to eliminate remaining restrictive measures. Most important for the immediate future is not to let the pursuit of farm income support or price stabilization lead us back into past restrictive approaches.

TAX POLICIES FOR CAPITAL FORMATION

In Chapter 1 it was noted that a higher rate of investment is desirable for two reasons: to help sustain the expansion in the short run and to provide the new capacity required in the longer run to ensure rising real incomes, productive employment opportunities for a growing labor force, greater self-sufficiency in energy, and a cleaner environment. Chapter 1 also noted that one of the important causes of the recent productivity slowdown has been the slower growth in the stock of capital per worker over the last decade. The conclusion was therefore reached that an important objective of economic policy in the years ahead should be to ensure adequate levels of new investment. In the near term, stable economic growth is essential for a higher rate of capital formation. But policies may also have to be devised to counteract the forces, identified in Chapter 1, which may have lowered the effective rates of return to saving and investment and interfered with an efficient allocation of capital resources. For example, the President's proposed reductions in personal and corporate income taxes can be justified in part as an offset to the bias against private investment created by our tax structure, under which the real tax burdens for business as well as individuals rise in periods of high inflation. There are a number of other aspects of the tax system which impinge on investment and saving. This section discusses some of these features and suggests some possible changes that may be useful to stimulate additional capital formation and promote a more efficient use of available capital resources.

INVESTMENT TAX CREDIT

The investment tax credit (ITC) was first enacted in 1962 as part of the Kennedy Administration's program to stimulate investment by increasing the profitability of new equipment. Since then, the ITC has been revised by a series of legislative actions and successively suspended, repealed, and reenacted. The ITC was permanently reinstated at a maximum 7 percent rate (4 percent for utilities) by the Revenue Act of 1971. The Tax Reduction Act of 1975 temporarily increased the maximum rate to 10 percent for all businesses, including utilities, during 1975 and 1976. The Tax Reform Act of 1976 subsequently extended the 10 percent rate through 1980, and the President has proposed that it be made permanent.

At present the law provides for a credit against current tax liabilities of corporate and noncorporate businesses, equal to 10 percent of the value of qualified investments. Qualified investments are generally new depreciable assets used in production, excluding structures, with service lives of 3 years or more. The credit is applied on a sliding scale in such a way that one-third of the full credit is allowed for assets with service lives of 3 or 4 years, two-thirds for assets with service lives of 5 or 6 years, and the full credit for those assets with service lives of 7 years or more. The ITC rates thus range from 3⅓ to 10 percent, depending on the life of the asset. The credit claimed in any year cannot exceed a company's total tax liability for the year, and the maximum credit that generally may be taken is $25,000, plus 50 percent of the tax liability in excess of $25,000. Credits not usable in the current year because of this limitation may be deducted against tax liabilities 3 years back and 7 years forward on a first-in, first-out basis, that is, the oldest credits are used first. Under current law, the basis for calculating depreciation allowances on new equipment is not reduced by the amount of the credit. A provision requiring a basis adjustment was contained in the original 1962 legislation, but it was subsequently repealed by the Revenue Act of 1964.

The credit was restricted to equipment purchases because of the favorable tax treatment already accorded to structures under the rules for accelerated depreciation and for expensing of interest and taxes incurred during the construction period. It was also felt that the most rapid gains in productivity could be achieved by encouraging investment in new equipment. In addition, there was a fear that a credit on structures might become a tax loophole for real estate speculation and the purchase of private residences.

There is no general consensus about the precise impact of the ITC on investment spending. Nevertheless it does appear that past increases in the credit have led to significantly higher expenditures for new equipment. Moreover, compared with the other major investment incentives—changes in accelerated depreciation and reductions in the corporate income tax rate—the ITC apparently yields larger and more rapid increases in investment per dollar of reduced tax liability. Consequently the issue with respect to the ITC concerns not so much its overall effectiveness as the distortions it may create in choices among different types of capital assets. These distortions derive from three specific aspects of the ITC as it now operates.

