Volume Title: American Economic Policy in the 1980s

Volume Author/Editor: Martin Feldstein, ed.

Volume Publisher: University of Chicago Press

Volume ISBN: 0-226-24093-2

Volume URL: http://www.nber.org/books/feld94-1

Conference Date: October 17-20, 1990

Publication Date: January 1994

Chapter Title: American Economic Policy in the 1980s: A Personal View

Chapter Author: Martin S. Feldstein

Chapter URL: http://www.nber.org/chapters/c7752

Chapter pages in book: (p. 1 - 80)

1 American Economic Policy in the 1980s: A Personal View

Martin Feldstein

The decade of the 1980s was a time of fundamental changes in American economic policy. These changes were influenced by the economic conditions that prevailed as the decade began, by the style and political philosophy of President Ronald Reagan, and by the new intellectual climate among economists and policy officials. The unusually high rate of inflation in the late 1970s and the rapid increase of personal taxes and government spending in the 1960s and 1970s had caused widespread public discontent. Ronald Reagan's election in 1980 reflected this political mood and provided a president who was committed to achieving low inflation, to lowering tax rates, and to shrinking the role of government in the economy.

In our democracy, major changes in government policy generally do not occur without corresponding changes in the thinking of politicians, journalists, other opinion leaders, and the public at large. In the field of economic policy, those changes in thinking often reflect prior intellectual developments within the economics profession itself.

That was clearly true of the broad shape of economic policy in the 1980s. While there is certainly never unanimity among economists, by the late 1970s the combination of Keynesian macroeconomics and interventionist microeconomics that had been widely accepted in the postwar decades was clearly in retreat. In its place, the traditional market-oriented ideas that had previously characterized economics since the time of Adam Smith were having a greater influence on both research and policy conclusions.

Economists recognized that it was through improved incentives rather than through increased demand that a sustained increase in national income could be achieved. Research studies emphasized the adverse effects on incentives of high marginal tax rates and of the rules governing transfer programs like unemployment insurance and Social Security that penalized work and saving. An increasing number of economists recognized the complex adverse effects of inflation and the fact that the fundamental cause of inflation is excess demand rather than the monopolistic power of unions and businesses. New ideas on antitrust and on regulation replaced older thinking about the proper relation between the government and private businesses.[1]

I was privileged to have a front row seat on policy developments as chairman of the Council of Economic Advisers (CEA) from 1982 through 1984. In this chapter, I comment on those aspects of policy with which I was most closely involved during those years: monetary and exchange rate policy; tax policy; and budget issues. Of course, my interest in these subjects preceded my days in Washington and continued after I had returned to Harvard and the NBER. I have therefore commented on some aspects of the evolution of policy throughout the decade of the 1980s while generally giving much more detailed attention to the events during my time at the CEA.

This chapter is not intended as a detailed history of economic policy during the 1980s because that has been ably provided by the authors of the background papers in this book. Nor is it a collection of personal anecdotes aimed at capturing the spirit of the Reagan administration or the character of my administration colleagues. Rather it is an extensive essay that analyzes some of the reasons for the policy changes that occurred and that offers my judgments about some of those changes.[2]

I have not tried to summarize or comment on the other chapters of this book. I have also avoided references to the literature on economics and economic policy during those years. I do provide some bibliographic references to my own papers, particularly nontechnical ones, in order to incorporate their content into this chapter. It would, of course, be best to read the present introductory chapter in combination with both the academic background papers and the personal statements of the other contributors to this book.

Although I have avoided any discussion of personalities in these pages, I think it would be negligent of me to write so much about economic policy in the 1980s without saying something about my perception of President Reagan's personal views on economics and the role that he played in shaping economic policy during those years. I saw the president in small groups at least once a week over a two-year period and talked with him about every aspect of economic policy. I believe that he shaped economic policy significantly through his style of leadership and his consistent and well-communicated vision of what constituted good economic policy. In the sections that follow, I will comment more specifically on his attitudes about monetary policy and inflation, about taxes, about the budget deficit, and about particular major areas of government spending. Here I will make just some very general observations.

I never had any doubt during those years about the sincerity of Ronald

1. For more extensive discussion of these ideas, see Feldstein (1981c, 1982a, 1986c, 1988c).

2. For a discussion of the organization of policy-making during my time in Washington and the role of the Council of Economic Advisers in particular, see Feldstein (1989c, 1992b).

Reagan's basic goals for economic policy: smaller government, lower tax rates, and less inflation. He favored smaller government and less spending on domestic programs not only because he disliked the taxes needed to pay for large government programs but also because he believed that much of the money paid by the government went to those who were reasonably well off. He was clearly moved by poverty and individual hardship and wanted to avoid policy changes that would hurt such people. His concern in the area of taxation was high individual marginal tax rates; although he thought that the corporation tax was irrational and "should be abolished," it was not something that he understood or cared about in the way that he did about personal tax rates.

President Reagan delegated to the White House staff and the cabinet departments the responsibility for the specific designs of most domestic policies. He was most actively involved in shaping the details of those aspects of domestic policy that he had previously dealt with as governor of California, including issues like unemployment and welfare.[3]

I believe that Ronald Reagan was correctly described as a "great communicator," not just because he read prepared speeches very well, but because of his skill in less structured situations like press conferences and small meetings. He had the ability to convey a clear sense of policy direction without limiting his future flexibility. In that way, he was able to achieve more through negotiation and to make sacrifices on specific issues without changing the public's support for his overall program.

Although this chapter and the book as a whole focus on the experience of the United States, the shift of economic policy in the 1980s was part of a worldwide movement toward greater reliance on markets that included countries as different as England, Spain, Mexico, China, and the Soviet Union. Depending on national circumstances, strengthening the role of the market involved everything from lowering inflation and income taxes to reducing regulation and privatizing state industries.

The global shift in policy in the 1980s may have been nothing more than a collection of ephemeral national attempts to "try something different" in response to the widespread disappointment with the economic record of the previous decade: the rapidly rising unemployment in Europe, hyperinflations in Latin America, stagflation in the United States, and a total failure of Marxist central planning policies in Asia, Africa, Latin America, and the Soviet Union. It may, however, reflect a more long-lasting change based on a correct diagnosis of the specific causes of poor performance and on a more fundamental change in economic thinking around the world. Only time will tell. But a study of the changes that occurred in the United States and of the reasons for those changes may help us understand and anticipate events in other countries as well as in the United States.

3. On President Reagan's involvement in different aspects of domestic economic policy, see Feldstein (1984b).

The first part of this chapter discusses the important changes in monetary policy in the 1980s, particularly in the early part of the decade. The second and third parts deal with tax and budget issues. The final part discusses the fluctuations of the dollar and their relation to trade policy.

1.1 Monetary Policy and Inflation

1.1.1 Attitudes about Inflation

In 1980, opinion surveys identified inflation as the problem of greatest concern to the American public. The widely reported rate of consumer price inflation was over 12 percent in both 1979 and 1980, up from about 4 percent in the early 1970s and less than 2 percent in the first half of the 1960s. Many Americans felt that inflation was out of control and might spiral to higher and higher levels.

Two years later, after the deepest recession of the postwar period, inflation had been reduced to 4 percent. Except for fluctuations in the price of energy, the inflation rate remained at approximately that level for the remainder of the decade, while the economy enjoyed above-trend growth of real GNP and employment.

An analysis of this dramatic reversal of inflation can illustrate the complex way in which public opinion, politics, and technical economics interact in the shaping of monetary policy. The public's strong aversion to inflation contrasted with a rather widespread view among economists in the 1960s and 1970s that inflation was not a serious problem and that it was probably better to live with inflation than to pay the price—in terms of lost output—of reducing it. The oversimplified models used to analyze inflation indicated that the only cost of persistent inflation was that individuals would be induced to hold too little cash. No less an economist than James Tobin warned those economists who worried aloud about inflation that we would be embarrassed if the public ever discovered that the only real cost of inflation was the *de minimis* "shoe leather" cost of going too frequently to the bank to withdraw currency. Indeed, in a major address to the Econometric Society, Tobin went further and argued that a higher rate of inflation could be desirable because it raised real incomes by inducing people to substitute claims on real capital (bonds and stocks) for cash in their portfolios, thus reducing the yield required on investment in plant and equipment.

Nevertheless, the rising inflation of the 1970s increased the public's opposition to inflation and people's willingness to support a presidential candidate who promised tough action to reduce inflation. No doubt some people opposed inflation because of fallacious reasoning: they thought that they "deserved" the full real value of the nominal wage increases that they had received and resented having the purchasing power of those increases eroded by inflation. But the public's opposition cannot be attributed to this logical error alone.

People resented the fact that the combination of inflation and an unindexed tax system was pushing them into higher tax brackets, forcing them to pay a higher share of their real incomes in taxes. Many prospective home buyers knew that the rise in mortgage interest rates from less than 6 percent in the 1960s to more than 12 percent in 1980 prevented them from qualifying for a mortgage or being able to make the monthly payments even if they could find a willing lender. Pensioners saw the real value of their corporate pensions and personal savings eroding rapidly. Businessmen understood that the real value of depreciation allowances was sharply reduced by the high inflation rate, raising the effective rate of tax and discouraging investment in plant and equipment. And shareholders, who had been paying capital gains taxes on nominal gains even though the real value of their stocks had been declining, were shunning common stock, depressing the stock market and raising the cost of equity capital.[4]

Some economists might argue that these distortions were not inherent in inflation but reflected institutional details that could be corrected by indexing tax laws and pensions and redesigning mortgage payment schedules. But a decade and a half of rising inflation had occurred without such institutional corrections. By 1980, the public was ready for a tough anti-inflationary policy, and an increasing number of economists (although certainly not all economists) were becoming convinced of the high real costs of inflation.

The Federal Reserve had, of course, been aware of and unhappy about the rising rate of inflation throughout the decade of the 1970s but did not act forcefully enough to stop it. This may be because they underestimated its adverse effects or thought that it could be reversed at some future time at relatively low cost (Feldstein 1982b). But a significant part of the blame must also be attributed to the Fed's focus on nominal interest rates as a measure of the tightness of monetary policy.

As inflation rose, interest rates rose as well, although at a slower rate. Thus, real interest rates actually fell, while nominal interest rates were rising. Federal Reserve officials who saw nominal interest rates rise thought that they were increasing the cost of funds when in fact the real cost of those funds was declining. The mismeasurement was even worse when taxes were taken into account because nominal interest payments are deducted in calculating taxable income.

To see this effect of the interaction of inflation and tax rules, consider, for example, the effect on the real net cost of mortgage borrowing. Between 1965 and 1975, the interest rate on fixed rate mortgages rose from 5.8 percent to 9.0 percent, while inflation rose from 1.4 percent to 6.2 percent. The real interest rate thus fell from 4.4 percent to 2.8 percent. A taxpayer with a 30 percent marginal tax rate in both years would have paid a real after-tax rate of 2.7

4. I discussed these issues in a series of technical papers published in the late 1970s and collected in Feldstein (1983c).

percent in 1965 but 0.1 percent in 1975. Such calculations may be commonplace now, but the logic eluded the Fed in the 1970s (see Feldstein 1980).

1.1.2 An Unsuccessful Disinflation

Paul Volcker became chairman of the Federal Reserve in August 1979. Two months later, he persuaded his colleagues on the Federal Open Market Committee (FOMC) that a strong commitment to reduce inflation and a radical change in the Fed's operating procedure were needed.

It could have been otherwise. The surge in inflation from 9 percent in 1978 to more than 12 percent in 1979 could have been attributed to the jump in oil prices rather than to excess demand. But Volcker seized the opportunity of an inflation surge to attack the inflation problem that had been festering for more than a decade.

The Federal Reserve announced in October 1979 that it would focus on slowing the growth of the money supply and would be willing to tolerate much greater movements in short-term interest rates. Interest rates then rose dramatically, and the economy slowed.

The interaction between the Federal Reserve and the Carter administration has not been fully documented. What is clear is that Paul Volcker had told CEA Chairman Charles Schultze and Treasury Secretary William Miller about his intentions in October and had presumably received at least the tacit consent of the Carter administration. But, when the short rates reached over 15 percent in March 1980, the Fed lost the support of the Carter administration. With less than nine months to the 1980 presidential election, President Carter authorized the Fed to use credit controls to constrain consumer spending and effectively forced them to do so by going on television to exhort consumer restraint in the use of credit.

During the next three months, the economy weakened dramatically. The Fed responded to a drop in the money stock by cutting short rates nearly in half. At the time, this looked like an attempt to reverse the recession during an election year rather than the inevitable interest rate effect of the Fed's new policy of targeting the monetary aggregates. The drop in interest rates was followed by an economic recovery in the third quarter of 1980. The very short period of tight monetary policy and weak economic activity was not enough to reduce the rate of inflation.

1.1.3 The Reagan-Volcker Disinflation Policy

Ronald Reagan's 1980 presidential campaign had emphasized the need to fight inflation and return to price stability. It was hoped that a gradual tightening of monetary policy combined with the fiscal stimulus of the 1981 tax cuts would permit inflation to be brought down slowly and without a recession.

To the extent that "credibility" of policy was thought to be helpful in accelerating the decline of inflation, the analysis was based on old commonsense propositions that had been put forward over the years by William Fellner and

Henry Wallich rather than on the more extreme version of those views embodied in the new rational expectations theories that claimed that even very tight money would not hurt the real economy at all if the policy change were correctly perceived. Nor was any credence given by either the Fed or the new administration to those extreme supply-siders who argued that reducing inflation did not require a contraction of demand since prices would fall once the supply-side policies had succeeded in increasing the supply of goods and services.

The Fed tightened monetary policy sharply immediately after the election, raising the Fed funds rate by 600 basis points in less than two months. This monetary contraction pushed the economy into a deep recession, a recession that was worsened by the very unusual drop of velocity in 1982. The unemployment rate rose from 7.5 percent in January 1981 to 10.2 percent in September 1982, when I joined the administration as chairman of the Council of Economic Advisers. On that occasion, my Harvard colleague Ken Galbraith commented to the *Boston Globe* that I had just signed on for a ride on the Titanic.

Despite the dramatic increase in interest rates and in unemployment, President Reagan supported the Fed's tough policy. A firm opposition to inflation was part of his overall conservative economic philosophy. Moreover, he believed that the public understood that the high interest rates and the recession were necessary to correct the inflation that he had inherited from the Carter years. It was indicative of his attitude, but nevertheless remarkable, that the president chose "Stay the Course" as the 1982 election campaign motto at a time when the unemployment rate was rising every month to higher levels than had been seen in the years since World War II.

It was also a remarkable indication of the public's concern with inflation that the president's "approval rating" in the opinion polls conducted by the White House turned up sharply in the second half of 1982 as it became clear that inflation had been brought down even though there was no sign of an economic upturn.

1.1.4 Monetary Easing and Recovery in 1982

Although the broadest measure of inflation (the GNP implicit price deflator) fell from nearly 9 percent in the final quarter of 1981 to only 4.5 percent in the first half of 1982, the Federal Reserve kept the Federal funds interest rate over 14 percent. The Federal funds interest rate was actually slightly higher in the first half of 1982 than it had been in the final quarter of 1981.

