

Overview

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Introduction

The role of the summarizer is always a difficult one. This paper attempts to develop an integrated perspective on the causal factors responsible for industrial deterioration and, based on an analysis of these causes, to draw out the policy implications that have emerged from the studies presented at this conference.

The underlying theme of my comments is that the problems of American industry are sufficiently variegated that they cannot be analyzed in a single dimension, but rather are accessible only to more multidimensional forms of analysis. More specifically, while this conference has focused on structural change, a recurrent point in the papers presented is the underlying tension between analyses of industrial decline that have focused on cyclical factors, and those that have emphasized longer-term structural relationships and linkages to the international economy. In my opinion, these interpretations should not be viewed as necessarily incompatible. Instead, a synthesis of these interpretations may provide a better conceptual handle on the nature of current economic problems than any individual interpretation on its own.

From this perspective, four broad categories of causal factors can be outlined. The most important has had to do with greater cyclical instability, as reflected in the greater length and depth of recessions during the past 10 years. Cyclical instability in turn owes its origins primarily to the way in which demand management policies were

conducted, and to the exogenous shocks represented by OPEC oil price increases.

Side by side with the deterioration in the domestic macroeconomic performance, American competitiveness in international markets has also been poor, with exports undergoing a series of erratic cycles since the end of the Bretton Woods period, but growing on average less rapidly than the exports of the other major industrial countries. At the same time as American firms underwent a gradual loss in share of world export markets, their share of domestic markets also declined, as substantial import penetration took place.

While the implication of the poor international performance was primarily to reinforce cyclic swings in the economy, cyclical instability has taken place coincidentally with a series of longer-term structural difficulties. There is considerable debate, as reflected in the papers at this conference, as to the distinction between cyclical and structural factors, but it is generally accepted that the declines in capital formation, productivity, R&D spending, and corporate profitability during the last decade were greater than can be accounted for solely by cyclical influences, and are in part attributable to structural factors. Paramount here are the obsolescence of the capital stock and losses in potential output associated with the OPEC shocks, increases in the user cost of capital, and a series of factors that have lowered corporate profit margins, ranging from price controls to excessive taxation.

Finally, the analysis of industrial deterioration requires some reference to problems at the industry and firm level. The contribution of wage rigidity to macroeconomic disequilibrium is now well understood. However, an additional factor has to do with poor management practices, which appear to be at least partially responsible for the problems of specific industries. In this paper, I overview these four causal areas, with particular reference to the points made in this conference, and then proceed to a discussion of policy recommendations.

The problem of cyclical instability

The role of cyclical instability is stressed by Larry Klein, who suggests that the basic parameters of economic behavior have not changed as much during the last decade as has frequently been argued, but that the performance of the economy was subject to **exog-**

enous shocks, changes in legal rules, or simply policy changes.' Following this line of analysis, cyclical instability can be linked more specifically with procyclical biases in demand management in conjunction with the destabilizing impact of the OPEC crises.

Procyclical biases in demand management. Because monetary and fiscal policies tended to be procyclical in the long term, they led to an exacerbation of the reflation-recession cycles that have characterized the last fifteen years. The early 1960s were characterized by highly successful policies that were able to achieve high growth without triggering an acceleration in inflation. However, from this point on, macroeconomic policies were noticeably poorer. During the Vietnam War, the main problem had to do with large deficits ratified by monetary accommodation, leading to excessive stimulus and rising inflation. On subsequent occasions, under Nixon in 1971-73 and Carter in 1977-79, the problem was excessive monetary reflation, which caused the inflation rate to accelerate, while the industrial boom associated with looser money proved unsustainable in the face of financial volatility.

In retrospect, monetary and fiscal policies tended to be too expansionist during periods of recovery, leading to pronounced accelerations in inflation. The rise in inflation was exacerbated by the successive OPEC shocks (and in 1974-75 by the wage-price rebound following removal of controls), leading to a situation in which inflation rates reached destabilizing levels, and compelled a more prolonged disinflationary policy response. In the long term, therefore, the output gains achieved during the reflationary booms of 1971-73 and 1975-79 were eventually offset by the greater magnitude of the output losses during the disinflationary recessions of 1974-75 and 1979-82.

There are two possible explanations for the tendency for macroeconomic policies to become increasingly procyclical. One possibility is that policy decisions have tended to lag behind the actual state of the economy. Thus, rather than attempt to cool off the economy during destabilizing booms, policymakers did not apply restraint until the inflation rate had accelerated substantially. Similarly, little countercyclical stimulus was applied during recessionary periods until after protracted declines in economic activity. A second possibility is that macroeconomic policy decisions have become excessively influ-

1. Lawrence Klein, "Identifying the Effects of Structural Change," this volume.

enced by short-term political pressures, causing recoveries to be pushed too far through excessive stimulus and recessions needlessly prolonged through excessive restraint.