First, because the amount of credit that may be taken is generally limited by the investor's total tax liability, firms with highly variable profit rates may have difficulty making full use of the ITC in any given year. It is estimated that about $1½ billion in additional tax credits would have been claimed in 1975 if this limitation had not existed, and this represents nearly 20 percent of the total amount of investment tax credit claimed in that year. The present carry-back and carry-forward provisions do permit eventual recovery of most credits. However, since profits and business tax liabilities generally fall during recessions, the credits may not be available to firms in cyclically sensitive industries at the very time when the need for additional cash flow is greatest. The same problem may affect rapidly growing firms, which have large investment needs relative to their profits and tax liabilities. Making the ITC fully refundable in the year in which assets are purchased would eliminate that constraint. This change would tend to minimize the adverse effects of the business cycle on investment and provide an additional incentive to the most dynamic sectors of the economy.

Second, the ITC discriminates against very short-lived assets as well as assets with service lives of more than 7 years. There may be some justification for denying the ITC to inventory assets because they are not used in production. Moreover, administration of the ITC for inventories tends to be complicated by the fact that they are often sold before the end of their service lives, thus necessitating recapture of credits received. There are nevertheless many other types of productive short-lived capital assets which on the grounds of efficiency should benefit from the credit. In addition, the flat 10 percent rate applied to all assets with useful lives of 7 years or more results in a progressively smaller increase in the rate of return on longer-lived capital assets (Table 35). If the credit is not to impart such a bias against long-term investments, the implied rate of return must be increased proportionately for all assets. To achieve this result, a variable rate ITC is required, with a larger credit applied to longer-lived assets. A restructuring and extension of the present sliding scale would therefore neutralize the effect of the ITC on the choice among assets with different service lives. Such a change would particularly benefit many primary processing industries which are critical to the economy's long-term growth potential and whose capital structure is heavily weighted toward long-lived assets.

TABLE 35—*Change in after-tax internal rate of return under present 10 percent investment tax credit, all businesses*

Life of asset (years)	Investment tax credit (percent)	Change in after-tax internal rate of return (percentage points)[1]
1	0.0	0.00
2	.0	.00
3	3.3	1.92
4	3.3	1.57
5	6.7	2.77
6	6.7	2.42
7	10.0	3.30
8	10.0	2.99
9	10.0	2.73
10	10.0	2.52
15	10.0	1.91
20	10.0	1.60
25	10.0	1.42
30	10.0	1.31

[1] Assumes that the net income stream from the investment is constant, that the after-tax internal rate of return before the investment tax credit equals 10 percent, and that the credit does not affect future costs or revenues.

Source: Council of Economic Advisers.

Finally, the current failure to exclude the amount of the tax credit from the depreciable base of an asset means that a write-off is allowed for an expense not incurred. This raises the effective rate of the ITC above the statutory level, the increase being larger for shorter-lived assets, thus accentuating the bias against longer-term investments. It would be preferable to make the appropriate adjustment to the depreciable tax base and change the size of the credit itself to achieve the desired rate of profitability on assets with different useful lives.

A redesign of the ITC to eliminate the distortions noted above would make it a more neutral and effective incentive for new investment and should be considered if the need arises in the future for additional fiscal stimulus for investment. Making the ITC permanent would also be desirable to remove the uncertainty about its future level and create a more stable basis for business investment planning. Frequent changes in the ITC should be avoided because they may actually have a destabilizing effect on aggregate demand. The primary effect of temporary revisions in the credit may simply be to change the timing of investment spending. For example, a 1-year increase in the credit may boost the level of investment in the short run, but then lead to a correspondingly lower level in the following year. Furthermore the ITC may have perverse effects on investment if firms begin to anticipate changes in the rate. If increases in the credit are regularly expected as the economy is headed out of recessions, the downturn may be prolonged if firms hold back on new investment until the credit is raised. For these reasons, then, the use of the ITC to stabilize aggregate demand in the short run should be kept to a minimum.

TAX INTEGRATION

Integration of the corporate and personal income taxes to eliminate the double tax on corporate income is another proposal that has been recommended as a means of improving the allocation of capital resources and raising the aggregate rate of investment. Under current law the first $25,000 of corporate income is taxed at a rate of 20 percent, the second $25,000 at 22 percent, and all income above $50,000 at 48 percent (22 percent plus a surtax of 26 percent).* In addition shareholders must pay individual income taxes on distributed profits (dividends); and retained earnings are taxed again, though at lower effective rates, when capital gains are realized from the sale of stock. Thus, while income from noncorporate businesses and wages and salaries is taxed only once, corporate income is subject to a double tax. This extra tax creates a number of distortions affecting the financial structure of corporations and the overall allocation of capital resources, which impair economic stability and reduce total output.