In a *Wall Street Journal* article in the summer of 1982 (Feldstein 1982c), I argued that a "one-time" increase in the money stock would, at least in theory, be appropriate at that time to reverse the recent rise of real interest rates. Without an injection of additional money, the increase in the real money stock required to return the interest rates to a sustainable equilibrium level could be achieved only by several years of depressed economic activity that kept the rise in prices below the rise in the nominal supply of money. But in that article I cautioned that injecting additional money would run the risk of frightening financial markets that the Fed was reverting to its old inflationary ways and that the "one-time" money supply increase was just the beginning of a new period of faster money growth. I hoped at the time that, if the rationale for a one-time injection of money could be communicated effectively to the financial markets, it might be possible to reduce short-term interest rates without arousing fears of renewed inflation.

Sometime after I wrote that article, and after my subsequent nomination as CEA chairman, but before I went to Washington in early September, I met with several people in the New York financial community to ask how they would respond to such an injection of liquidity by the Fed. There was virtual unanimity in this sophisticated financial group that the market would welcome a sign of easing by the Fed.

Paul Volcker and his colleagues dealt with the perception and credibility problem by easing without saying that they had done so. Interest rates fell sharply, with the Federal funds rate dropping from over 14 percent to below 9 percent by the end of the year. The Fed took no credit for easing but said only that the Fed funds rate was moving in parallel to other short-term market rates and that this general downward movement of rates reflected the fall of inflation. The sharp increase in the narrow money stock (M1) was explained away by references to the expiration of all-saver certificates, a technical factor that could probably account for only a very small part of the jump in the growth rate of M1 in late 1982.

In 1983 and 1984, the economy enjoyed stable inflation and rapidly increasing real GDP. The overall pace of nominal GDP growth was not in any way surprising in the wake of the Fed's substantial easing that had begun in mid-1982. The division of the nominal GDP rise between real growth and inflation was, however, more favorable than would have been expected on the basis of past statistical relations. The primary reason for this, I believe, was that the fiscal expansion caused the dollar to rise, reducing import prices and putting downward pressure on the prices of domestic products that must compete with foreign products. The result was lower inflation and therefore more room for faster real GDP growth within the same total nominal GDP (see Feldstein and Elmendorf 1989).

1.1.5 Presidential Support for the Fed

As the newly arrived CEA chairman in the fall of 1982, I heard loud complaints from businessmen and from members of Congress about the state of the economy and about the need for lower interest rates. Even with the easing of monetary policy that had begun during the summer of 1982, real short-term rates remained quite high. The real rate on six-month Treasury bills was more than 5.5 percent in the third quarter of 1982. Moreover, the prime rate charged to business borrowers came down more slowly than market rates; the gap between the prime rate and the six-month Treasury-bill rate widened from less than 3 percent at the start of 1982 to 4 percent in September. The unemployment rate was over 10 percent and was continuing to rise every month.

Although the NBER eventually identified November 1982 as the bottom of the recession, the fact that the economy had begun expanding was not clear until February 1983. During the months before the 1982 congressional election, the economy looked very weak, and Fed policy appeared unnecessarily tight to many observers. Some of the president's staunchest allies in Congress complained bitterly that excessively tight monetary policy was preventing the rapid growth that should have resulted from the supply-side tax cuts of 1981. On one occasion in October 1982, soon after I had joined the administration, a leading member of that group met with the president in the Oval Office. The president listened politely to his plea to lean on the Fed to achieve an easier monetary policy, but then explained that that would be wrong because it would jeopardize the progress on inflation. The president then added that it would in any case be inappropriate to interfere with the Fed's independence.

The president's comments in that meeting were quite consistent with his later actions and statements on monetary policy. On many occasions over the next two years, when the press reported that "the administration" was criticizing Federal Reserve policy, the criticisms were never coming from the president or being made at his request. The Fed's critics were either in the Treasury (Secretary Donald Regan or Undersecretary Beryl Sprinkel) or among the White House political staff. The White House officials who criticized the Fed wanted to protect the administration from any future criticism if the economy faltered by blaming the Fed in advance and distancing the president from Federal Reserve policy. On several occasions, when I thought that the criticism had gotten loud enough to worry about, I mentioned it to the president, who soon went out of his way at a news conference to express support for the Fed.

The ultimate measure of the president's support for the Fed's policies was his decision to reappoint Paul Volcker in 1983 for another four-year term as Fed chairman. Volcker's critics urged the president to dissociate himself from the 1981–82 recession by not reappointing the man most closely identified with the policy of high interest rates. They also urged him to "have his own man" at the Fed to assert his control of that institution. But the president accepted the advice of those who said that Volcker had done a good job in reducing inflation and that his reappointment at the Fed would be a sign of the president's continued commitment to low inflation.

1.1.6 The Determinants of Monetary Policy in the 1980s

It is difficult to generalize about the determinants of Federal Reserve monetary policy. Federal Reserve actions do not represent the views of the chairman alone but reflect a consensus among FOMC members or at least a majority of those voting at the FOMC meeting. Moreover, each FOMC member has his own implicit weights on a variety of considerations. I am nevertheless confident that Federal Reserve decision making in the 1980s was quite different than it had been in the 1970s or 1960s.

At a minimum, the difficulty and pain of reducing inflation in the early 1980s made the FOMC members more concerned about policies that could allow a resurgence of inflation. The emphasis was therefore on restraining the pace at which unemployment declined so that the recovery would not be fast enough to overheat the economy.

Monetary aggregates played a more central role in making and judging monetary policy than they had in the past, although probably not as substantial a role as the Fed's annual reports to Congress suggested. Nevertheless, it is surely more than a coincidence that M2 was within the target range in almost every year from 1983 through 1989. And, although the Federal Reserve paid more attention to the Federal funds rate after mid-1982 than it had in the previous two years, it did not go back to the narrow 50-basis-point range that it had used prior to 1989. Instead, it was common to have a wide range of 400 basis points for the Federal funds rate.

Monetarist critics accused the Fed in 1983 of abandoning monetary targets and allowing too rapid a growth of the monetary aggregates. In fact, however, the change in Fed rules permitting banks to pay interest on checking accounts that took effect in early 1983 changed the demand for money in two fundamental ways that temporarily made continuation of the previous money growth rates inappropriate. First, it made the difference between M1 and M2 much less meaningful, eventually forcing the Fed to abandon M1 targets and focus on M2. Second, the interest available on checking accounts caused a sharp increase in the demand for M2 relative to nominal GNP.[5]

The monetarist critics (including Treasury Undersecretary Beryl Sprinkel and many distinguished academic and business economists) were not convinced. They complained about the sharp acceleration of M2 in early 1983 and the deceleration that followed. They predicted that the spurt of money growth would cause inflation and that the subsequent sharp deceleration of money growth would cause an economic downturn. Since neither prediction materialized, the episode reduced the already weak support among economists and financial experts in general for focusing on monetary aggregates in deciding monetary policy, a case that had previously been undermined by the sharp decline of velocity in 1982.

In chapter 1 of the 1983 *Economic Report of the President,* I had previously argued that a strict policy of targeting monetary aggregates was less appropriate than one of targeting nominal GNP, using monetary aggregates as important intermediate targets or indicators in a way that reflected observed changes in velocity. I had tried to persuade Paul Volcker that an explicit state-

5. In the months before this regulatory change occurred, Paul Volcker told me privately that the Fed was expecting a substantial increase in the demand for M2 balances. The Fed staff had studied the experience in New England, where such interest-bearing checkable deposits had been introduced earlier, and concluded that for a few months the Fed should abandon the aggregate targets and stabilize nominal interest rates.

ment of such a policy would allow the Federal Reserve to vary the growth of monetary aggregates without causing financial markets to fear that the Fed had lost control or was returning to old inflationary ways. Volcker and his colleagues were never willing to be quite so explicit. Perhaps that was because they believed that the public and the Congress would not permit the Fed so much freedom of action if they understood the extent to which the Fed could actually influence nominal GNP and thus short-run movements in real economic growth. The Fed preferred to disguise its influence on both interest rates and nominal GNP, speaking instead about its policies to change "pressure on reserves."

In reality, of course, the FOMC members know that their policies affect aggregate demand and thus both real income and inflation in the short run so that any decision to change the level of interest rates is at least an indirect way of influencing real income and inflation. Indeed, because the staff presents model simulations of the effects of alternative policies on both the price level and real output, they are in effect inviting the FOMC to choose among alternative pairings of real GNP and inflation when they set the Federal funds rate and the targets for the monetary aggregates.

1.1.7 A Correct Strategy

In my judgment, the basic strategy of monetary policy in the 1980s was correct: tough medicine to reduce inflation quickly while the public's support permitted the necessary contractionary policy, followed by enough monetary easing to achieve a moderately paced recovery that would avoid overheating demand. The tough recession reduced inflation at substantially lower cost in terms of lost output than many critics of tight money had predicted at the start of the decade, and the restrained pace of expansion permitted a substantial decline of unemployment without any increase in inflation.

The Fed's reaction to the 1987 stock market crash was also appropriate—both in providing immediate liquidity and in rapidly withdrawing it once the markets had become calm. But, while I believe that the broad sweep of monetary policy was correct, there were many periods in the 1980s when the Fed's fine-tuning seemed to me inappropriate.

The Fed's unwillingness to focus on a nominal GNP goal may also have led at times to an inappropriate monetary policy. For example, monetary policy was tightened sharply in 1987, contributing to the collapse of the stock market. The Fed explained at the time that its policy was aimed at preventing a decline of the international value of the dollar. If this is an accurate description of the Fed's motivation, it shows the disadvantage of trying to target the exchange rate rather than the growth of nominal GDP.[6]

6. It is, of course, difficult to know whether the Fed's statements that monetary tightening in mid-1987 was designed to prevent a sharp fall of the dollar should be taken at face value. It is perhaps equally plausible that the Fed was using the international system as a way of obtaining administration support for a decision to restrain economic activity that the Fed judged was increasing too fast.

More generally, the problem that the Fed faced as the decade of the 1980s came to an end was that the economy had been expanding at too fast a rate for too long. A relatively easy monetary policy throughout the post-1982 period had cut the unemployment rate to 5.2 percent by the start of 1990. As a result of this policy, the rate of inflation (measured by the CPI excluding energy) rose from 3.9 percent in 1985–86 to 5.2 percent in 1990. The Fed then shifted to a pattern of tightening aimed at continuing the previous decline of inflation without an actual downturn of employment. Whether that strategy would have worked well will never be known because of Saddam Hussein's invasion of Kuwait.[7]

1.2 Tax Policy in the 1980s

The reforms of the personal income tax in the 1980s were the most substantial tax changes since the dramatic expansion of personal taxation during World War II. The top marginal tax rate for individuals was reduced from 70 percent in 1980 to less than 35 percent a decade later, median-income taxpayers saw their marginal tax rates reduced by a third, and millions of low-income individuals no longer paid any individual income tax. At the same time, the opportunity for middle- and upper-income individuals to reduce taxable income through a variety of special provisions was substantially reduced. Indexing of tax brackets meant that inflation would no longer increase effective tax rates.

The effective tax rate on investment income at both the personal and the corporate levels was also substantially reduced by the 1981 tax legislation. But, unlike the general reduction of personal tax rates, those changes in the taxation of investment income were reversed during the next five years.

These remarkable developments were driven by an unusual convergence of intellectual and political forces and shaped by the preferences of President Reagan and a few key administration officials. This paper begins by examining these general determinants of the tax reforms in the 1980s and then turns to a more detailed analysis of the sequence of specific tax legislation. Because Don Fullerton has provided an excellent analytic history of these tax changes in his chapter in this volume, my comments focus on my own interpretation of the causes of those changes and a personal perspective on the changes themselves. I provide only enough description of the legislative changes themselves to permit the reader to understand my comments.

7. For a detailed discussion of monetary policy actions through the entire decade, see Michael Mussa's excellent chapter in this volume. Feldstein (1992c) discusses monetary policy in the last few years of the decade and the early part of the 1990s.

1.2.1 The Determinants of Tax Reform in the 1980s

The Conceptual Foundations of Tax Reform

The tax reforms of the 1980s reflected ideas about taxation that public finance economists had been discussing for many years: combining base broadening with lower tax rates, substituting a "flat tax" for the finely graduated "progressive" rate structure, indexing tax brackets for inflation, using a "vanishing exemption" to increase the average tax rate of the highest-income taxpayers without raising their marginal rate, and restructuring depreciation rules to improve the efficiency of capital allocation. The "academic scribblers" who had written about these issues during previous decades may not have been in Washington when the changes occurred, but the influence of their ideas was very much present in the design of the tax legislation of the 1980s.

The intellectual roots of the tax reform went beyond the technical concepts of public finance specialists. They reflected a very fundamental retreat from the general Keynesian economic philosophy that had shaped economic policy throughout the postwar period. There were four interrelated aspects of this shift in thinking: attention to the effects of incentives on behavior; a concern with capital formation; an emphasis on the efficiency of resource use; and a negative attitude about budget deficits. None of these represented new ideas in economics; they were in fact a return to the earlier views that had dominated economics from the time of Adam Smith until the Depression of the 1930s ushered in the Keynesian revolution.[8]

Effects of incentives on behavior. The massive unemployment of the Great Depression had focused the economic profession's attention on the lack of demand as the cause of low output and employment. The Keynesian economics that was developed in the 1930s emphasized that an increase in demand through monetary or fiscal policy would raise national income. With one-third of the labor force out of work, there was no need to worry about the willingness of workers to supply labor.

The simple Keynesian models that shaped most economists' view of the world over the next several decades generally ignored incentives: labor supply was assumed to be a fixed, given quantity; household savings were assumed to depend only on income (and not on the rate of return to the saver); and business investment was assumed to depend on sales and capacity utilization rather than profitability. This was a dramatic reversal of the views that had been held by economists before the 1930s and the introduction of Keynesian economics. While sophisticated economists recognized that all the Keynesian assumptions were just analytic simplifications, this "demand-determined" worldview con-

8. On the retreat from Keynesian economics, see Feldstein (1981c). On the ways in which the policies of the 1980s reflected a return to older ideas, see Feldstein (1986c).

ditioned much of the economic thinking about practical policy problems in the 1950s, 1960s, and 1970s.

In the design of personal taxation, this emphasis on demand and disregard of supply incentives led to high marginal tax rates; at the end of the 1970s, marginal tax rates reached 49 percent for an individual with $25,000 of taxable income and exceeded 65 percent for taxpayers with incomes of $90,000 and above (although a maximum tax rate of 50 percent applied to personal services income). The interaction of inflation with tax rules that did not distinguish between real and nominal interest income or between real and nominal capital gains meant that many taxpayers faced marginal tax rates over 100 percent on real interest income and real capital gains.

The procedure of revenue estimating by the staffs of the Treasury and the Congress was symbolic of the disregard of the behavioral response of taxpayers to changes in tax rates. The revenue effect of any proposed tax change was always calculated on the assumption that it would have no effect on the behavior of taxpayers and therefore than an induced change in behavior could have no feedback effect on total tax revenue. Although the economists who managed these revenue-estimating calculations knew that the assumption of "no behavioral response" was not literally true, they regarded it as a good enough approximation on which to base policy decisions.