The worsening of the tradeoff. Klein also notes a gradual outward shift in the Phillips curve during the 1970s, and in this respect, one of the outcomes associated with the successive reflation-disinflation cycles of the late 1970s was a gradual worsening of the short-run inflation-unemployment tradeoff. As the underlying inflation rate gradually rose, each cycle of monetary stimulus tended to raise inflation by comparison with its level during the preceding business cycle. At the same time, as a result of the maturation of the generation born in the early 1950s and the unprecedented entry of women into the job market, the labor force grew very rapidly during the 1970s, increasing by over 20 million workers during the course of the decade. The result was that high employment could be achieved only at the expense of accelerating inflation. The political need to reduce inflation, impelled in part by public demands for greater price stability, led to more protracted monetary disinflation than would have been necessary if initial inflation rates had been lower.

The mismatch of monetary and fiscal policy. The period of acute decline beginning in late 1979 is attributable in part also to the fact that monetary and fiscal policy have been fundamentally mismatched. Monetary policies were almost continuously restrictive from October 1979 until the initial loosening in July 1982. However, monetary restriction was not accompanied by a corresponding tightening of fiscal policy. Instead, fiscal policies have been excessively expansionist, resulting in severe congestion in credit markets and raised interest rates to levels not witnessed in over a century.

Thus, in the final analysis, the lower average growth rate experienced during the past decade traces back in part to cyclical volatility and therefore to errors in the conduct of macroeconomic policy. However, side by side with their impact on the domestic business cycle, macroeconomic policy changes have also been associated with substantial fluctuations in exchange rates and for this reason have also contributed to a deterioration in the international competitiveness of American industry.

Industrial performance in international trade

Another theme touched on at this conference has been the contribution of international trade to economic performance. The competi-

tiveness of American industry is analyzed extensively by Robert Lawrence.² He finds that while export competitiveness improved on average from the end of the Bretton Woods system up to 1980, a more adverse development was that the export volume in the U.S. did not increase as rapidly as that of other major industrial countries during this period. His analysis also indicates that the loss in American export competitiveness is a comparatively recent development, having to do primarily with exchange rate misalignment. However, in addition to the current overvaluation of the dollar, there is ample evidence that the United States would have benefited from a more systematic export promotion policy, comparable to what has been instituted in the other industrial countries.

The exchange rate. The role of the exchange rate in accounting for the recent deterioration in export performance is now well understood. Under Bretton Woods, the dollar was overvalued from the late 1950s onward. This tended to retard the growth of American exports and led domestic manufacturing industries to concentrate primarily on the domestic market. The increasing multinationalization of American industry was also impelled in part by the overvaluation of the dollar. With exchange rates favoring imports, American companies established operations overseas and used foreign countries as "export platforms" in order to produce goods destined for the domestic market. The Bretton Woods system also encouraged import penetration of the American market by foreign corporations. Because of the undervaluation of the exchange rates of Japan and the western European countries, they were able to exploit increases in aggregate demand in the United States by shifting production to the American market. With the breakdown of the Bretton Woods system during the early 1970s, the dollar underwent two phases of depreciation in 1973 and 1978-80, which were associated with substantial increases in the export volume. Nevertheless, the export booms were eventually cut short by decreases in global demand and increases in the exchange rate. Most recently, the overvaluation of the dollar traces back primarily to differential between interest rates in the U.S. and the other industrial countries, which led to increased purchases of dollar-denominated assets in international financial markets.

2. Robert Lawrence, "Changes in U.S. Industrial Structure: The Role of Global Forces, Secular Trends and Transitory Cycles," this volume.

Differences in export promotion policies. David Richardson's paper noted that the practice of trade policy among the industrial countries during the last few years has become increasingly divorced from the formal policy framework as established by multilateral agreements, although the United States has actually been less culpable in this respect than other nations.³ The policy instruments through which exports have been promoted include

- 1) Tax credits or exemptions for exporters,
- 2) Credit allocation to export industries through semi-public financial consortiums or regulatory controls over capital flows,
- 3) Selective pricing by nationalized corporations, both in international markets and in domestic industries that provide inputs to exporters,
- 4) Fiscal subsidies by governments,
- 5) Provision of special credit terms to foreign countries purchasing exported goods.

Private companies in the United States have not enjoyed the same advantages. The major public policies available for export promotion in the United States have been tax advantages through DISC (Domestic International Sales Corporations) and easier credit terms through the Export-Import Bank. These have been neither as extensive as the corresponding advantages made available to exporters by governments in other countries, nor as systematic.