First, because after-tax rates of return on capital tend to be equalized by market forces, the higher rate of tax on corporate income implies that an extra dollar invested in the corporate sector must yield a higher before-tax rate of return than an extra dollar invested in the noncorporate sector. The double tax therefore discourages capital resources from flowing into higher-yielding projects in the corporate sector, the result being a net loss in output. Second, since retained earnings are generally translated into capital gains in the form of higher stock prices, and these gains are taxed at preferential rates, the tax burden on distributed profits is relatively larger than that on undistributed profits. Corporations thus have an incentive to reduce dividends and increase retained earnings. This phenomenon may produce a misallocation of capital within the corporate sector as investment is encouraged in older established firms with a high level of retained earnings and discouraged in newer firms, which usually rely more heavily on capital markets to raise funds. Moreover certain investment projects may be undertaken with internally generated funds, despite the fact that they might not be worthwhile if financed with capital from external sources. Third, the combination of high inflation and the tax-deductibility of interest payments has encouraged many corporations to raise debt-equity ratios to levels where the risk of bankruptcy may have risen substantially. Such firms are thereby made more vulnerable to business cycle developments and may experience increasing difficulty in raising funds in capital markets. Finally, the increase in the tax burden resulting from the double tax is relatively greater for lower-income stockholders.

It is also sometimes claimed that the double taxation of corporate income reduces the national rate of saving and that integration would be desirable to increase capital formation. Taken by itself, integration would lower taxes

*The Tax Reform Act of 1976 extended these brackets and rates only through the end of 1977. The President has proposed that the first two brackets and rates be made permanent, and that the surtax be permanently lowered to 24 percent. The latter change would yield a combined rate of 46 percent on corporate income over $50,000.

and raise the return to capital income, which could be expected to result in higher saving as well as consumption. However, if integration were accompanied by an increase in other taxes, leaving total revenue unchanged, the effect on saving would be ambiguous. Saving would rise only to the extent that a net increase in the rate of return remained after the offsetting tax changes (and saving responded positively to such an increase) or income was redistributed to individuals with above-average propensities to save. Since the response of saving to changes in the rate of return is uncertain in any case, and it is unlikely that the offsetting tax increases would produce a significant change in the after-tax distribution of income, it is probable that the effect of revenue-neutral integration on aggregate saving would be minimal. The major benefits of integration thus stem from the improved allocation of capital resources and the more equitable distribution of tax burdens that it would bring about—not from its presumed effects on total saving.

Full integration in its purest form would eliminate the corporate income tax entirely and allocate income to stockholders as if they were general partners in a small business. There may be certain administrative problems, however, which would make this partnership approach difficult to implement in the case of widely held corporations. Moreover, severe cash flow problems could be created for shareholders with high marginal tax rates if their tax liabilities significantly exceeded the dividends paid out.

A more modest scheme of partially integrating the personal and corporate income taxes would remove only the double tax on dividends, either by allowing corporations to deduct their dividend payments in calculating income for tax purposes, or by treating the corporate tax on dividends as withholding for the shareholders. Under either of these methods of partial integration, the bias toward reliance on retained earnings in corporate financing decsions would be reduced. The Administraton's integration proposal combines both approaches. A portion of dividends paid would be treated as a cost of doing business and therefore would be deductible from a corporation's gross income. The remaining amount of dividends would be subject to the ordinary corporate income tax, but the tax paid would be imputed to shareholders and treated as withholding in the calculation of their individual income taxes. The shareholders would then be required to raise their dividend income by the amount of tax imputed to them and withheld by the corporation, calculate their individual income tax on this adjusted basis, and credit the amount withheld against their tax liability. If there were no offsetting increase in taxes, this integration procedure could be expected to raise the after-tax incomes of both corporations and their shareholders, assuming no change in dividend payout rates.

Full integration of corporate and personal income taxes would completely eliminate the distortions in resource allocation mentioned earlier. Partial integration, affecting dividends only, would not be completely neutral because it would not change the present tax treatment of retained corporate income.

Nevertheless, if the difficulties in implementing full integration should prove insurmountable, partial integration may be a possible second-best solution. Neither plan by itself, however, should be expected to result in a noticeable change in the saving rate.