All this began to change in the 1970s. Academic economists began to focus research on the way in which tax rules and government transfers affected economic behavior. There were studies of the effects of taxation on labor supply, of the effects of Social Security on retirement behavior, and of the impact of unemployment insurance on the behavior of the unemployed. The common theme in all this research was that labor supply is responsive to incentives.

But it was the congressional consideration of changes in the tax treatment of capital gains that made Congress recognize the importance of taking the behavioral response of taxpayers into account in the analysis of tax reforms. In the context of the 1978 reduction of the capital gains tax rate, the members of the House Ways and Means Committee and the Senate Finance Committee focused on the fact that lower capital gains tax rates would cause taxpayers to realize more capital gains as they accrue. They recognized that this behavioral response would reduce and possibly eliminate the revenue loss that would otherwise result from lowering the tax rate on capital gains.

The logic of the capital gains response and the research on labor supply led some economists to note that cutting personal tax rates in general would also cause less revenue loss than the nonbehavioral (or *static*, to use the somewhat misleading label that became popular in Washington tax policy discussions) calculations implied. This idea, that tax cuts were not as expensive as they seemed because of taxpayers' positive supply response, was, of course, the basis for what came to be called *supply-side economics*. Economists like Art Laffer dramatized the importance of the supply-side response by claiming that it is so strong that a substantial across-the-board reduction in personal income tax rates would actually increase tax revenue.

I will return below to the experience with the capital gains tax reduction and to the claims of supply-side economists. But first I want to turn to another aspect of the retreat from Keynesian economics: the renewed interest in capital accumulation.

Capital formation. The 1970s saw a renewed interest in capital formation as an engine of economic growth. This too was a reversion from Keynesian economics to an idea that had been stressed by pre-Keynesian economists.

The accumulation of capital was understandably irrelevant in the economic conditions of the Depression years that shaped Keynesian economics. With vast amounts of unused capacity, additional investment was not needed to increase output. Increasing the propensity to save was even less important since the Keynesian "multiplier" analysis implied that an increased desire to invest in plant and equipment would automatically increase national saving by an equal amount. Indeed, textbook Keynesian theory stressed that an increase in the desire to save would actually reduce national income by decreasing the demand for output.

Although these ideas were developed for the economic conditions of the 1930s, they continued to have a powerful effect on economic thinking and policy in later decades. Various policies were adopted that would favor an increase in consumer spending rather than in saving: banking rules that limited interest paid to depositors and reduced the cost of mortgage borrowing, tax rules that reduced the return to saving and lowered the net cost of borrowing, a Social Security system that made private saving for retirement virtually unnecessary for a majority of households, and an acceptance of budget deficits as a useful tool of demand stimulus.

Ironically, the economic profession's development of "growth theory" in the 1960s did little to reverse the attitude that capital accumulation was unimportant. One reason is that the theory emphasized that a higher national saving rate does not increase the rate of economic growth in the very long run. This conclusion was reinforced by the implied calculation that a 1 percent increase in the saving rate would increase the rate of GNP growth in the short run only by about one-tenth of 1 percent.

Even when an investment tax credit was adopted in the early 1960s, it was conceived as a Keynesian cyclical stimulus rather than as a way of expanding productive capacity. The aversion to encouraging saving remained, reinforced perhaps by the fact that any plan that is likely to encourage substantial personal saving is likely to favor those with higher incomes or assets.

Nevertheless, the decline in unemployment throughout the 1960s turned attention from the Keynesian problem of increasing demand to the pre-Keynesian problem of raising output per worker. Economists in the 1970s began to focus again on the desirability of increasing national saving and investment in plant and equipment. Although growth theory implied that increased capital accumulation would have only a modest effect on per capita GNP, it was the only determinant of growth that seemed susceptible to changes in economic policy.

The emphasis on saving and investment played an important part in the tax reforms of 1981: strengthened incentives for business fixed investment through more rapid depreciation allowances; increased incentives to save through universal eligibility for individual retirement accounts; and an increased return on individual equity investments through lower rates of tax on capital gains. The reasons that these increased incentives were largely withdrawn later in the decade are discussed below.

Efficiency of resource use. Even before Adam Smith, economists like William Petty were concerned with making the best use of scarce resources. Much of the subsequent academic work in public finance—including the writings of David Ricardo, A. C. Pigou, Frank Ramsey, and Irving Fisher—was specifically concerned with levying taxes in a way that would raise the revenue required by the government with the least distortion to economic efficiency.

Once again, it was the experience of the Depression that diverted attention from this traditional economic concern with the efficiency of resource use. National income could be raised much more easily by putting unemployed resources to work than by increasing the efficiency with which already employed resources were used. During the early postwar decades, the attention of most economists who were concerned with economic policy was on policies to achieve and maintain full employment.

The pre-Keynesian tradition nevertheless continued within public finance with economists like Richard Musgrave and Arnold Harberger emphasizing the design of tax policies to reduce economic distortions. With the return to full employment in the postwar period, a wider group of economists eventually came to see the fundamental importance of these efficiency issues. The public finance economists of the 1960s and 1970s were concerned with efficiency questions rather than with the macroeconomic questions of achieving full employment. A substantial academic literature on the design of efficient capital income tax rules played a significant role in shaping the depreciation reforms in the Tax Reform Act of 1986.[9]

Adverse effects of budget deficits. Yet another of the Keynesian propositions that was rejected in the 1970s was the idea that an increased national debt would have no adverse effects because "we only owe it to ourselves." Analyses by James Meade, Franco Modigliani, and James Buchanan pointed out that, even when all the government debt is intranational, it is harmful to the extent

9. See, e.g., the NBER studies included in Feldstein (1983a, 1987c, 1987h).

that it substitutes for real capital formation and that it requires future interest payments that have to be financed by higher taxes that themselves involve distortions and therefore a loss of economic efficiency.

Ironically, it was Ronald Reagan, a longtime outspoken critic of budget deficits, who was president during the years when the United States amassed the largest increase in the national debt. But, despite this, as I emphasize in what follows, it was President Reagan's aversion to budget deficits that caused him to accept tax increases in 1982, 1983, and 1984.

Political Motivations for Tax Reform

The retreat from Keynesian economics in the 1970s and the growing influence of the technical ideas of public finance economists resulted in new tax legislation in the 1980s because they coincided with political forces that supported similar reforms.

Inflation and tax burdens. The inflation of the 1970s—a decade in which the level of consumer prices doubled—was in my judgment the primary political force driving the tax reforms of the 1980s.

The interaction of inflation and an unindexed tax system pushed middle-income individuals into sharply higher tax brackets. Between 1965 and 1980, a typical median-income family saw its marginal personal income tax rate double (from 22 percent to 43 percent), while a family at twice the median saw its tax rate jump from 38 percent to 54 percent.

The combined employer-employee Social Security tax also rose in these years from 7.25 percent in 1965 to 12.3 percent in 1980, and many states either introduced or increased their state income tax rates. A middle-class couple with about $40,000 of income in 1980 was shocked to find itself facing a combined marginal tax rate over 50 percent.

Average effective tax rates also rose sharply. A median-income family paid about 8 percent of its total income in federal income tax in 1965, but half again as much (12 percent) in 1980. And a family with income equal to twice the median saw its effective individual income tax rate rise from 13 percent to 21 percent over the same fifteen years.

While taxpayers always prefer lower taxes, the sharp rise in real tax burdens caused by inflationary bracket creep without any explicit legislation created a sense that the higher taxes were unfair, unjustified, and unnecessary.

Inflation also caused a sharp rise in the effective tax rates on the investment incomes of individuals and in the effective corporate tax rate.[10] The rise in inflation from 4 percent in the second half of the 1960s to 8 percent in the second half of the 1970s raised the short-term interest rates available to savers from 7 percent in 1969 to nearly 10 percent in 1979. Thus, the real interest

10. Several of my own papers on the interaction of inflation and tax rules that were written in the late 1970s and early 1980s are collected in Feldstein (1983c).

rate declined by 1 percentage point. This decline in the real interest rate (from 3 percent to 2 percent) was magnified by the fact that taxes are levied on nominal rather than real interest income. Even a taxpayer whose marginal tax rate remained unchanged at 40 percent would have seen his net real return decline from essentially zero (i.e., the 40 percent tax on the 7 percent nominal interest rate implies an after-tax return of 4.2 percent or only 0.2 percent above inflation) to *minus* 2 percent (i.e., the 10 percent nominal interest rate implied an after-tax return of 6.0 percent or 2 percent less than the rate of inflation).

In practice, the rise in the tax burden on interest income was compounded by the increase in marginal tax rates. Thus, for a median-income family whose marginal tax rate increased from 22 percent to 43 percent, the real after-tax return fell from about 1.5 percent to *minus* 2.3 percent, a decline of nearly 4 percentage points. For a family at twice the median income, the real after-tax rate fell from zero to *minus* 3.4 percent. Individuals resented this capital levy and felt justified in their demand for lower tax rates.

A similar distortion applied to the taxation of capital gains. An individual who had purchased a portfolio equivalent to the Standard and Poor's 500 in 1965 for $10,000 and sold it in 1980 would have realized a nominal gain of $3,520. But the rise in prices over that fifteen-year period meant that the individual needed $26,160 to buy the same volume of goods and services in 1980 that $10,000 bought in 1965. Thus, the taxpayer would pay a tax on $3,520 of gain even though he had incurred a real loss of nearly 50 percent of his initial investment (the $13,520 was only 52 percent of the $26,160 needed to maintain the purchasing power of the initial investment). Not surprisingly, individuals who invested in common stock felt that a dramatic cut in the capital gains tax rate was justified, and they found a sympathetic hearing among many members of Congress. That political pressure supported the capital gains tax reduction of 1978 and the subsequent reduction in 1981.

Finally, inflation grossly distorted the taxation of corporate income. Because the depreciation of plant and equipment for tax purposes is based on original cost with no adjustment for inflation, the rise in interest rates caused by inflation substantially reduced the present value of the depreciation deduction. Between 1965 and 1980, the rise in corporate bond rates reduced the present value of fifteen-year straight-line depreciation by more than 40 percent, a reduction equivalent to an increase of 20 percent in the initial cost of the investment.

Inflation also caused a sharp rise in artificial accounting profits for firms that used the first-in first-out method of accounting. Such artificial profits rose from a negligible $1 billion in 1965 to more than $40 billion in 1980.

These extra corporate taxes were partly offset by the deductibility of nominal net interest costs. Nevertheless, when Larry Summers and I put all the pieces together (Feldstein and Summers 1979), we concluded that the effect of inflation with the existing tax laws was to raise the 1977 tax burden on the capital income of the nonfinancial corporate sector by an amount equal to 69 percent of the real after-tax income of that sector (including retained earnings, dividends, and the real interest receipts of the corporations' creditors). Stated differently, the effect of inflation was to raise the effective tax rate on capital income of the nonfinancial corporate sector from 41 percent to 66 percent.

The greatly increased tax burden caused by inflation was a major engine of the tax reduction movement in the late 1970s that led to the 1981 tax cuts. It also helps explain why, once the idea of indexing tax brackets for inflation was explained to the public, it was politically unstoppable.

Personal incomes and public spending. The pressure for tax cuts reflected not only the increasing tax burden but also the combination of the stagnant pretax incomes of working families and increased government spending on transfer programs. Middle-income individuals felt that their own situations were deteriorating while the government taxed them more heavily in order to give money to an increasing number of transfer recipients. Between 1970 and 1980, median family income in constant dollars rose by less than 1 percent. A full-time year-round male worker earned $21,511 (in 1981 dollars) in 1970 and $21,162 in 1980 (in the same 1981 dollars). The corresponding figures for female workers showed a rise of $50 over the entire ten-year period. If per capita incomes rose, it was only because of the substantial rise in female labor force participation (from 43 percent in 1970 to 52 percent in 1980).

During the same decade, government nondefense spending rose rapidly. Nondefense outlays of the federal government increased from 11.2 percent of GDP in 1970 to 16.7 percent in 1980. Transfer payments and nondefense discretionary outlays rose 93 percent in real terms during the decade, jumping from 55 percent of total government outlays to 70 percent. Even when Social Security and Medicare outlays are set aside, nondefense spending rose by 82 percent in real terms between 1970 and 1980.

It is not surprising that voters were very receptive to the message that taxes and government spending should be sharply reduced to redress the distribution of income between wage earners and welfare recipients.

Political competition in 1981. Although the inflation-induced tax increases of the 1970s and the public's dissatisfaction with the shift of income to welfare recipients and other transfer beneficiaries provided the political impetus for a program to cut taxes and spending, the actual tax legislation in 1981 was shaped by a competition between Republicans and Democrats to get credit for tax cutting.

Ronald Reagan's presidential campaign had promised that he would seek 10 percent tax cuts for three successive years, a cumulative 27 percent reduction in marginal and average tax rates. When he presented this proposal to the Congress, the Democratic leadership responded with its own package of tax cuts that included such things as a tax credit for second earners and an expanded program of individual retirement accounts. A bipartisan coalition led by Republican Congressman Barber Conable and Democratic Congressman Jim Jones also supported sharp reductions in corporate tax liabilities through accelerated depreciation schedules; this Conable-Jones bill was known as 10–5–3 because structures would be depreciated for tax purposes in ten years, equipment in five years, and vehicles in three years. The final "compromise" legislation included virtually all these pieces (although the personal rate reductions were reduced from 10–10–10 to 5–10–10, or a cumulative 23 percent) plus an agreement to index tax brackets starting in 1985.

The political origins of the 1986 Tax Reform Act. The radical changes in tax rules and tax rates in the 1981 legislation would have been enough to characterize the 1980s as a decade of major tax reform. While it is perhaps not surprising that the 1981 legislation was followed by several small tax bills in succeeding years to reduce the budget deficit, it is quite remarkable that Congress enacted another change in tax rules in the Tax Reform Act of 1986 and did so as a piece of tax reform without any expected net revenue impact.

The specific features of the 1986 legislation reflected several of the intellectual developments that I have already discussed. It can be seen as a shift in emphasis from increasing the rate of investment to using the available investment dollars more efficiently. But the 1986 legislation owes its existence neither to the tax specialists' desire to increase allocative efficiency nor to strong public support for another round of tax changes.

Administration interest in a second round of tax reform originated in the White House as a political response to the initiative developed by Senator Bill Bradley and Congressman Dick Gephardt. The Bradley-Gephardt proposals called for a combination of lower rates and base broadening, appealing to traditional tax reform sentiments of fairness and more technical concerns about the efficiency of resource use. The influence of academic public finance economics in this design was very clear.

Jim Baker, then President Reagan's chief of staff, was concerned in early 1984 that the Democrats could seize the tax reform issue from the Republicans in the upcoming presidential election by building on the Bradley-Gephardt proposal. The president's 1984 State of the Union address therefore called for a new major tax reform that would reduce tax rates without increasing the deficit and ordered the Treasury to carry out the study and report after the election. What started as an attempt to preempt a political move became the most wide-ranging tax reform since the introduction of the income tax.

Presidential Preferences

It would be wrong to regard the tax reform of the 1980s as the product of intellectual fashions and political forces alone. President Reagan had strong convictions about tax policy that shaped the tax changes throughout his eight years as president.