Long-term structural problems

The role of long-term structural factors in accounting for industrial decline is considerably more controversial than that of cycles. The argument that there has been a secular or structural decline in the American industrial performance is difficult to reconcile with the cyclical behavior of the economy during the major business cycle upswings of the 1970s, and in this respect the entire structuralist case is sharply criticized by Lawrence. Although it has frequently been argued that in the aftermath of the first OPEC crisis, the growth rate of American industry underwent a process of secular decline, in fact, as Lawrence's research reveals, this is not the case: during the recovery of 1975-79, industrial growth was as rapid as during the boom of the early 1960s, and was actually somewhat more rapid than during

3. S. David Richardson, "International Trade Policies in a World of Industrial Change," this volume.

the Vietnam War era. Relative to trend, U.S. industrial output and real GNP growth did not fall during the recovery of the late 1970s. The prognosis of a secular decline in industrial output during the late 1970s is therefore thrown into some question.

The strength of the American industrial performance during the late 1970s is particularly apparent when compared with the experience of western Europe and Japan during the same period. The recovery of 1975-79 in western Europe, even in countries that achieved high growth rates such as Canada, Austria, Germany, and Italy, was noticeably erratic, witnessing a sharp slowdown in 1976 — with the result that growth rates were lower relative to trend than their average of previous postwar business cycles. Similarly, in countries that experienced poorer economic performances, such as France, the U.K., and Sweden, growth rates fell to approximately one-half their trend of prior recoveries. Interestingly enough, the same phenomenon was also visible in Japan, where growth rates during the late 1970s were only about half their level of the 1960s. Hence, relative to trend, the U.S. actually registered one of the best economic performances of the industrial countries during the second half of the 1970s. The situation was, of course, somewhat less sanguine than the aggregate growth record would imply, inasmuch as the recovery of 1975-79 in the U.S. was achieved only through consistent reflation. The result was that while the greater buoyancy of domestic demand and the increase in export competitiveness implied by the depreciating dollar kept the American economy expanding for a period of nearly five years, the ancillary result was a sharp increase in the underlying inflation rate.

The structuralist case is also criticized by Barry Bosworth, who offers a highly iconoclastic approach to the current debate on productivity and capital formation.⁴ The basic thrust of Bosworth's critique is that the link between capital formation and the productivity decline is weaker than has commonly been thought. Although there are indications of a secular decline in productivity growth over the business cycle, this is not paralleled by a corresponding decline in capital formation.

The relationship between declining capital formation and productivity has been the object of considerable debate. Studies by Siegel

4. Barry Bosworth, "Capital Formation, Technology, and Economic Policy," this volume.

(1979) and Eckstein and Tannenwald (1981) analyze the productivity decline using a peak-to-peak methodology during the business cycles of the 1970s, comparing this period with the previous 15 years. Their conclusion is that the decline in the capital-labor ratio over the business cycle accounts for slightly less than one percentage point of the decline in productivity relative to **trend**.⁵ Since the methodology used involves comparing productivity growth rates on a peak-to-peak basis, however, the **Siegel** and Eckstein-Tannenwald studies should not be viewed as incommensurate with the interpretation that the decline in capital formation during the 1970s was largely accounted for by the first OPEC energy price increase in 1973-74 and the resulting global recession in 1974-75. This latter interpretation is generalized to the industrial countries as a whole by **Bruno**.⁶ Tests for the industrial countries and relatively more industrialized LDC's confirm that a major component of the productivity decline during the 1970s is explained by the combined effect of higher relative energy prices and the ensuing contraction in real economic activity.

From this perspective, the link between the capital-labor ratio and productivity growth on a cyclical rather than secular basis is largely noncontroversial. The deterioration in productivity growth and capital formation during the period 1973-75 is attributable to much the same causes, and was fundamentally global in nature. Where **Bosworth's** argument is more telling, however, lies with the asymmetrical relationship between capital formation and the productivity slowdown during the late 1970s. Following the 1974-75 recession, real business fixed investment underwent a sharp recovery. During the period of rapid expansion from 1975 to late 1979, real growth in investment actually surpassed its peak rates of the 1960s, and capital formation rose substantially as a share of GNP. Not until the second OPEC shock in 1979-80 and the renewed onset of recession did the investment boom slow down. The strength of the recovery in capital formation contrasts markedly with the behavior of productivity growth during the recovery of 1975-79. Following a severe decline in 1974 productivity growth recovered to its normal postwar trend by 1976, but thereafter slowed considerably over the next three years,

5. Robin Siegel, "Why Has Productivity Slowed Down?" in *Data Resources Review of the U.S. Economy*, March 1979, and Otto Eckstein and Robert Tannenwald, "Productivity and Capital Formation," in *Data Resources Review of the U.S. Economy*, February 1981.