POLICIES TO STIMULATE SAVING

To help meet the economy's need for more capital, the most pressing goal of policy should be to strengthen the long-term incentives for investment. However, if the share of GNP devoted to investment is to rise over the next several years, a comparable flow of savings must also be forthcoming. Otherwise there may be a significant rise in the rate of interest, which could limit the amount of new capital formation. Although the present supply of savings is sufficient in view of the current level of economic activity, it may be necessary to stimulate more saving as we approach full employment toward the end of the decade. If this need does arise, the additional saving could come either from the public sector in the form of larger budget surpluses (or lower deficits), or from higher personal and business saving. In Chapter 1 it was noted that in order to release the resources necessary for investment it would be desirable in the longer run to move toward a macroeconomic policy mix which generates a higher level of public saving. In the private sector, consideration should be given to changing those features of our present tax system that may discourage saving. Recent discussions have suggested that the personal saving rate might be raised by restructuring the social security system or by substituting a consumption tax for the personal income tax. There may of course be other reasons for reforming both taxes, but the discussion here will focus only on the impact they may have on personal saving.

Most individuals finance their retirement with the returns from savings accumulated during their working years, intrafamily transfers, and social security benefits. Social security has become increasingly important in people's retirement planning because of liberal increases in benefits and wider coverage. The question therefore arises whether this development may have led to a decline in private saving. If it has, the national rate of saving would be correspondingly lower, since the social security system is financed on a pay-as-you-go basis; that is, benefit payments are financed by contributions from the current work force rather than through a trust fund reserve accumulated over time.

The social security system may affect personal saving in several ways, some of which tend to raise the level, while others tend to lower it. The prospect of retirement benefits financed by younger generations in effect raises the current working population's future endowment of wealth and encourages a reduction in their saving. To the extent that social security benefits are expected to yield significantly higher returns to individuals than are available in private capital markets, the incentive to save is further reduced during the working years. On the other hand, by providing retirement income, social security encourages people to shorten their working lives. Since social security retirement benefits generally become available only at the age of 62, individuals will therefore tend to save more over a shorter working life in order to lengthen the period of retirement. Furthermore, because income from assets, unlike labor income, does not reduce social security benefits, the desire to maintain a high rate of consumption after retirement may encourage more saving. Finally, to some extent social security may simply replace intergenerational transfers within familes, and hence have no net impact on national saving.

Whether the net effect of these factors influencing personal saving is positive or negative is an empirical question. Some recent econometric studies have suggested that the social security system on balance may have reduced personal saving. The evidence is inconclusive, however, about the exact magnitude of this effect, and further research is clearly necessary before a definitive answer can be reached. Nevertheless it would be useful to begin considering possible ways of altering the social security system to mitigate any adverse effects it may have on saving. Insofar as such a reform would involve more complete funding of current and future social security benefits, a large Federal budget surplus might result. Of course it would be necessary to ensure that the implicitly more restrictive fiscal policy would be consistent with the overall objectives of demand management.

An alternative proposal designed in part to encourage saving would be to replace the personal income tax with a tax on consumption. It is well known that both taxes cause a loss in efficiency by distorting individual choices between market and nonmarket activities. An income tax, however, generates an additional distortion between consumption and saving by first reducing after-tax income available for all purposes, and then lowering the interest earned on savings. An income tax therefore interferes with the choice between present and future consumption by causing a divergence between the before- and after-tax rates of return on capital investments. This distortion could be removed either by making capital income deductible under the income tax, or by replacing the latter with a tax on consumption.

A consumption tax, by deferring the tax payment until consumption occurs, is neutral with respect to the choice regarding consumption in different periods. Such a tax would therefore raise the yield from postponing consumption and remove the existing disincentive to saving. As in the case of tax integration, whether a consumption tax would in fact lead to a net increase in aggregate saving depends on the relative magnitudes of its income, substitution, and asset value effects. The available empirical evidence suggests that there is considerable uncertainty regarding both the magnitude and the direction of the effect of interest rate changes on saving. Therefore, if one purpose of a consumption tax is to stimulate saving, further examination of how changes in the rate of return affect saving-consumption decisions is clearly necessary. Nevertheless a consumption tax merits study not only as a possible mechanism to raise personal saving, but also in connection with basic tax reform as an alternative to a broader-based and simplified income tax.