President Reagan strongly opposed high rates of personal income taxation and particularly the very high level of the top marginal tax rate. He spoke privately of the personal disincentive and of the sense of frustration and unfairness created by tax rates of nearly 100 percent that he had experienced himself. Until the 1963 tax reductions, the maximum marginal rate was 91 percent, and the tax rate was 89 percent for income over $100,000. He had a visceral dislike of high maximum tax rates and wanted tax changes that would reduce them.

On the basis of his own experience and that of his friends, the president clearly believed that lower tax rates would increase work effort and reduce the use of accounting arrangements to shelter taxable income. This explains his enthusiasm not only for the initial 1981 rate cuts but also for the 1986 plan to combine even lower rates with a broader tax base. Although the president believed in the supply-side effect of lower taxes, I never thought that he accepted the extreme supply-side position that lower tax rates would actually increase tax revenue. He did make such statements in public announcements and press conferences,[11] but I never recall him saying that in private discussions with senior administration officials; perhaps, even if he once believed it, he no longer did by mid-1982 when I joined the administration.

When it came to deficit reduction, the president disliked any kind of tax increase but was less opposed to higher business taxes, especially when they took the form of "eliminating undeserved breaks and closing tax loopholes," a characterization that could be applied to the tax increases of 1982, 1983, and 1984 since the statutory tax rates were not increased. He strongly resisted the rise in the Social Security payroll tax that was proposed as part of the Social Security rescue package in 1983 but reconciled himself to this change by noting that it represented only advances in the dates of the increases that had been proposed and legislated by the Carter administration.

Although President Reagan's rhetoric always emphasized his opposition to increased taxes, he agreed grudgingly to the need for tax increases in 1982, 1983, and 1984 because he did not like the looming budget deficits. While projecting the image of a fierce opponent of taxes, in his prepared remarks and his press conferences he was always careful to avoid an outright promise that he would not raise taxes. Instead, he would say things like (my words) "I will not hurt the American economy by raising taxes" or "I will not raise taxes that penalize hard-working American men and women." It may have sounded like a promise not to raise taxes, but it was in fact a statement about the kinds of tax increases that he would accept. When pressed explicitly in a press conference, his favorite reply was of the form "A president should never say never."

The following excerpt from a 23 December 1981 press interview provides a good example of the president's ability to stress his opposition to higher taxes

11. See, e.g., his comments in a 7 July 1981 speech: "It's true, that I believe, as President Kennedy did, that our kind of tax cut will so stimulate our economy that we will actually increase government revenues, but the gross national product will be increased by even more so that government's excessive percentage will decline."

while keeping open all options for future tax increases. At that time there was already talk about the need for a tax increase that ultimately led to the enactment of the 1982 tax bill that raised a projected $100 billion over three years. When the president was asked about raising taxes, he replied as follows:

> Well, there certainly will be no change in taxes in 1982, I guarantee you. We have put a program in place that I believe will increase government's revenue simply by broadening the base of the economy, stimulating an increase in productivity, offering incentives that the program does offer.
>
> I learned a long time ago that putting your feet in concrete was dangerous, because I have among my mementos a round cement block with a pair of shoes embedded in it that was given me by the Capital Press Corps in Sacramento after I had put my feet in concrete and then, one day, had to stand before them and say the sound you hear is the sound of concrete breaking around my feet. So, they gave me that, but I would like to see what happens with this program.
>
> Of course there is one thing with regard to taxes that from the very first I did always speak of, and that was we continue to review where there are places where people are getting undeserved tax breaks, the so-called closing of loopholes. Now in that I do not include as loopholes the legitimate deductions that—without which the whole program would have failed a long time ago—but actual loopholes where, as I say, there is an unjust break. This we continue to review and I am not opposed to that.

A press interviewer then asked, "At what point will you make a decision?" and the president replied, "After I see what happens."

A subsequent questioner asked whether, even if there would be no tax increase in 1982 except for loophole closing, there might be a tax increase in 1983. The president replied that he would not "look kindly on anything that is contrary to the stimulative part of our tax program" but that "what I was trying to say with my story about the concrete block was that with the unexpected things that can happen I just feel that I'm in no position to comment on suggestions for a 1983 tax increase."

Later in the interview, the president was asked about excise taxes and replied that "I don't think that consumption taxes are in direct opposition to the tax program that we instituted."

It is clear from these remarks that the president was very eager to emphasize his opposition to higher taxes, and in fact to resist increases in marginal tax rates as such, but would not rule out any future tax increase if he felt it necessary and was more inclined to accept excise taxes than other forms of tax increase. This was not empty rhetoric since the president proposed and Congress enacted tax increases (by "closing loopholes") in 1982, 1983, and 1984 and a higher excise tax on gasoline in 1982.

1.2.2 The Sequence of Tax Changes in the 1980s

With these comments as a general background on the reasons—intellectual, political, and presidential—for the tax changes of the 1980s, I turn to some personal observations on the major tax changes themselves.

Reducing Capital Gains Taxes

The capital gains tax cut of 1978 is important as a precursor of the individual and corporate rate cuts enacted in 1981. By the late 1970s, the combination of inflation-induced increases in tax brackets and new additional taxes on capital gains (the add-on minimum tax and the reduced ability of taxpayers with capital gains to use the maximum tax on earned income) had raised the maximum tax rate on capital gains to more than 45 percent.

In 1978, the House Ways and Means Committee was considering legislation to reduce capital gains tax rates that would bring the top rate down to 28 percent. The staff at the Treasury and at the congressional Joint Tax Committee estimated the revenue consequences of the proposed changes on the assumption that the lower capital gains tax rates would have no effect on taxpayers' decisions to realize gains. The opponents of reducing the capital gains tax rate, including the Carter administration, charged that the projected revenue loss was too large to be acceptable. The supporters of lower capital gains taxes, who were generally unaware of the "no behavioral response" assumption used by the revenue estimators, argued that the projected loss of revenue was worth accepting because a lower capital gains tax would encourage venture capital and other activities that would contribute to economic growth.

Research that I was doing on the effect of capital gains taxation on shareholder behavior implied that the Treasury and congressional staff calculations were fundamentally wrong.[12] Since capital gains taxes are levied only when the individual actually sells an asset, the capital gains tax can be postponed indefinitely and thereby substantially reduced in present value. Moreover, the tax on accrued gains need never be paid if the asset is held until death and bequeathed to the taxpayer's heirs; their base for future capital gains taxation is the value of the property at the time that it is bequeathed. And since, under the tax rules of the 1970s, an individual could borrow against the appreciated asset to finance current consumption and deduct the interest paid in calculating taxable income, it was unnecessary to sell the asset in order to consume the value of the appreciation.

With these rules, capital gains realizations would be expected to be very sensitive to tax rates. The statistical analysis that I was doing of a very large random sample of individual tax returns appeared to confirm that. Indeed, tax-

12. This research, done with Joel Slemrod and Shlomo Yitzhaki, appeared in several papers that are reprinted in Feldstein (1983b).

payers appeared to be so sensitive in their decision to realize capital gains that a reduction in the capital gains tax would actually raise revenue.

The ink was hardly dry on my NBER working paper reporting these research findings when I was asked to testify about them to the Senate Finance Committee. Several senators made it clear that they had not previously understood the "static" nature of the staff's revenue estimates (i.e., the assumption that there would be no behavioral response to a cut in the capital gains tax rate) and that they did not believe that such static estimates were useful for evaluating the proposed tax changes. I had a receptive audience for my estimates of substantial feedback effects of taxpayer behavior on the revenue consequences of lower tax rates on capital gains.

The capital gains tax rules were changed in the 1978 legislation, reducing the effective tax on capital gains. The subsequent experience confirmed the conclusion that taxpayers are quite sensitive to the capital gains tax rate. The revenue-estimating procedure of the Treasury and Joint Tax Committee staffs was subsequently modified to take the behavioral effects of changes in capital gains tax rates into account in estimating revenue consequences.

Supply-Side Extremists and the 1981 Tax Reduction[13]

My advocacy of a capital gains tax cut and my emphasis on the favorable revenue effect of the induced increase in the tax base made me an early "supply-sider," probably before the term had been coined by former CEA chairman Herb Stein and certainly before I had heard the term.

I believed (and continue to believe) that the favorable feedback effects of tax cuts on revenue would not be limited to capital gains tax cuts, but I was also convinced that other kinds of economic behavior would be much less sensitive to taxes than capital gains realizations. I objected therefore to those supply-siders like Arthur Laffer who argued that a 30 percent across-the-board tax cut would also be self-financing because of the resulting increase in incentives to work. While lowering the very highest marginal tax rates might actually raise revenue, for most taxpayers a cut in the tax on wages and salaries would increase tax revenue only if the resulting increase in labor supply was much greater than either logic or previous experience suggested was at all likely.

I was not opposed to a substantial across-the-board rate reduction when the idea was debated in the late 1970s, although I thought and testified to Congress that the combination of a smaller rate cut and immediate bracket indexing was safer at a time when future inflation was uncertain. I recall discussing this with Senator Bill Roth, an early advocate of the 10–10–10 personal rate cut. He recognized the logic of the argument that indexing might be better but argued

13. Don Fullerton's chapter in this volume provides an excellent detailed survey of the evolution of the 1981 tax cuts. Since I was not then a member of the administration, I limit my remarks here to a recollection of my own views at the time.

that it would be harder to enact than a pure rate cut because it was more difficult for the public to understand.

While reasonable people could differ about just how big a tax cut was desirable, I had no doubt that a combination of a sizable tax cut and a reduction in spending would improve efficiency and was justified after a decade of increases in taxes and spending. I was convinced that there would be some favorable offsetting feedback effects of the lower tax rates on total revenue but that the tax cut would definitely not be self-financing.[14]

I was convinced, moreover, that the supply-side hyperbole about self-financing tax cuts was undesirable because it was discrediting what I thought was a good case for reducing tax rates. Critics of the tax cut could rightly argue that it was unlikely to be self-financing as its most ardent supporters were claiming and then jump to the wrong conclusion that such a tax cut would therefore be a mistake.

The rhetoric of self-financing tax cuts nevertheless continued during the 1980 presidential campaign and was later part of the administration's effort to sell the tax package to Congress and the nation. The implausibility of the claim that the tax cut would be self-financing clearly did not hamper the ability of the new Reagan administration to enact its package, but it did complicate my subsequent job as CEA chairman in defending the tax package as good economics despite its obvious failure to raise revenue. And just when an increasing number of mainstream economists were accepting the traditional "supply-side" view that incentives are important and that high tax rates do not raise correspondingly high revenues, the supply-side extremists gave supply-side arguments in general a bad name.

Within a few years, the surge in the budget deficit caused many of the original supply-side extremists to say that they had never claimed that the tax cut would raise revenue. For example, Martin Anderson, President Reagan's first domestic adviser, claimed in his 1988 book *Revolution* and in subsequent newspaper articles that the supply-siders had never said that the tax cut would be self-financing.[15] The record clearly points to the opposite conclusion. Writing about the proposed series of three 10 percent tax rate cuts, Arthur Laffer, the leading supply-sider, was quite explicit in saying that "each of the 10 percent reductions in tax rates would, in terms of overall tax revenues, be self-financing in less than two years. Thereafter, each installment would provide a positive contribution to overall tax receipts" (Laffer 1981, 201). This was not an isolated statement but part of a general line of argument that distinguished the self-styled "supply-siders" from the rest of the economics profession.

14. The actual size of the tax cut and the reasons for the increase of the budget deficit are discussed in the next section of this chapter.

15. I tried to be polite in my remarks on this subject to the 1985 meeting of the American Economic Association (Feldstein 1986c) by not identifying anyone by name when I said that the supply-siders had claimed that the tax cut would be self-financing, only to be accused by Anderson in his book of attributing views that the supply-siders never had.

Shrinking the Deficit: Tax Changes from 1982 through 1984

It became clear almost immediately after their enactment that the 1981 tax reductions would lead to deficit increases despite the administration's success in cutting many domestic spending programs. This led to a series of small tax increases in 1982, 1983, and 1984. Although President Reagan strongly opposed any increase in personal or corporate income tax rates, he accepted the increases in revenue that resulted from a variety of technical changes in business tax rules.[16]

The 1982 deficit reduction legislation The 1982 tax legislation was projected to raise $100 billion over three years by reducing the value of business depreciation allowances and by eliminating the "safe-harbor leasing" provisions. The "safe-harbor" rules allowed companies that had no taxable profits to take advantage of favorable depreciation rules and the investment tax credit when they made investments by transferring the tax benefits to companies that did have taxable profits.

The politics and economics of safe-harbor leasing contain an interesting lesson about the importance of the appearance of fairness in tax policy, even in an aspect as arcane as business depreciation rules. Safe-harbor leasing looked bad because it permitted companies with substantial taxable profits to pay little or no tax by buying the tax benefits from companies that had made investments. In reality, the transferable tax benefits were priced in such a way that almost all the value went to the firms that made the investments rather than to the firm that bought the resulting tax benefits. The safe-harbor leasing rules thus had the desirable effect of encouraging investment for new firms that lacked taxable profits and for established firms that were temporarily losing money as well as for established firms with taxable profits.

Although I was not in the administration at that time, my judgment, both then and in retrospect, is that the 1982 reversal of the favorable tax treatment of investment that had been enacted the year before was a mistake. A generous tax treatment of business investment is needed to balance the relatively favorable treatment of owner-occupied housing if a disproportionate share of national saving is not to flow into residential investment. Safe-harbor leasing was needed to allow all types of firms to face the same cost of investing. But the perception of firms buying the right to pay no tax made the safe-harbor approach politically unsustainable.

A further adverse effect of the 1982 tax legislation was that it was the first time that depreciation rules were changed retroactively on equipment that was already in use. This meant that, in the future, businesses would no longer count on the prevailing depreciation rules when they made investment decisions, a

16. The next section of this chapter discusses the policies and politics of deficit reduction in more detail. The current section focuses on the specific tax proposals in each year's budget.

factor that would made future investments riskier and would reduce the potency of changes in depreciation rules. I found that it also made it impossible in 1983 to interest businessmen in the idea of accepting indexed depreciation in exchange for a further lengthening of depreciation lives.

The 1983 contingent tax plan. The debate about taxes in the budget to be submitted in February 1983 (i.e., the fiscal year 1984 budget) provided a good lesson both about the difference between economic and political priorities and about the way that an internally divided administration worked in practice.

The preliminary estimates for that budget (the first that I participated in preparing as CEA chairman) implied that, without substantial changes in taxes or spending, there would be large deficits in each of the next five years. The sharp decline in inflation and the deep recession together meant that tax receipts would be low in 1983 and 1984, while the indexing of brackets scheduled to begin in 1985 meant that future revenue increases would be very modest. Even with the spending cuts that could be proposed (but not enacted), the projected deficits would remain unacceptably large.

At an informal dinner soon after Christmas 1982, Secretary of State George Shultz suggested that an energy tax on domestic and imported oil would be a good way to raise revenue. The combination of that energy tax and the proposed spending cuts would, on realistic economic projections, lead to substantial deficit reductions over the five-year budget horizon.

The "supply-siders" in the Treasury, the Congress, and elsewhere objected to any tax increase as economically counterproductive and argued that, once the recovery began, the revenue gains from the tax cuts enacted in 1981 would be so great that no further tax changes would be needed to eliminate the deficit. The White House political strategists, led by Chief of Staff Jim Baker, were concerned about the adverse political effects of any proposal to increase taxes. Baker was also aware that his leadership in achieving the 1982 tax increase may have weakened his relationship with the president and definitely had hurt his relations with those Republicans who were more concerned about keeping taxes low than about preventing large budget deficits.