6. Michael Bruno, "World Shocks, Macroeconomic Response, and the Productivity Puzzle," National Bureau of Economic Research working paper #942, 1982.

despite the fact that the economy continued to experience rapid growth in 1977-78. The cyclically adjusted deterioration in productivity growth therefore cannot be explained as a function of cyclical decreases in investment, and instead emerges as a result of structural factors.

In essence, therefore, when one looks at productivity growth and potential output rather than aggregate industrial growth, a more compelling case can be made in favor of a role for structural factors as causes of industrial decline. Here several causes have been at work, ranging from the ancillary effects of the energy shocks to increases in the user cost of capital and other factors which have reduced the capacity to invest.

Changes in relative energy prices. The OPEC shocks were associated with both a decrease in potential output due to the reduction in direct energy inputs, and a decrease in actual industrial output due to the transfer of income to the OPEC countries. These in turn had a series of additional indirect implications for the economy. First, because of the higher complementarity between capital and energy inputs to production, the OPEC shocks were associated with a decrease in capital formation. Since increases in relative energy prices imply a **corresponding** increase in the cost of capital, capital inputs to production also declined. Secondly, because of the drop in demand associated with the transfer of purchasing power to OPEC, real output was further reduced, beyond the reductions implied by the decline in energy inputs.

Capital formation. Although the growth of business fixed investment has tended to correlate with the business cycle, the decline in investment in 1974-75 and 1980-82 appears to be somewhat greater than would be implied by cyclical underutilization of capacity. Hence, the magnitude of the declines on both occasions has reflected the impact of additional causes.

Apart from cyclical underutilization of capacity, the causes of the decline in capital formation have had to do primarily with the energy price shocks and increases in the user cost of capital. Because of the relationship between factor inputs of energy and capital noted above, the successive OPEC price shocks in 1973-74 and 1979 reduced capital formation directly. The OPEC shocks also account for the deterioration in the net investment ratio. Higher relative energy prices made much of the existing capital stock obsolete, since the equipment in place at the time ran on cheap energy. Thus the sharp increase in

investment in 1976-78 can be interpreted more in terms of conversion to energy-efficient plant and equipment than expansion of net new investment.

A major additional factor has been the increase in the user cost of capital — the rate at which corporations obtain funds for investment — since the late 1970s. Since the late 1960s, the user cost has been unusually high, with the result that even before the dramatic increase in interest rates in 1979, corporations faced a severe aggravation of the costs they incurred in obtaining capital. An additional factor here was the decrease in the real rate of return on corporate equity during the late 1970s, which lowered corporate equity values and retarded capitalization. Since 1979, with interest rates at their highest levels in over a century, the increase in the user cost of capital has been a major factor in accounting for the decline in investment.

The financial deterioration of industry. There has been a serious decline in both corporate profits and business liquidity, which although particularly acute during the major recessionary periods, has also resulted in part from non-cyclical developments.

Several factors contributed to the longer term process of financial deterioration. Wage-price controls and guidelines tended to depress prices in relation to labor costs, with the result that when controls were in force, particularly in 1971-74, the deflection of the price trajectory below its free market path was achieved primarily through constriction of profit margins.⁷ Another factor had to do with the exaggeration of corporate tax liabilities by inflation; here two mechanisms were involved, overstatement of inventory profits and understatement of depreciation costs under the old ADR system.

Side by side with the decline in profitability there has been a corresponding decline in liquidity, due primarily to heavy dependence on short-term debt as a means of meeting capital requirements in a high interest rate environment. The dependence on short-term debt reflects two factors, an obvious reluctance on the part of business to incur long-term debt at exceedingly high interest rates, and a corresponding reluctance on the part of banks to undertake long-term lending when uncertainty about interest rates means that longer run com-

7. For analyses of the impact of the Nixon administration's wage price controls on prices and wages respectively, see in particular Robert J. Gordon, "Wage-Price Controls and the Shifting Phillips Curve," in *Brookings Papers on Economic Activity*, No. 2, 1972, and Robert J. Gordon, "The Response of Wages and Prices to the First Two Years of Controls," in *Brookings Papers on Economic Activity*, No. 3, 1973.

mitments may not guarantee optimal rates of return on loans. However, it is the pervasive dependence on short-term debt that is primarily responsible for the rise in the debt service ratio. At the same time, there has been a serious rise in the debt-equity **ratio**, an important measure of the financial structure of corporations. The rise in interest rates during the late 1970s caused the rate of return on bonds and Treasury bills to exceed the real rate of return on corporate equity, prompting investors to switch their asset **portfolios** from corporate stock to bonds. This in turn forced business to rely more heavily on borrowing than on new stock issuances in order to obtain working capital, leading to a deterioration in the debt-equity ratio. The significance of the increase in the ratio of debt to equity was primarily to heighten the vulnerability of the business sector to the increase in interest rates since late 1979. The contraction in corporate cash flow was considerably more acute than it would have been with a more favorable debt-equity structure, since an increasing share of profits was tied up in debt service.

Research and development. There is also evidence of a sharp decline in **R&D** spending from roughly 1969 up to 1975, which in contrast to capital formation and productivity is largely uncorrelated with the business cycle. In accounting for the falling off of **R&D** spending during the early 1970s, one factor was the de-escalation of the Vietnam War, which led to a direct decline in military **R&D**. Thereafter, the gradual shift in the composition of federal spending from defense to transfer payments during the mid-1970s was associated with a further slackening off of **R&D** expenditures relative to trend. However, a substantial component of the **R&D** slowdown was in industrial rather than federally sponsored research, and probably is attributable to the deterioration in profitability during the mid-1970s. The fact that the recovery in **R&D** outlays has been sustained since 1979 is, however, quite remarkable in view of the decline in real profits during this period. Despite falling profits and severe illiquidity, the private sector has been able to increase its real allocations for **R&D**, in part because of the **R&D** tax incentives enacted under ERTA, including a moratorium on Section 1.861-8 of the Treasury Regulations, and an incremental **R&D** tax credit. The result of these new incentives is that **R&D** spending has held up quite well during the recent recessionary period.

In sum, there is considerable evidence that structural factors have coexisted along with the cyclical causes of industrial deterioration,

and in this respect there are a series of linkages between these two causal areas. First, the aggravation of cyclical downturns and longer run structural problems are to some degree attributable to the same causes. The OPEC shocks in particular were responsible for both the emergence of the two recessionary periods of the past decade and for the decline in capital formation and the deterioration in cyclically adjusted productivity growth. Monetary restriction not only produced the short-term contractions in demand that led to the recessions, but also increased the cost of capital. Second, the magnitude of the cyclical downturns of the 1970s themselves has been such that the resulting decline in factor inputs has lowered the level of potential output.

Microeconomic factors

Although microeconomic factors are difficult to analyze through accepted econometric techniques, it may be useful to draw attention to certain micro-institutional factors at the corporate level which have contributed to the process of industrial deterioration.

The long period in which the United States functioned as a semi-autarkic industrial power and in which external trade comprised a minimal share of GNP made it more difficult for corporations to adjust to the opening up of the economy to international markets and competitive pressures during the 1970s than was the case in countries which have historically had open economies. The result was that investment strategies failed to take sufficient account of foreign competition, and American firms were not particularly aggressive in attempting to penetrate external markets. At the same time, the long period of price stability from the end of the Korean War up to the Vietnam War escalation of the late 1960s made it difficult for corporations to adjust to the new, volatile price environment. The distortion of market signals by inflation was associated with a greater prevalence of defensive investment strategies on the part of corporations, in which the length of corporate plans was reduced and risky long-run investment plans were avoided.

The historically semi-autarkic nature of American industry and the more inflationary environment beginning during the late 1960s led to inadequate attention to productivity and efficiency at the single-firm level. The decreased attention to single-firm productivity reflected a lack of awareness that declining competitiveness would be followed inexorably by penetration of domestic markets by foreign suppliers that could produce more efficiently and could increase their **produc-**

tivity more rapidly. It also reflected the supposition that low rates of productivity growth could be allowed since an accommodative monetary policy would allow the resulting increases in unit labor costs to be passed along to consumers. The difficulties involved in adapting to the more internationally integrated and higher-inflation environment of the 1970s, both at the single-firm and the public policy level can both to some degree be traced to the emergence of institutional inertia at the corporate level. As some corporations became progressively more institutionalized, their responsiveness to changes in the external environment was correspondingly diminished. Frequently, their response is less one of adaptation than of perpetuation of existing institutional rigidities.¹

A microeconomic factor on which there is greater consensus is the problem of wage rigidity, as dealt with by Wachter and Wascher, and other recent econometric literature.⁹ Because of the dependence of current wage settlements on lagged inflation through the process of cost of living adjustments, the result has been to introduce a strong element of inertia into the process of labor market equilibration. As inflation rates have accelerated under the impact of increasing demand, wages have risen in response to prior price movements in an effort to maintain purchasing power, with the result that only through exceedingly deep recessions have wages been able to be brought down to a less inflationary path. Furthermore, during disinflationary periods, wage rigidity meant that business confronted an unfavorable escalation of unit labor costs; this was exacerbated by the slowdown in productivity growth. However, business was not always able to pass these costs through to consumers, particularly during periods in which aggregate demand declined. Consequently, the costs of disinflation have been borne disproportionately by corporate profits, lost output and reduced employment rather than through wage restraint.