In the White House budget discussion that followed, Ed Harper (the domestic policy adviser) and I suggested as a compromise that the energy tax could be legislated in 1983 but would take effect only in 1985 and then only if the deficit remained above some threshold level. Budget Director Dave Stockman, who was also skeptical of the supply-siders' claims and eager for a plan that would actually reduce the outyear deficits, supported the idea of a contingent tax.

Treasury Secretary Donald Regan, responding to the advice of the Treasury supply-siders and the White House political staff, opposed the idea of a tax increase and favored assuming that future economic growth would be fast enough to shrink the budget deficit. The CEA was responsible for the forecast, and my refusal to go along with the Treasury projections of five years of rapid growth made a tax increase necessary to achieve an acceptable projection of declining deficits.

Despite the opposition of Regan and others, the combination of spending cuts and the "conditional" energy tax increase was accepted by the president as part of the February 1983 budget plan for fiscal year 1984 and beyond. But getting presidential approval for a budget that combined a reasonable economic forecast and good policies for deficit reduction was far from getting those policies legislated.

The White House political strategists and Treasury Secretary Don Regan could not stop the president's adoption of a proposal for a contingent tax increase because they recognized the need to project declining deficits and an eventual budget balance. But they could make sure that it would not be enacted by asserting that the contingent tax increase would be acceptable to the president only if all the president's proposed spending cuts were also accepted by the Congress. Since the proposed spending cuts are at best only the first bid in a negotiation between the president and the Congress, it was easy for the White House staff and the Treasury to sink the entire budget by adopting a very tough no-compromise strategy and then to blame Congress for the continued deficits that the president had proposed to reduce. In the end, none of the administration budget was enacted that year.

Taxes for Social Security solvency. The tax changes that were actually enacted in 1983 were the result of a plan to protect the long-run solvency of the Social Security system. A bipartisan commission, headed by former CEA Chairman Alan Greenspan (who was then a private citizen), had been established in 1982 to find a way to deal with the projected gap between future Social Security benefits and taxes.[17] The report of the committee, released in 1983, called for raising the payroll tax and including half the benefits of higher-income individuals in income subject to personal taxation. The income level at which this inclusion began was fixed in nominal terms, permitting the tax to fall only on relatively high-income individuals in the near term, but gradually extending future taxation to all beneficiaries without the political pain of enacting additional legislation to increase taxes. The resulting rise in tax revenue made a substantial contribution to shrinking projected deficits over the next five years and beyond.

When the proposed Social Security changes were initially described to the president (before they were made public by the commission), he objected vehemently to the plan to close the Social Security funding gap by higher taxes alone with virtually no reductions in future benefits. He eventually reconciled himself to the higher payroll taxes on the grounds that this was essentially just advancing the date of changes that had already been proposed and enacted by

17. The 1983 decisions about Social Security are discussed more fully in Sec. 1.3.3, which deals with the budget and government spending.

President Carter. He accepted the inclusion of benefits in taxable income with the rationale that it was essentially equivalent to a reduction in the benefits paid to high-income beneficiaries. But the reality was that the Social Security financial crisis had been resolved without any fundamental changes in benefits, a subject to which I return below in the section of this chapter on government spending and the budget.

Raising taxes in 1984. When the forecasts were prepared for the budget to be enacted in 1984, the economy had already been in recovery for more than a year. Despite the relatively strong growth in the first year of the recovery, plausible estimates of the future path of expansion (estimates that subsequently proved to be essentially correct) left unacceptably high budget deficits for the indefinite future.

The spending cuts that could be proposed in an election year were not large enough to make a significant dent in the projected deficits. Once again, the Treasury supply-siders and their allies outside the administration argued that no tax increase was needed because growth would continue at a fast enough pace to provide the additional revenue. Some conservatives who didn't accept the supply-siders' optimism argued that it would nevertheless be better to hold out for further spending cuts since a tax rise would just lead to additional spending without shrinking the deficit. Not surprisingly, the White House political strategists were opposed to any tax increase in an election year.

David Stockman and I were convinced that the five-year deficit could be reduced significantly only with the help of a tax increase and that such an increase would achieve a net deficit reduction. I continued to favor some type of contingency tax increase. My preferred solution was a modification of indexing in which Social Security and other retirement benefits and personal tax brackets would be adjusted by 3 percent less than the inflation rate instead of by the full inflation rate. Such a modified indexing rule would still protect individuals completely against any unexpected rise in inflation. Although there would not literally be any tax increase (just a slowdown in future tax cuts) or any reduction of benefits (just a slowdown of future benefit increases), the modified indexing would raise a substantial amount of additional tax revenue and save roughly an equal amount in Social Security outlays.

In the end, such a raise in personal taxes and fall in personal benefits was politically too costly to be acceptable as part of the president's budget. Instead, the Treasury developed a series of technical changes in business tax rules that would over time raise a moderate amount of additional revenue. The president accepted that these were not real "tax increases" but just the closing of business loopholes, allowing the Treasury to collect the taxes that "should be paid."

I left the administration in the summer of 1984 hoping that, once the election was over, a political compromise could emerge that would combine a significant tax increase with reductions in entitlements and other spending (Feldstein 1984a, 1985b). But that was not to be. In the second Reagan term, there were no voices in the administration to support higher taxes as part of an overall budget compromise. Instead, budget deficit action shifted to the Gramm-Rudman initiative, while tax legislation turned from deficit reduction to revenue neutral tax reform.

The Tax Reform Act of 1986

The primary focus of the Tax Reform Act of 1986 was a dramatic reduction of personal income tax rates. The marginal tax rate on the highest incomes fell from 50 percent to 28 percent, and other rates were reduced to 15 percent. The challenge was to pay for these rate reductions with changes in tax rules that would be acceptable to voters as a trade-off for the rate cuts and to do all this in a way that appeared distributionally neutral, that is, that gave low- and middle-income taxpayers at least as large as percentage reduction in tax liabilities as the reduction given to high-income taxpayers.

The most difficult part of the distributional challenge was to limit the overall tax reduction of the highest-income taxpayers, whose statutory rate had been cut nearly in half. An early proposal to eliminate the personal deduction for state income taxes died because of the opposition of large states like New York with high state income taxes.[18] Raising the tax rate on long-term capital gains was then seized on as the way to show a substantial offsetting increase in taxes paid by high-income taxpayers. Although raising the capital gains rate for high-income taxpayers from the existing 20 percent maximum to 28 percent would substantially reduce realizations and therefore produce less revenue from these taxpayers that the "static" calculations implied, the reality was less important than the perception. What mattered was to show that taxing long-term gains like other income would offset the reduction in the top rate of personal income tax. The Treasury and congressional staff therefore ignored the behavioral effects of the proposed higher capital gains tax rate in their projections of tax changes by income bracket. Remarkably, they nevertheless took the reduced realizations into account when calculating the aggregate revenue effects of the proposed tax change!

A number of technical changes were also made in tax rules to discourage the use of tax shelter investments, particularly eliminating the use of so-called passive losses to reduce taxable income. As a practical matter, these changes were less important in discouraging the use of tax shelters than the publicity given them suggested. They were less important in practice because the other changes in tax rules—reducing the maximum personal rate to 28 percent, raising the capital gains rate to the same level as ordinary income, and cutting depreciation allowances—were sufficient by themselves to eliminate the advantage of tax shelter investments.

18. Eliminating the personal tax deduction might only have encouraged states to rely more heavily on corporate taxes, with a resulting larger revenue loss to the federal Treasury (see Feldstein 1985d; and Feldstein and Metcalf 1987).

The primary effect of eliminating the use of passive losses reflected the Treasury's decision to phase out these accounting losses on already existing tax shelter investments. This raised revenue from high-income taxpayers and did so quickly. However, just as with the 1982 retroactive changes in depreciation rules, it sent the message that depreciation tax rules could not be relied on in the future. It also encouraged tax-motivated investors in real estate to sell their properties immediately, exacerbating the collapse of real estate values and the problems of the banking system in the late 1980s.

Another change designed to limit the tax cut for the highest-income taxpayers was eliminating the personal exemptions and the use of the low bracket rates (the zero bracket and the 15 percent bracket) for high-income individuals. This feature, which had long been advocated by liberal tax reformers as a way of increasing the overall progressivity of the tax schedule, had the effect of creating a range in which the marginal tax rate exceeded 28 percent for taxpayers with moderately high incomes before dropping back to 28 percent. Although the average tax rate increased continuously with income, this "hump" or "bubble" in the marginal tax rate schedule was seen by many taxpayers as unfair. But, in practice, the pressure to remove the "bubble" led in the 1990 tax legislation to a modification of the rate schedule that raised tax rates at the top to 32 percent and that pushed the "bubble" to higher income levels.

But, even with all these changes, the high-income group appeared in 1986 to receive a proportionally larger tax cut than those at lower income levels. The designers of the tax reform therefore introduced a substantial increase in the personal exemption as a way of cutting taxes for lower-income taxpayers. An increase in the personal exemption leaves almost all marginal tax rates unchanged (except among those who no longer owed any tax as a result of the higher exemptions) and therefore has no favorable supply-side effect. Indeed, by increasing the after-tax income while leaving marginal tax rates unchanged, the increase in the personal exemption could be expected to increase the demand for leisure and reduce labor supply. Its justification was that it focuses tax cuts not only on those with lower incomes but also on large families who had been disproportionately hurt by the inflation-induced erosion of personal exemptions over the past decade.

The increased personal exemption was, however, very expensive, adding about $25 billion a year to the cost of the overall reform. To balance this, the administration and Congress agreed to increase corporate tax revenue by $25 billion a year. This was achieved despite a reduction of the corporate tax rate from 46 percent to 34 percent by lengthening depreciation lives and eliminating the investment tax credit.

The revenue estimators conveniently chose not to take the increased corporate tax revenue into account in calculating the effect of the overall reform on the taxes paid at each income level. This produced the politically convenient result of an apparent tax cut for each income class despite the aggregate estimate that the tax reform as a whole was revenue neutral.

A more accurate analysis might impute the additional corporate tax on the basis of the ownership of capital and would therefore indicate that the extra $25 billion of corporate tax was paid primarily by higher-income taxpayers.[19] If the corporate tax collections had been correctly imputed, it would not have been necessary to raise the capital gains tax rate in order to show that higher-income individuals were not receiving a disproportionately large tax cut.

Indeed, since little or no additional revenue would result from raising the tax rate on capital gains from 20 to 28 percent, that change was also unnecessary to make the tax package revenue neutral. The top rate on capital gains was raised by 40 percent to create an impression rather than to raise revenue or balance the distribution of tax changes. Once again, the content of tax reform was shaped by the desire for a perception of fairness rather than by the actual likely effects of the proposed changes on the distribution of taxes and the performance of the economy.

The Treasury staff took the tax reform legislation as an opportunity to redesign depreciation rules in a way that they thought would increase the efficiency of the allocation of the corporate capital stock. In order to achieve what was popularly described as a "level playing field," the Treasury staff carefully calculated the depreciation schedules for equipment and structures that they believed would achieve equal effective tax rates on investments in equipment, structures, and inventories.[20] In the process, the overall effective tax rate on capital in the corporate sector was increased. In my judgment, this attempt to achieve a "level playing field" for different types of investments was misguided in three ways.

First, the overall increase in the effective tax rate on the return to corporate capital as a whole increases the distortion between owner-occupied housing and business capital.

Second, the higher effective tax rates on investments in plant and equipment and in inventories increase the distortion within business investment between these forms of tangible investment that must be depreciated over time and intangible investments in such things as advertising, marketing, and price discounting that enjoy immediate expensing.

Finally, the Treasury calculations of equal effective tax rates as a standard of tax neutrality made no allowance for differences in the way that different types of investments are financed. Inventories can be financed by relatively low-cost short-term loans and real estate investments by somewhat more expensive mortgages and bonds, while equipment and research must rely more heavily on equity capital.

It is perhaps ironic that a Republican administration should have passed such

19. For an analysis of the distribution of the corporate tax increase by income class, see Feldstein (1988b).

20. For a discussion of the evolution of the tax changes proposed by the Treasury staff as part of the TRA86 legislative process, see the chapter in this volume by Fullerton.

an antibusiness tax reform bill. In part, this reflected the president's primary interest in personal rather than business taxes and his great desire to reduce the top tax rate. Increasing the corporate tax by $25 billion a year or approximately 25 percent was of course opposed by those businesses that would expect to pay higher taxes. The administration was very clever in defusing this opposition by seeking endorsements from those businesses that were not capital intensive and that would therefore gain more from the reduction in the corporate tax rate than they would lose from the less favorable treatment of capital investments. In addition, the administration promised a variety of corporations that had particular tax and nontax concerns that the Treasury would try to help them if they would publicly support the overall legislation. As a result, the business community as a whole did not offer any unified opposition to these tax changes. Since the total of the Treasury's promises was more than could be accommodated within the overall revenue target, the Treasury jettisoned some of these supporters during the final round of congressional negotiations when it was too late for them to reverse their support.

The general effect of the business tax changes was to reduce the reward to investment and therefore to saving, exacerbating the problem of a low national saving rate. The incentive to save was also reduced in the 1986 Tax Reform Act by narrowing the eligibility for IRAs, by reducing the allowable level of pension benefits, and by increasing the tax rate on capital gains.[21]

The decade ended with personal income tax rates much lower than they were when the decade began and with fewer opportunities for individuals to reduce tax liabilities by creative accounting or by investments that have large tax advantages but few economic profits. Although the lower rates should have supply-side advantages, the decline in the top marginal tax rate from 50 percent to 28 percent (now 32 percent) exaggerates the favorable change since many of those who had faced a marginal tax rate of 50 percent had previously used tax shelters to reduce the effective marginal tax rate on a substantial portion of their incomes. Whether the sharply reduced personal income tax rates of the 1980s will remain in the 1990s is now uncertain.

1.3 Government Spending and Budget Deficits

The budget deficit was the primary problem that concerned me during my two years as CEA chairman (from mid-1982 to mid-1984) and was a continuing source of controversy with some of the other members of the Reagan administration. Even now, a decade later, the deficit remains a major problem that I would regard as the significant negative legacy of a decade of otherwise generally favorable policy developments.

Long before the 1980 presidential campaign, Ronald Reagan had been an advocate of reducing both taxes and nondefense spending. Both these goals

21. For further comments that I made at the time, see Feldstein (1986a, 1986d).

were achieved to a surprising and unprecedented extent during the first two years of the Reagan presidency. The tax cuts turned out to be much greater than expected, while the spending cuts were much less than the president and his advisers had anticipated. The result was an enormous budget deficit that continues until the present.

The failure to correct the deficit reflects a complex mix of personal, political, and economic factors. Before trying to unravel them, I begin with a brief overview of the changes that occurred in the pattern of government spending. I then discuss the role of economic analysis in shaping the changes in the components of government spending. After that, I look in detail at two aspects of budget policy that were important during my years in Washington: Social Security reform and the attempted reform of Medicare and the tax treatment of health insurance. Finally, I discuss the budget deficit itself: its origins, the attempts to control it, and the reasons why it remains unresolved.

1.3.1 The Changing Structure of Government Spending

The broad structure of federal government spending changed dramatically during the 1960s and 1970s. The share devoted to defense fell rapidly, while nondefense spending rose even faster. These trends were halted and reversed in the 1980s. Table 1.1 presents the components of government outlays as percentages of gross domestic product.[22]

Spending for defense (including other international programs) fell from 10.5 percent of GDP in 1962 (a time before the increase in military spending associated with the Vietnam War) to 5.6 percent in 1980. The sharp decline was halted in the 1980s. A substantial investment in defense equipment and a significant rise in military pay raised the defense share of GDP during the first half of the decade to 6.9 percent of GDP in 1986 before it declined again to 5.8 percent of GDP in 1990.

Outlays on the Social Security and Medicare programs for the aged, together with other retirement and disability programs, more than doubled as a share of GDP from 3.0 percent in 1962 to 6.9 percent in 1980. The rapid growth continued during the first two years of the Reagan administration (to 7.8 percent of GDP in 1982) but then declined and stabilized at 7.6 percent of GDP as the very fast real GDP growth during the recovery outstripped the rise in Social Security spending by enough to offset the increases in Medicare costs.

The third major change in the structure of spending, and in many ways the most dramatic, was the sharp reversal of the rise in other nondefense outlays. Total domestic spending, other than Social Security and related programs (shown in row 3 of table 1.1), rose from 4.5 percent of GDP in 1962 to 7.9 percent in 1980. By 1984, it had been cut from 7.9 percent to 5.9 percent, a fall of more than one-fourth in the GDP share. It is, of course, always hard to

22. The figures begin with 1962 because that is the first year for which the Congressional Budget Office provides comparable data.

Table 1.1 Government Outlays as a Percentage of GDP

	1962	1970	1980	1982	1984	1985	1990
1. Defense and international	10.5	8.7	5.6	6.4	6.6	6.8	5.8
2. Social Security, Medicare and related retirement	3.0	4.4	6.9	7.8	7.6	7.6	7.6
3. Other domestic spending	4.5	5.2	7.9	6.9	5.9	6.1	6.1
3a. Domestic discretionary	3.0	3.9	4.9	4.1	3.7	3.7	3.3
3b. Entitlements[a]	2.8	2.6	4.1	4.1	3.4	3.7	2.8
3c. Offsetting receipts	−1.2	−1.2	−1.1	−1.2	−1.2	−1.2	−1.1
3d. Deposit insurance	−.1	−.1	0	−.1	0	−.1	1.1
4. Net interest	1.2	1.5	2.0	2.7	3.0	3.3	3.4
5. Total	19.3	19.9	22.3	23.9	23.0	23.8	22.9
6. Total without deposit insurance	19.4	20.0	22.3	24.0	23.0	23.9	21.8

Source: Congressional Budget Office.
Note: Totals may not equal the sum of individual components because of rounding errors.
[a]Excluding Social Security, Medicare, and related retirement.

know what would have happened without the determined effort of the Reagan administration to cut such spending. But, if spending had continued to grow relative to GDP during the 1980s as it had in the previous two decades, it would have reached 10.8 percent of GDP in 1990. The gap between that hypothetical projection and the actual 6.1 percent spending level represented more than $260 billion a year of outlays.

Despite the fall in total domestic spending relative to GDP, total government outlays relative to GDP showed little change in the 1980s. During the first half of the decade, this was due in equal measure to the rise in defense spending and in net interest payments. For the decade as a whole, the defense increase was only 0.2 percent of GDP. Social Security and related programs rose much more rapidly, increasing by 0.7 percent of GDP. Together these offset half the 1.8 percent fall in other domestic spending, leaving a net decline in spending of only 0.9 percent of GDP. However, the rise in net interest costs from 2.0 percent of GDP to 3.4 percent caused total government outlays to rise from 22.3 percent of GDP in 1980 to 22.9 percent in 1990.

These figures are somewhat misleading because of the large outlay for deposit insurance in 1990 (equal to 1.1 percent of GDP) after the deposit insurance program showed small surpluses over the previous decade. A more appropriate analysis would exclude deposit insurance outlays since these represent only the explicit recognition of losses that had accrued over a period of years.[23] When deposit insurance is excluded, the category "other domestic spending" declines from 7.9 percent of GDP in 1980 to 5.0 percent of GDP in 1990.

23. That procedure is followed by the Congressional Budget Office in many of their analytic comparisons. A further reason for excluding deposit insurance outlays is that some of those outlays are for the purchase of assets that will later be sold (see Feldstein 1989b).

Because of the 0.2 percent of GDP rise in defense spending and the 0.7 percent of GDP rise in Social Security and related programs, total noninterest spending was down 2.0 percent of GDP. Even after the 1.4 percent of GDP rise in net interest payments, total government spending was down by 0.5 percent of GDP.

Nevertheless, for many conservatives, the attempt to shrink government spending had failed. This hardened their opposition to tax increases to deal with the budget deficit. But, within the increased total outlays, there had been a dramatic and unprecedented reduction in domestic spending. The conservatives had achieved a greater budget victory than anyone could have anticipated in 1980. But, because many conservatives refused to recognize their own political success, they were not prepared to adjust the revenue side of the budget to shrink the deficit.

Before looking at the budget deficit debates in more detail, I will examine the impact of economists on the character of the spending changes that did occur.

1.3.2 The Role of Economic Analysis in Spending Reforms

Defense

Economic analysis and economists had little influence on the overall level of defense spending. I cannot judge the extent to which economists and defense analysts who criticized particular weapons systems did affect the shape of the defense budget. But the overall level of defense spending was not the result of adding up a series of individual decisions. The administration's target level for total defense spending was decided by the president and Defense Secretary Casper Weinberger and then negotiated with the Congress in similarly aggregate terms.

The national mood at the beginning of the 1980s favored increased defense spending. American military power and influence appeared to be eroding around the globe. The embarrassing failure of the attempted rescue of American hostages in Iran (when the military equipment failed in the desert and the entire mission had to be abandoned) was a symbol of declining capability. There was also a sense that the end of the draft and the erosion of military pay had led to a decline in the quality and morale of the armed forces.

In 1980, President Carter and candidate Reagan both promised that they would raise defense spending if elected for the next four years. During the last two years of his presidency, Jimmy Carter had actually increased defense outlays significantly, from $126 billion in fiscal year 1979 to $172 billion in fiscal year 1981. Even allowing for an approximately 23 percent rise in the price level during this time, real defense spending rose by 11 percent from 5.2 percent of GDP to 5.8 percent of GDP. President Reagan accelerated the increase in defense spending in order to put pressure on the Soviets, to enhance U.S. military capability, and to increase the morale and quality of the services through higher pay.

Cap Weinberger, himself a former Office of Management and Budget

(OMB) director, was able to keep defense spending outside the regular budget process. Although the OMB reviewed the details of the defense budget, the overall level of defense spending was decided by the president and the defense secretary alone, something without parallel in the other spending departments and a continuing source of frustration to OMB Director David Stockman.

After 1983, Congress tried to reduce the budget deficit by cutting the growth of defense spending. There was a growing public debate about whether the amount of defense spending requested by the administration was justified and about whether the rise in defense outlays was responsible for the budget deficit.

When I was CEA chairman, I recognized that as an economist I didn't have the expertise to judge the proper amount of defense spending. My view, which I repeatedly stated publicly, was that the nation could certainly afford the current and projected levels of defense spending if we were willing to pay for them by raising taxes or cutting other spending. Privately, I tried unsuccessfully to enlist Weinberger as an ally in the internal debate over raising taxes by arguing to him that, without higher taxes, Congress would cut the administration's defense requests more sharply than if there were the additional revenue to pay for the increased defense outlays. The president continued to ask for large spending increases for defense but eventually accepted Congress's demand for smaller increases rather than accede to larger tax rises.

Domestic Discretionary Spending and Entitlements Other than Social Security and Medicare

In contrast to the negligible role that economics played in shaping the size and composition of the defense budget, economic analysis did have a substantial impact on the myriad annually appropriated nondefense programs (the so-called domestic discretionary budget) and the smaller "entitlement" programs other than Social Security, Medicare, and related retirement programs. Although the economics profession as a whole pays relatively little attention to most of these programs, those economists who had studied them were often critical of individual programs. They criticized them for having costs that exceeded the resulting benefits, for transferring to the government things that could be better done in the private sector, and for creating adverse incentives for individuals and businesses. Such programs would have been worth cutting or eliminating even if there were not a large budget deficit.

Economists were generally not involved in the detailed legislative process dealing with these spending programs, but there is no doubt that economic reasoning set the framework for selecting appropriate spending cuts. Specific program cuts generally originated in the OMB. David Stockman was not only a brilliant budget director but also a "natural" economist who instinctively focused on programs that an economist would identify as suitable for cutting.[24]

24. Describing Stockman as a "natural" economist may be misleading. When I met Stockman at the beginning of his first term in Congress, he had done some systematic reading of economics and continued to read nontechnical economics during his years in Congress.

The budget ax fell heavily on such things as the Carter energy program, transfer programs that created adverse work incentives, wasteful intergovernmental grants, and similar activities.

Table 1.1 shows that, between 1980 and 1984, the combination of nondefense discretionary spending and the group of smaller entitlement programs was reduced from 9.0 percent of GDP to 7.1 percent of GDP, a drop of more than one-fifth of the former GDP share. Although some of the initial 1981 spending cuts were eventually restored, the decade ended with these programs down to only 6.1 percent of GDP. In contrast to this 32 percent decline in the GDP share in the 1980s, the corresponding spending share of GDP had risen by more than 12 percent in the 1960s and by 38 percent in the 1970s. David Stockman is undoubtedly too modest in his comments in this volume when he says that he and President Reagan had done little to reduce domestic spending.

Two things are striking about these cuts in nondefense discretionary spending. First, the major spending cuts were largely enacted during the first legislative year after President Reagan's inauguration.[25] Second, the political power of the aged allowed them to avoid cuts in the programs that specifically benefited them. Instead, the cuts fell primarily on small programs with changing groups of beneficiaries like unemployment insurance.

Net Interest Costs

Interest payments on the national debt increased from 2.0 percent of GDP in 1980 to 3.4 percent in 1990. The primary driving force in this increase was the growth of the national debt that resulted from the large budget deficits. The increase in the debt held by the public, from 26.8 percent of GDP in 1980 to 44.2 percent in 1990, accounts for nearly all the rise in the interest outlays.

Although the net interest payments on the government debt were a large and rising component of total government outlays in the 1980s, the Treasury Department failed to accept economic advice on how that debt service cost could be reduced. Throughout the decade, the administration issued forecasts that inflation and interest rates would continue to decline. These forecasts were sincerely believed and turned out to be correct. The Treasury nevertheless failed to accept the logic of their own forecasts by borrowing short in anticipation of the declining rates. Instead, the Treasury actually lengthened the maturity of the debt.

The national debt might instead have been managed in a way that significantly reduced the government's interest cost. Although interest rates were higher at the start of the decade than they had been in the 1970s, the level of

25. This reflected not only the substantial size of the early successes but also the loss of the effective control of the House of Representatives that occurred after the 1982 election. Although the Republicans were a minority in the House in 1981 and 1982, the coalition of Republicans and conservative Democrats supported the Reagan spending reforms. The Republicans suffered substantial losses in the 1982 congressional election because of the recession and the abortive attempt at cutting Social Security benefits, a subject to which I return later in this essay.

interest rates then fell sharply throughout the decade. The interest rate on ten-year bonds fell from 13.9 percent in 1981 to 7.7 percent in 1986 and then remained under 9 percent for the rest of the decade. Shorter-term rates fell even faster. The yield on a three-year Treasury security fell from 14.4 percent in 1981 to 7.1 percent in 1986 and then stayed below 9 percent.

In 1983, when the interest rates on ten-year bonds were still over 10 percent and the administration was forecasting a sharp fall in rates over the next five years, I suggested that the Treasury either borrow short (with the prospect of lengthening later when rates had declined), or use a floating-rate note, or link the interest rate to the rate of inflation.

Such suggestions were rejected by Treasury Secretary Don Regan for reasons that I could never understand. He argued, for example, that indexing the interest rate to inflation would indicate that we had lost confidence in our ability to reduce inflation in the future. I explained (to no avail) that the opposite was true. While the unwillingness of financial markets to lend to a government on a long-term fixed-rate basis is evidence that the market lacks confidence in that government's ability to control inflation, the United States was clearly able to issue long-term debt. Our decision to borrow with an interest rate that was linked to inflation or to Treasury-bill rates would show our confidence that rates would decline in the future.

But debt management is quite definitely a Treasury responsibility, and the CEA can only offer friendly advice. The Treasury not only failed to respond to its own interest rate forecasts but continued a policy, begun under the Nixon and Carter administrations, of deliberately lengthening the maturity of the debt. The average length of the privately held public debt rose from three years and nine months in 1980 to over six years in 1990.

1.3.3 Social Security Reform

The Social Security reforms enacted in 1983 were among the most remarkable domestic policy developments of the decade, not only in the magnitude of the changes that were made, but also in the procedure that was followed and in the incongruity of the reforms with the basic philosophical position of the president.

When I joined the administration in 1982, I had been studying Social Security for more than fifteen years since my days as a graduate student. I was (and remain) convinced that the provision of high Social Security benefits substantially reduces private saving and is a significant cause of our low national saving rate (Feldstein 1974, 1985c).

Social Security was on the administration's agenda from the start for two reasons. Such a large program (it represented 4.4 percent of GDP in 1980) could not be ignored in any attempt to reduce total government spending. Moreover, the Social Security program was itself in financial trouble with payroll taxes too low to cover current or projected benefits. The trust fund was shrinking and would soon be depleted unless some action was taken. This problem provided the opportunity for a serious consideration of Social Security reform.

In addition to containing detailed proposals for changing taxes and spending, the administration's original 1981 budget plan identified one major deficit reduction only by a set of asterisks and a promise that more detail would be given later. These asterisks actually denoted a major reduction in projected Social Security outlays that the administration had not yet designed in detail.

The president had been advocating a reduction of Social Security benefits for at least a decade. He objected to the payment of benefits to older individuals with high incomes and thought it wrong to have such high payroll taxes for a system not based on need. But he had gotten into political trouble himself once in proposing a change in Social Security in the 1976 presidential election primaries. He therefore instructed the OMB in 1981 to design a reduction of Social Security outlays without actually cutting benefits to any person sixty-five years old or older. Such a constraint need not have interfered with a long-term strategy for slowing the growth of Social Security, especially if the president's restriction could be interpreted to refer to nominal dollars so that a modification of the full benefit indexation was acceptable. But the need for substantial short-term budget cuts and for an immediate remedy of the Social Security program's financial problem caused OMB to formulate a short-term plan that satisfied the president's specific injunction against cutting benefits of those over age sixty-five but violated its spirit by proposing sharp benefit reductions for retirees between the ages of sixty-two and sixty-four. The OMB proposal called for an immediate and very substantial (20 percent) cut in the benefits of anyone who took early retirement at age sixty-two with pro rata reductions for those who retired between the ages of sixty-two and sixty-five.