8. See in particular the following for analyses of management practices: William J. Abernathy, Kim B. Clark, and Alan Kantrow, *Industrial Renaissance*, New York, Basic Books, 1983. Thomas J. Peters and Robert H. Waterman, *In Search of Excellence*, New York, Harper & Row, 1982.

9. Michael Wachter and William Wascher, "Labor Market Policies in Response to Structural Changes in Labor Demand," this volume. For a more generalized analysis of the impact of wage rigidity and other factors on macroeconomic adjustment, see Arthur Okun, *Prices and Quantities: A Macroeconomic Analysis*, Washington, D.C., Brookings Institution, 1981.

A review of policy recommendations

A further theme covered at this conference is that of macroeconomic policy solutions. I will confine my comments to two substantive areas, tax policy as it relates to capital formation, and industrial policy, before moving on to a discussion of my own recommendations.

Tax policy and capital formation. Among the policy recommendations put forward in Robert Hall's paper, probably the most significant proposal has to do with shifting the base of taxation to **consumption** rather than income.¹⁰ The premise for consumption-based taxation rests primarily on evidence that the savings rate in the United States has consistently been below that in the other industrial countries. The argument that shifting to a consumption-based tax system in order to favor greater capital formation is, however, criticized by Bosworth, who points out that both over time and across national boundaries the relationship between personal savings and capital formation is also weaker than is commonly held to be the case. To put Bosworth's argument in some perspective, it should be noted that the relationship between personal saving and capital investment should in any event not be viewed as strictly causal: at best, savings provide a pool of liquidity from which investment can be financed. Thus it is possible to develop hypothetical scenarios in which increases in savings have no demonstrable effect or even a negative effect on investment; for instance, if an increase in personal saving is associated with lower capacity, the negative impact of the resulting slack in the economy on capital investment may easily outweigh the effects of higher liquidity.

Nevertheless, Bosworth's critique is subject to the qualification that during the next few years, the major factors working against capital formation may not be underutilization of capacity, but rather high interest rates and lack of access to funds due to preemption in credit markets by federal borrowing. The argument can therefore be made that under the present economic circumstances, the liquidity effect of higher savings would in fact be associated with an increase in capital formation, inasmuch as it would directly reduce the user cost of capital and raise the supply of loanable funds.

10. Robert Hall, "Macroeconomic Policy Under Structural Change," this volume.

In evaluating the merits of consumption-based taxation, it should be borne in mind that most of the other industrial countries do not have pure consumption-based tax systems, but rather incorporate some mix of consumption and income taxes. Thus while there is substantial empirical evidence suggesting that mixed tax systems may be more effective in certain respects than tax systems based predominantly on income, there is as yet insufficient evidence as to the economic effects of a consumption-based system to justify a wholesale reorganization of the tax code. A further argument against a full-scale shift to consumption-based taxes is that the importance of a higher savings rate may have been overstated by consumption tax advocates. Decisionmakers may wish to consider whether or not they wish to make tax reform dependent on a single economic indicator such as the savings rate. Under the circumstances, it might be preferable to rely on a mixed tax system based partially on consumption and partially on savings, as is actually the case throughout most of the industrial countries.

Furthermore, it is not clear what constitutes the optimal savings rate over the business cycle, and in this respect, a tax system designed to raise savings by taxing consumption could under certain circumstances elevate the savings rate to an excessive level. Particularly in an economy such as ours, where growth rates are critically dependent on consumer demand, it is conceivable that once savings surpassed a given rate, the result would merely be greater economic slack. In this respect, while advocates of consumption based taxation have normally pointed to Western Europe and Japan to illustrate the alleged advantages of higher savings rates, they have typically failed to take adequate cognizance of the fact that in these countries the business cycle is generally export-led rather than led by domestic consumption. In an export-led business cycle, a high savings rate does not necessarily imply shortfalls in aggregate demand since a substantial component of the growth of demand is exogenous, and consumer spending typically increases fairly late in the business cycle as a result of higher employment in the export industries. This, however, is not the case in countries that have historically been semi-autarkic, such as the United States. Here tax measures encouraging savings could hold demand at levels incommensurate with full utilization of resources.