The proposal for an abrupt reduction in benefits of individuals who were expecting to retire very soon caused a political uproar. The members of Congress were so opposed to the idea that none of them was prepared to introduce the administration's plan. Indeed, the Senate soon passed a unanimous sense-of-the-Senate motion putting themselves on record as opposed to any substantial cut in benefits.

A similar political fiasco occurred over the administration's plan to eliminate the floor on Social Security benefits.[26] Although the minimum benefit recipient conjures up the image of an individual with very low income, many of the minimum benefit recipients are retired government workers with substantial pensions who qualified for the minimum Social Security benefit by working in private industry for a few years after leaving government employment.[27] Retir-

26. Social security benefits are based on a formula that relates the level of benefits to the inflation-adjusted average monthly earnings during the individual's working life with a variety of adjustments to eliminate anomalous years. If this calculation results in a benefit below a prescribed minimum, the law provides that the individual will receive the minimum benefit.

27. Federal employees did not at that time participate in Social Security but could qualify for benefits by working in private employment before or after their years with the government.

ees who have very low Social Security benefits and no other income are entitled to means-tested Supplemental Security Income benefits. Nevertheless, the proposal to eliminate the minimum benefit was easily misinterpreted by its opponents and used to criticize the Reagan administration for denying Social Security to the "most needy" beneficiaries. The legislation repealing the minimum benefit was subsequently reversed by the Congress.

As a result of these two misjudged proposals, the Democrats were able to attack congressional Republicans who were running for reelection in 1982 as opponents of Social Security and of the aged. The Republicans eventually suffered substantial election defeats and lost effective control of the House of Representatives. The memory of those losses deterred congressional Republicans from supporting modifications of Social Security in future years.

Nevertheless, the financial gap in Social Security funding remained and had to be addressed. In an attempt to limit the damage to Republicans in the 1982 election, the president proposed that a solution to the financial problems of Social Security be worked out by a bipartisan committee headed by former CEA Chairman Alan Greenspan with members appointed by himself and by the Republican and Democratic congressional leaders. The committee would report in December 1982, after the election. The proposal was supported by the congressional leadership of both parties.

During the months before the election, the Greenspan Commission did work separately from the White House and other parts of the administration. There were, however, private discussions among the administration senior staff and with the president. In these private discussions, the president stressed his desire to see the financial problems of the Social Security program resolved by reducing the growth of future Social Security benefits. He recalled that the program began with a promise that the combined tax rate would never exceed 2 percent, and he resented the pressure to raise taxes from the existing 13.4 percent level. He wondered why the Social Security program could not be privatized and reluctantly accepted the explanation that continuation of the existing Social Security payroll taxes was needed to finance benefits of the current retirees.

Dave Stockman and I analyzed and discussed possible Social Security reforms. I favored a change in the indexing of Social Security benefits, shifting from the existing law that maintains postretirement benefits constant in real terms to indexing benefits by 3 percent less than the inflation rate. A 3 percent threshold would still protect beneficiaries fully from any increase in the inflation rate above 3 percent. Limiting the index modification to five years would mean that no individual's real benefit would be cut by more than 15 percent. The lowest 25 percent of benefits could be exempted from the adjustment without significantly altering the prospective savings. Stockman, who also wanted to shrink Social Security, focused on more opaque options, such as changing the "bend points" in the Social Security formula (i.e., the income levels at which the ratio of benefits to the individual's average previous earnings changes).

In December 1982, the Greenspan Commission announced that it was at a stalemate with Democratic and Republican members sharply divided on what should be done. The Democrats were unwilling to reduce benefits or postpone the retirement date. The Republican members did not want to close the Social Security financing gap by tax increases alone. But, without a unanimous report, Social Security would be thrown back into partisan controversy.

James Baker, then White House chief of staff, was having active discussions with commission member Alexander Trowbridge, a Democratic appointee, former Commerce Department secretary, and current head of the National Association of Manufacturers. It was never clear to me why Trowbridge was our negotiating contact with the commission. Baker reported to the White House Social Security group[28] the "compromise" that Trowbridge suggested for closing the Social Security financing gap: advance the date of a future payroll tax increase that had been enacted during the Carter years; subject half the Social Security benefits of married recipients with incomes over $32,000 and single recipients with incomes over $25,000 to personal income taxation (with the resulting revenue transferred from the Treasury to the Social Security trust fund); and require all employees of nonprofit institutions and new employees of state and local governments to participate in the Social Security program. There would be no reduction in benefits or postponement of the retirement age.

The president was clearly very unhappy with the proposed "compromise." The administration's group monitoring the Social Security issue discussed the option of encouraging the Republican members to remain firm. There would then be no commission plan, and the administration could propose a solution to the Social Security financial crisis that was more in keeping with the president's preferences.

I supported this strategy and advocated a change in benefit indexing as a way of achieving substantial outlay reduction over time without actually "reducing any checks in the mail." that is, without actually causing a decline in any individual's monthly Social Security check. I knew that the public opinion polls being conducted by the Chamber of Commerce and by the president's pollster (Dick Wirthlin) showed that the public favored limiting Social Security indexing to the same partial rules that prevailed in private industry. I described this to the president and made the case for a 3 percent threshold on benefit indexing.

The president talked about going on television, explaining to the viewers that high-income individuals should not be getting Social Security benefits from the government and that most retirees were getting much more in benefits than they had paid for. The only way to avoid higher taxes for younger families

28. The group that met with the president and vice-president to discuss these issues was David Stockman, Don Regan, White House Domestic Policy Adviser Ed Harper, Jim Baker, Presidential Counselor Ed Meese, Dick Darman (Jim Baker's deputy), Cabinet Secretary Craig Fuller, Legislative Affairs Director Ken Duberstein, Communications Director David Gergen, and myself.

was to slow the growth of benefits. It looked for a while as if the combination of a Social Security financing crisis and a conservative president would bring about the reduction in the size of the Social Security program that I thought was desirable for quite different reasons.

But, as the discussion continued, Jim Baker argued that that was too dangerous a strategy politically and that it would cause Republicans as a party to be stigmatized as being opposed to Social Security and to the aged. He argued that even if the polls currently implied that the public would support the president's ideas, that support would not persist after the Democrats mounted a campaign against the proposed changes. In any case, Baker argued, the Republicans in Congress had been hurt in the 1982 elections by the administration's Social Security proposals and would not support any proposal that could be characterized as a plan to shrink Social Security.

Although, as a general rule, I did not get involved in congressional negotiations, in this case I wanted to see for myself how much potential support the president would have if he proposed to modify Social Security indexing or some other aspect of Social Security benefits. My visits with congressional Republicans were not encouraging. While most of them spoke about the desirability of limiting benefit growth rather than raising taxes, almost every one of them explained why in his own particular case it would be much easier to vote for a bipartisan plan to raise payroll taxes than to support a controversial presidential initiative to slow benefit growth. The benefits of reducing the relative size of Social Security and thereby avoiding a 2 percentage point increase in the payroll tax seemed too small and the cost to Republicans of reducing Social Security benefits—even if only the growth of those benefits—politically too high for them to take on what would have become a partisan issue.

What would have happened if the president had decided to "go to the people" will never be known. He decided to follow Jim Baker's advice to accept a compromise plan proposed by the Greenspan Commission's Democrats. He indicated some modifications that he wanted and said that he would encourage the Republican members of the commission to accept the modified plan. He rationalized that the payroll tax increase was really just an advancing of the date of a tax increase that had been proposed by President Carter and therefore not really "his" tax increase. Similarly, he accepted the interpretation that subjecting half the benefits of the higher-income aged to the income tax was really equivalent to a reduction of benefits (ignoring the fact that it would be a reduction related to taxable income and therefore similar to a tax increase on higher-income taxpayers; although not indexing the income level at which such taxing begins would eventually make this a virtually universal tax, it would still be a greater tax on individuals in higher tax brackets). Expanding Social Security to currently uncovered workers could be regarded as closing an existing loophole.

Although the size of Social Security was not reduced, Social Security rules were changed in several ways that economists had long advocated to reduce the distortion in retirement behavior. First, the reduction of benefits for "retirees" with earnings above a threshold amount was reduced from fifty cents per dollar of extra earnings to thirty-three cents. Second, the increase in benefits for those who delayed retirement beyond age sixty-five was raised and scheduled to go on rising for future retirees until eventually the benefits would be actuarially equal regardless of the age of retirement. Finally, although the commission did not have the political courage to raise the retirement age, the Congress did modify the commission's proposal and enact a postponement of the retirement age at which full benefits would be payable from sixty-five to sixty-seven in the next century.

With these changes in taxes and future benefits, the Social Security actuaries could project that the system would remain solvent for the seventy-five-year Social Security forecast period. There would be a substantial Social Security surplus for several decades. This surplus would permit a fund to accumulate that could be used to meet the rising benefit obligation that would occur as the baby-boom generation retired after 2020 without increasing the payroll tax rate at that time. Surprisingly, this feature of the reform received relatively little attention in our discussions, which focused instead on the implications of the reforms for the Social Security finances in the 1980s and for the next few years of budget figures.

The Social Security reforms of the 1980s were one of the great ironies of the Reagan administration. Here was a president who wanted a substantial reduction in Social Security benefits. His OMB director and CEA chairman were also eager for such reductions. A substantial deficit in the Social Security program had forced a consideration of future benefits and taxes. Yet, when the dust settled, the Social Security program had not been reduced but had actually been given a more secure future. The 1983 legislative changes in Social Security thus removed the pressure for immediate benefit reductions, helped maintain confidence in the future benefit payments, and reduced the prospects of a substantial future benefit reform induced by a subsequent financial crisis as the total cost of benefits increased. The tax increases enacted in 1983 meant that, for the next seventy-five years, it would not be necessary to increase taxes again to meet the obligations that would result from the increased number of retirees. The size of the Social Security program was significantly enlarged by extending mandatory coverage to all employees of nonprofit institutions and eventually to all state and local government employees. The financing barrier between the proportional payroll tax earmarked for Social Security and the graduated personal income tax was broken by transferring funds from general revenue to the Social Security trust fund.

1.3.4 Reforming Medicare and the Health Insurance Tax Rules

In the fifteen years after it began, the Medicare program of health care for the aged grew from \$3.2 billion in 1967 to \$49 billion in 1982. Unlike Medicaid, which is means tested and financed in part by the individual state governments, Medicare is a program for all the aged, and it is fully financed by the federal government.

Health care was another area that I had been thinking about since my student days. By the early 1980s, experts agreed that Medicare's existing system of comprehensive insurance and cost-plus hospital reimbursements was a major contributor to the explosive rise in the cost of the Medicare program and more generally to the national rise in health care costs. My own research over the years had convinced me that greater out-of-pocket payments by patients at the time of care (i.e., increased deductibles and coinsurance) would make patients and their doctors more cost conscious and would thus improve the allocation of health care resources and reduce the excessive rise in health care costs.[29] I was also convinced (and remain convinced) that the exclusion of employer health insurance payments from taxable income caused health insurance to be much more complete and to have less cost sharing by patients at the time of care than would have been true without the implicit tax subsidy (Feldstein 1973; Feldstein and Allison 1974; Feldstein and Friedman 1977).

I was pleased, therefore, that the desire to limit the increase in Medicare costs and the search for ways to increase tax revenue by "closing loopholes" put health care reform on the agenda as we prepared the budget to be submitted in February 1984.

The basic tax reform idea was to limit employers' ability to provide tax-free income in the form of health insurance premiums. Political reality precluded including all employer-provided health benefits in taxable income. At most, the amount of tax-free income could be limited either by including in the employee's taxable income any employer payments over a certain level or by denying firms the usual business expense deduction for insurance premiums above a certain level. Either option would provide the correct incentive at the margin for employees with high levels of employer-provided health benefits. Indexing the tax-free limit to the general level of consumer prices would cause it to rise more slowly than medical care costs and therefore to become more significant over time.

The proposed change in the tax rule was described publicly as a way of raising tax revenue by closing a tax loophole that disproportionately favored high-income taxpayers. The idea that it would change the character of health insurance and therefore the patterns of health care was considered better left unsaid.

A parallel change was discussed for Medicare with an emphasis on increasing various deductibles and coinsurance payments to be paid by patients at the time that care is received. I favored this as a way of improving incentives in the choices of medical care. The budgeteers at OMB thought that it would be a good idea even if there were no behavioral response since it would reduce the cost of the Medicare program.

These tax changes and Medicare reforms were proposed by the president but died in the Congress. In retrospect, I believe that we set the limits on tax-

29. Several of my papers dealing with health insurance and hospital costs are collected in Feldstein (1981b).

free insurance premiums too low. Since many union contracts provided for benefits above the allowable level, the unions strongly opposed the proposed change on the basis of their members' immediate interests as well as on more general philosophical grounds. Similarly, too many Medicare recipients would see significant increases in their out-of-pocket costs. It would have been better to establish the principal of limiting the tax subsidy by setting much higher limits for tax-free employer payments and permitting the rise in medical care costs to make the limit binding for an increasing number of individuals over time. Similarly, it would have been better to introduce coinsurance payments at much higher levels of Medicare benefits and allow general medical care inflation to make these more broadly applicable over time. Because of the administration's eagerness for immediate revenue rather than structural reform, we got neither. In this way, the Medicare experience was very similar to our earlier experience with Social Security reform.

The analysts at the Department of Health and Human Services (HHS) were developing a different approach to Medicare reform. The HHS approach was to replace the existing system of reimbursing hospital costs with a system of paying specific fixed prices for patients in each of several hundred individual diagnostic groups. The HHS officials argued in interagency meetings that this would make the purchase of hospital care by the Medicare program similar to the market system by which the government procured other goods and services: setting a price and buying from vendors who would sell at that price. I argued unsuccessfully that this analogy was faulty because paying for the treatment of a patient with a particular diagnosis was very different from buying ordinary products and service. I was never certain whether the HHS officials really believed in the "market system" analogy of the proposed payment system or just regarded that as a useful way to sell their cost regulation plan to a market-oriented administration.

Although I liked the idea of ending the traditional cost-plus approach to reimbursing hospitals, I worried that the proposed HHS system would create an extensive bureaucracy to check that patients were correctly classified, to monitor the patients who were admitted to hospitals (to reduce unwarranted admissions), and to make certain that patients were not "undertreated" in order to keep costs down. It seemed ironic that a strongly market-oriented administration would not strengthen the market mechanism in medical care (by introducing copayments or competition among group providers) but should instead accept government price setting and detailed bureaucratic supervision for its largest domestic procurement.

1.3.5 Budget Deficits

Although the federal budget has been in deficit in all but nine years in the past half century, the deficit soared to new heights in the 1980s. These deficits absorbed more than half of net domestic saving, putting upward pressure on real interest rates and inducing a massive trade deficit in the 1980s.

But, unlike inflation and unemployment, the deficit is not visible to the general public, and its links to the future performance of the economy remain vague and poorly understood by almost everyone. The traditional association of deficits with inflation was clearly shown to be wrong by the U.S. experience of the 1980s. I regarded it as one of my important tasks to educate not only my administration colleagues but also the relevant members of Congress and the public at large about the long-run adverse effects of budget deficits. Only if they understood the serious long-run effects would they be willing to incur the short-run costs that would be needed to reduce the deficit.