Apart from consumption taxes, other options for stimulating capital formation through the tax system include retention or expansion of

the existing depreciation reforms enacted under ERTA. The ability of tax reform to stimulate capital formation has also been criticized by Bosworth; nevertheless, I do not share in his skepticism. Bosworth's critique of the link between tax rates and capital spending focuses on the fact that marginal tax rates on capital across national boundaries do not correlate closely with indicators such as the ratio of gross fixed investment to GNP. Thus the U.K., traditionally a low-capital-formation country, has extremely generous depreciation laws, while depreciation provisions in high-capital-formation countries such as West Germany, France, Italy, and Japan have actually been inferior to those in any number of countries with lower levels of investment.

This finding should not be misinterpreted to mean that tax policy is impotent as a determinant of capital formation, but that it may be secondary to other factors. Looking at the countries Bosworth mentions, it seems logical to conclude that depreciation tax cuts were unsuccessful in the U.K. because of distinctive aspects of that country's experience, while other countries were successful in achieving higher levels of investment despite less liberal depreciation laws because of economic conditions on the whole were more conducive to capital formation. In the U.K., the long-run overvaluation of the pound under Bretton Woods was associated with lack of export competitiveness and slower growth than in the rest of Western Europe. Subsequently, the inflationary explosion of 1973-75 left the U.K. with a substantially higher inflation rate than the other major industrial countries, and impelled successive governments to pursue restrictive monetary policies that insured an exceedingly slow real growth rate. Conversely, of the high-capital-formation countries, Japan and West Germany are distinctive in having experienced consistent undervaluation, high rates of capacity utilization, and for the most part relatively low inflation rates (except for 1973-74 in Japan), which enabled them to pursue more accommodative monetary policies during the late 1970s. The result was that higher growth rates and greater financial stability enabled these countries to maintain higher rates of capital formation.

In essence, the conclusion that should be drawn from cross-national historical experience is that in an environment conducive to increased capital formation, tax cuts may substantially augment the investment process, while in the event that the economic environment works against capital investment, the best that can be expected from tax cuts to favor capital formation is that they may exert some

mitigating impact.

Industrial policy. The concept of industrial policy, normally defined as government intervention in support of specific industrial sectors, was extensively criticized at this conference. Paul **Krugman's** paper in particular makes two entirely valid critiques of the current industrial policy literature." On the one hand, it points out that much of the literature has eschewed any kind of scholarly or technically advanced economic analysis, preferring to rely instead on an anecdotal approach more accessible to a popular audience. The result is that the criteria alleged in support of industrial policy options are at best haphazard and at worst largely spurious. In my view, a similar problem is that the advocates of industrial policy have put forward their recommendations on the basis of an inadequate and incomplete analysis of the actual causes of industrial decline. Given the analysis of the causes of decline that I have outlined here, it is readily apparent that industrial policy cannot contribute to the stabilization of the business cycle; rather, what is needed here is to develop a set of fiscal and monetary policies commensurate with a stable long-term growth path for the economy. Similarly, **sectoral** targeting cannot assist in the resolution of economy-wide structural problems, while microeconomic problems such as poor management and wage rigidity are more appropriately the domain of the private sector than the federal government. The one area in which greater governmental support for private industry is export promotion, and this should more realistically involve removal of the existing legislative barriers to export promotion and the restoration of a more realistic exchange rate.

Krugman's case studies of specific examples of industrial policy also present substantial countervailing evidence to the viewpoint of industrial policy advocates that such policies have generally been successful, and call into question some of the commonly held tenets associated with this school of thought. In short, to use a legalistic phrase, reasonable doubt has been demonstrated about the efficacy of industrial policy solutions.

Extending the critique of industrial policy further, an additional problem with such options has to do with the possible political ramifications. First, the process of governmental support for the private sector could easily be associated not with greater rationalization and competitiveness, but rather with exactly the opposite process, the

11. Paul Krugman, "Targeted Industrial Policies: Theory and Evidence," this volume.

perpetuation of the existing institutional rigidities which have worked against efficiency. If unprofitable corporations were targeted for governmental support, the incentive for regaining profitability would be lost; in countries such as the U.K., France, and Italy, which have carried out extensive nationalizations, there are repeated instances of nationalized corporations that have proven less efficient under government control than when they were privately held. Furthermore, once a precedent had been established for governmental support, this could easily lead to demand for further support from other industries. The implementation of an industrial policy would therefore be associated with additional pressure on fiscal policy at a time when a major priority of public policy is to enforce greater fiscal restriction. Finally, the decisionmaking process whereby industries are selected for government support could easily come to be dominated by lobbying from special interest groups and would therefore depend more on political patronage than on economic rationality.

Toward better economic policies

While the constraint of space does not permit a comprehensive overview of possible public policy alternatives, there is clearly a need to develop a coordinated economic strategy that will address the actual causes of industrial deterioration. The elements should include demand management policies commensurate with a stable growth path for the economy, along with greater promotion of exports and policies aimed at increasing the long-term factor inputs to production. While I have identified a further cause of industrial deterioration as microeconomic in origin, I do not outline any public policy solutions here; rather, the resolution of microeconomic problems is fundamentally the responsibility of the private sector, and is not an appropriate domain for public policy.

Better demand management policies. In the fiscal area, the key problem for the next few years will be elimination of the structural deficits. At their current levels, deficits will average in the range of 5-6 percent of GNP over the upcoming business cycle. Deficits of this magnitude are not commensurate with macroeconomic stability. As the basis for a better fiscal policy, Congress should bring the full-employment budget into surplus, while the actual budget could gradually be brought into equilibrium as the economy converges to a level of unemployment consistent with fuller utilization of resources. In the long term, revenues and expenditures should be held in approxi-

mate equilibrium over the business cycle; surpluses accumulated during booms can be used during recessions to offset deficits.

In the area of monetary policy, the principle of quantitative targets for monetary aggregates is useful and should be retained. However, such targets should be applied flexibly and in conjunction with targets for other indicators, rather than rigidly. In this respect, the Federal Reserve should consider formally adopting a multiple target system in which annual targets would be used for monetary aggregates and nominal GNP, but in which interest rates and exchange rates would be stabilized in the short term. The central banks of the other major industrial countries have successfully used multiple target systems.¹²

One recommendation aired at this conference, in Hall's paper, would be for the Federal Reserve to target expected future inflation, as well as current economic indicators. However, there is a series of problems with such a strategy, most importantly the fact that the existing econometric research on inflation expectations demonstrates a highly significant relationship between expectations and current actual inflation rates.¹³ For this reason, stabilizing expectations appear to require more than a credible anti-inflationary monetary policy. Rather, it requires stabilization of actual inflation, and in this respect, there may be little difference between a policy rule aimed at controlling expectations and one aimed at controlling the price level.

Policies to promote international competitiveness. A systematic policy aiming at export promotion would require a broad range of policies, including both a shift in the fiscal-monetary policy mix aimed at restoring a more realistic dollar exchange rate, and other policies to enhance export competitiveness. The Ex-Im Bank should be given the necessary budget authority to provide competitive financing for exports, and new financial instruments should be developed to support commercially competitive medium-term export credit. DISC's (Domestic International Sales Corporations) should be maintained until Congress passes legislation providing equivalent or improved benefits for U.S. exports. The Foreign Corrupt Practices

12. See in this respect two studies by the Organization for Economic Cooperation and Development on central bank operation procedures in the major industrial countries, *The Role of Monetary Policy in Demand Management*, Paris, OECD, 1976, and *Monetary Targets and Inflation Control*, Paris, OECD, 1979.

13. See in particular Don Mullineaux, "Inflation Expectations and Money Growth in the United States," in *American Economic Review*, Vol. 70, March 1980.

and Export Administration Acts should be amended to clarify existing ambiguities. In this respect, although I have consistently criticized the interventionist schemes associated with industrial policy, it must be acknowledged that in the areas such as international trade, where the functioning of free markets has been systematically impeded by foreign governments, greater governmental support for American exports would be desirable.

Policies to promote long-term growth. In the normal specification of the aggregate production function for the economy, potential output is modelled as a combination of technological change plus factor inputs of capital, labor, and energy. From this perspective, it is clear that a general industrial strategy commensurate with high long or medium-term growth must address the factor inputs that go into the determination of potential output.

In the area of capital formation, the ERTA depreciation reform should be retained in its current form, or possibly improved either through repeal of the TEFRA modifications or eventual transition to immediate first-year expensing of capital expenditures. A more restrictive fiscal policy achieved through reductions in federal spending, applied in conjunction with a stable monetary policy, will be associated with a reduction in interest rates, and will therefore reduce the user cost of capital. In the area of energy, the recent decline in OPEC prices will contribute positively to increased energy utilization, and thus has exerted a stimulative effect on economic activity. At the same time, the removal of remaining price controls will facilitate greater market equilibration in the energy sector.

In the area of **R&D**, two major actions were taken under ERTA that have stimulated greater spending on research. These were the incremental **R&D** tax credit and repeal of Section 1.861 of the Treasury Regulations, which forced companies to apportion their research activities among their foreign subsidiaries. Further measures can be taken to increased **R&D** spending, such as exempting joint research ventures from federal anti-trust legislation, restoration of patent terms, and in cooperative efforts between the public and private sector to share research and improve technical training.

In this paper I have outlined what constitute in my view the most important components of industrial decline, as reflected in the presentations made at this conference, and provided some preliminary indications as to how a broad industrial strategy dealing with these causes could be developed. An industrial strategy which addresses

these diverse needs could go a long way toward the restoration of stable long-term growth.