Looking back on the decade of the 1980s, too little was done to cut the deficit and to restrain its future growth. The political costs of deficit reduction clearly and understandably exceed the political benefits of a smaller deficit and a higher national saving rate. That something was done in almost every year to shrink the deficit showed that the president and key congressional leaders did care about the problem. That more was not done showed that they did not care enough.

Sources of the Increased Deficit

In fiscal year 1984, more than a year after the start of a strong economic recovery, the deficit had reached 5.0 percent of GDP. The sharply rising deficit had generated a debate about its sources that sought to place blame and to justify alternative remedies. The administration's critics charged that this was due to excessive tax cuts and large increases in defense spending. The administration responded that much of the deficit was inherited from the Carter administration, that it had been enlarged by the recession, and that the real problem lay in rising entitlement costs and other so-called uncontrollables.

There were enough facts to support almost any conclusion. Debaters could prove almost anything by taking about nominal levels of taxes and spending: "How could tax cuts have caused the deficit since revenues actually rose from $517 billion in 1980 to $666 billion in 1988?" and "Despite the attempts to control domestic spending, nondefense outlays rose from $444 billion in 1980 to $607 billion in 1984; even if Social Security and Medicare outlays are excluded, domestic spending rose by nearly $80 billion."

The only way to make sensible comparisons is to look at ratios to GDP.[30] Between 1980 and 1984, the deficit rose from 2.8 percent of GDP to 5.0 percent of GDP, implying that more than half the deficit had been there when President Carter left office. The result is similar if we look at the cyclically adjusted structural deficit. The Congressional Budget Office estimates that the 1984 structural deficit (calculated at a 5.8 percent unemployment rate) was equivalent to 3.6 percent of GDP. Since the corresponding structural deficit for

30. The most recent figures from the Congressional Budget Office (*The Economic and Budget Outlook: Fiscal Years 1993–97* [1992]) now state ratios to GDP, and I use these figures even though we were looking at GNP ratios in the 1980s.

1980 was 1.8 percent of GDP, half the structural deficit was inherited from the Carter administration.

Roughly one-third of the 2.2 percent of GDP rise in the deficit between 1980 and 1984 can, in a purely arithmetic sense, be attributed to higher spending (total outlays rose by 0.6 percent of GDP) and the remaining two-thirds to lower taxes as a share of GDP. But the more one disaggregates the spending and tax totals, the more ambiguous the sources of the deficit become. For example, the "uncontrollable" outlays for Social Security and related programs and for net interest rose by 1.7 percent of GDP over the same four years, accounting for more than three-fourths of the increase in the deficit. Since "other domestic spending" fell relative to GDP by 2 percentage points (from 7.9 percent to 5.9 percent), this was more than enough to offset all the revenue decline (from 19.6 percent of GDP to 18.0 percent).

The most common view of the 2.2 percent of GDP increase in the deficit between 1980 and 1984 attributed it to a combination of the revenue decline (1.6 percent of GDP) plus the rise in defense outlays (an increase of 1.0 percent of GDP). But, to those who made this argument, it could reasonably be replied that the cut in "other domestic spending" paid for more than 75 percent of the combined effect of lower taxes and increased defense outlays.

For the decade of the 1980s as a whole, the combination of increased defense spending (from 5.6 percent of GDP to 5.8 percent) and the relative decline in revenue (from 19.6 percent of GDP to 18.9 percent) added only 0.9 percent of GDP to the deficit, less than one-third of the 2.9 percent of GDP decline of "other domestic spending" (excluding deposit insurance payments). The 2.0 percent of GDP rise of the deficit in the 1980s (0.9 percent if deposit insurance payments are excluded) can be more than accounted for by the combination of the increase in Social Security and related outlays (an increase of 0.7 percent of GDP) and in interest on the national debt (an increase of 1.4 percent of GDP).

No unambiguous resolution of the "sources of the deficit" is possible because the individual components can be combined in many different ways to support different points of view, each of which is true but incomplete.

The 1981 Tax Cuts

There is no ambiguity, however, about the fact that the tax cut enacted in 1981 provided a much larger decline in revenue than the administration had expected when that legislation was proposed or passed. The primary reason for this was that inflation declined much more rapidly than had originally been expected. A second but less powerful reason was that real economic growth was lower than projected in 1981. Finally, as Don Fullerton's chapter documents, the tax bill that emerged from the Congress was much more generous to business taxpayers than the original administration proposal.

A calculation that I made in January 1983 for discussion with the president and other members of the budget group[31] shows just how much greater the personal tax cuts were turning out to be than had originally been intended. The administration's original proposal for a series of three 10 percent cuts in personal tax rates ("10–10–10") was projected in the February 1981 budget calculations to reduce individual income tax collections to 11.3 percent of personal income in 1986. But, using the January 1983 economic forecast, individual income tax payments in 1986 would be only 10.1 percent of personal income.

This sharp decline in projected tax revenue was due almost completely to the revised economic outlook, particularly to the lower rate of inflation and therefore the reduced extent to which "bracket creep" would raise real tax liabilities. The extra tax breaks for individual taxpayers that Congress had voted in 1981 were just about offset by the effect of substituting a 5–10–10 schedule of rate cuts for the originally proposed 10–10–10 schedule of rate cuts. Substituting the actual 1981 tax legislation (the Economic Recovery Tax Act) for the proposed 10–10–10 plan, but retaining the 1981 economic forecasts, only reduced the projected revenue share of personal income from 11.3 percent of personal income to 11.2 percent.

I produced these numbers to support the case for a "mid-course correction," a revision of the third part of the 5–10–10 tax cut or a modification of the inflation indexing of personal tax brackets that had been enacted in 1981 and that was scheduled to begin in 1985. I argued that, if the president had been satisfied with the relative tax burden projected in 1981 (i.e., that individual income taxes would equal 11.3 percent of personal income in 1986), a modification of existing tax rules was now necessary to achieve those original targets.

The president was not persuaded by this argument. The original proposal for a 10–10–10 tax cut was aimed not at achieving a particular relative tax burden but at cutting taxes as much as feasible. Viewed from the perspective of 1980, the implied level of taxes hardly represented any decrease at all. The administration's 1981 projection that 10–10–10 would lower the ratio to 11.3 percent in 1986 was essentially only equivalent to maintaining the current tax share unchanged, not even seeking to return to the tax share of the middle of the 1970s. Individual income tax payments were 11.0 percent of personal income in 1979 and 1980 and 11.5 percent in 1981, up sharply from less than 10 percent of personal income in the mid-1970s.

The key reason for this very small decline in the projected level of individual taxes relative to personal income was the substantial "bracket creep" rise in effective tax rates that was expected to result from the combination of inflation and real income gains in the early 1980s. The February 1981 budget assumed that inflation would decline from over 10 percent in 1980 to 7.7 percent in

31. The small group that met intensively with the president in January to make decisions on all aspects of the budget consisted of Vice-President Bush, the three senior economic officials (Don Regan, Dave Stockman, and myself), and several White House staff members (Ed Harper, Jim Baker, Ed Meese, Dick Darman, Craig Fuller, Ken Duberstein, and Dave Gergen).

fiscal year 1982. The actual decline was to less than 5 percent. The forecast also projected strong real GNP growth of 5.2 percent for the coming year. This real growth projection might not have seemed unreasonable for an economy that was just coming out of the 1980 recession and that was then experiencing real GNP growth of more than 6 percent (in the fourth quarter of 1980 and the first quarter of 1981) and still had an unemployment rate of 7.5 percent. You didn't have to believe in supply-side miracles to anticipate such real growth, although there were some inside the administration who were expecting even stronger real growth before CEA Chairman Murray Weidenbaum persuaded them that such high real growth estimates were likely to be too optimistic.

Some of us outside the administration criticized this forecast as inconsistent with the Federal Reserve's very tight monetary policy (Feldstein 1981a). The interest rate on three-month Treasury bills was over 14 percent, and long-term government bonds had a 13 percent interest rate. The Fed had expressed a determination to slow the growth of nominal spending and bring down inflation.

In contrast to the administration's prediction of nominal GNP growth over 13 percent, the actual nominal GNP growth in the fiscal year that began in October 1981 was only 4.2 percent, with real GNP falling at a rate of nearly 2.0 percent. Although real GNP recovered and grew more rapidly over the next few years, inflation came down much more rapidly than either the administration or others had forecast, resulting in substantially less "bracket creep" and lower tax revenues than had been forecast.

Although the press joked that the administration's forecast had been prepared by Ms. Rosy Scenario, the big revenue error in the five-year budget forecast came not from overoptimism but from being too pessimistic about the speed with which inflation would be reduced. Nevertheless, the label "Rosy Scenario" stuck, and the administration's lack of credibility greatly increased the difficulty of the fiscal year 1983 budget negotiations in 1982 and reduced public support for the administration's policies.

The 1982 Tax Increase

The weakness of the economy and the rise of interest rates in 1981 quickly made it clear to careful analysts that the budget deficit would be more than the administration's initial projections. But it was the sharp decline of the stock market between March 1981 and a year later that, more than any other single thing, convinced the president that action was needed to reduce the deficit.[32]

32. The fall of the Dow Jones average from 1,000 in March 1981 to about 800 a year later reflected the combination of a weak economy, high interest rates, and the tax changes that reduced the market value of existing capital stock. (By making it less expensive to make new improvements in plant and equipment, the 1981 accelerated depreciation rules reduced the value of the existing capital stock and therefore of share prices that represented the ownership of that capital [see Feldstein 1981d].)

Many financial analysts blamed the stock market decline on the prospect that the fiscal policy would cause large budget deficits that would keep real interest rates high and that might prevent a decline in inflation. The president was persuaded (primarily by Jim Baker and Dave Stockman) that the stock market's decline was evidence that action to shrink the deficit was necessary. Formal negotiations with the Democratic and Republican congressional leadership produced a package of tax increases on business. These tax increases were achieved primarily by repealing some of the generous depreciation provisions of the 1981 tax legislation and the so-called safe-harbor leasing rules that permitted interfirm transfers of tax benefits. The package of tax changes would raise $17 billion in 1983, $38 billion in 1984, and higher amounts in subsequent years.[33]

Although I was not in the administration at the time, I gathered from subsequent conversations with some of those who were involved in the 1982 budget negotiation that the president was persuaded to accept the higher taxes by the assertions of the administration's negotiators (Jim Baker and Dave Stockman) that the congressional leadership had agreed to three dollars of outlay reductions for each dollar of additional tax revenue. Since a formal agreement between the administration and the congressional leaders was never completed, the "details" about the nature of the spending cuts were never spelled out for the president. In fact, the spending cuts that the negotiators were discussing involved little more than some dubious savings through management improvements and the projected reductions in interest on the national debt that the budgeteers assumed would follow from lower interest rates and a smaller debt.

The administration's negotiators knew that the spending reductions would never be achieved but preferred to maintain the fiction to get the president's support for the tax increase. During the years that I was in the administration, the president complained frequently that the Congress had failed to deliver on its promise to cut spending. Republican congressional leaders repeatedly told the president that this was not true since a final agreement had not been reached with the Congress in 1982. But, more important, the facts about the nature of the projected spending cuts themselves were never told to the president. As a result, the president always looked back on the 1982 tax legislation as unsatisfactory because he felt that he never got the spending cuts that he had been promised. That, in turn, made it difficult to get him to consider future budget deals with the Congress in which he would accept higher taxes in exchange for a congressional willingness to accept further cuts in nondefense spending.

The February 1983 Budget

I joined the administration in late August 1982 and immediately began to work on the deficit issue. The $49 billion increase in the budget deficit between

33. These tax changes are discussed on pp. 26–27.

1981 and 1982 was due almost completely to the deep recession.[34] But, although economic recovery would eventually eliminate the cyclical component of the deficit, the tax changes that had been enacted and the spending rules that were on the books implied that the deficit would continue to grow. Estimating the extent of that deficit growth was critical to planning the five-year budget to be submitted in February 1983.

It is politically true and economically desirable that substantial deficit reduction can be achieved only over a number of years. The 1983 budget would provide a suitable five-year policy horizon for implementing a deficit reduction plan. The necessary magnitude of the explicit deficit reduction (through new spending cuts or additional changes in tax rules) would depend critically on the extent to which economic growth (and inflation until the indexing of tax brackets became effective in 1985) would raise revenue without explicit legislative changes.

The medium-term economic forecast that would provide the framework for the budget was therefore crucial for deciding on the needed changes in spending and taxes. Since the budget was not to be used as a tool of short-run demand management, it seemed best to focus on estimating the overall rate of growth to the end of the five-year budget period and not on the year-to-year or quarter-to-quarter fluctuations along the way. Moreover, anything proposed in the February 1983 budget would not take effect before 1984.

With the help of Bill Poole (the CEA member with responsibility for macroeconomic forecasting) and Larry Summers (who was serving as special domestic policy economist on the CEA staff), I prepared a forecast that reflected what we regarded as consensus estimates of the likely changes in labor force and in productivity. We concluded that the most likely annual rate of real economic growth from the first quarter of 1983 to the final quarter of 1988 was 4.0 percent. This was clearly above the long-run potential growth rate of the economy but reflected the recovery from the very deep recession at the time of the forecast.

While I was quite happy to defend a 4 percent trend rate of real GNP growth for 1983–88, there was the awkward question of how to deal with the transition from recession to recovery. In the late fall of 1982, when the economic forecast had to be made final so that revenue and outlay estimates based on it could be calculated by the Treasury and the OMB, there was no clear evidence of an economic upturn (the November trough became clear only in the following year). Most private forecasters were predicting that the recession would end during the next twelve months, but there was no clear consensus on the likely time of the upturn or on the extent of further deterioration before the upturn began.

For the purpose of the five-year budget, however, this short-run uncertainty

34. According to Congressional Budget Office calculations, the structural deficit increased by only $6 billion between 1981 and 1982.

was not relevant. But, if we assumed 4 percent real growth for each quarter in 1983, there was a substantial risk that the entire budget would be dismissed by the Congress and serious private analysts as the work of Ms. Rosy Scenario if the first quarter of the year continued to show an economic decline.

It seemed better, therefore, to assume a lower rate of real growth for the first quarter and then to revert to a 4 percent rate for each quarter until the end of 1988, thereby emphasizing that, after the first quarter, we were using only the 4 percent average growth rate rather than trying to make short-term predictions. A 1 percent rate for the first quarter had the virtue of being greater than zero but low enough that it would not cast doubt on the forecast as a whole even if the economy was still in decline when the budget was presented.

With this assumption, our forecast implied a cumulative 3.9 percent of growth from the fourth quarter of 1982 to the fourth quarter of 1988.

This forecast was criticized inside the administration by those who said that it showed too little faith in the efficacy of the administration's program and who worried that it would imply a need for tax increases to achieve an acceptable deficit forecast. In fact, however, the real rate of economic growth during the five-year forecast period to the fourth quarter of 1988 eventually turned out to be 4.1 percent. The average error of 0.2 percent growth per year means that our forecast implied an underestimate of the fiscal year 1988 revenue of only about $20 billion, or 15 percent of the actual deficit in that year.

During the fall of 1982, I spent considerable time explaining publicly as well as inside the administration that the recent deficit surge was cyclical but that, as the economy recovered, we would still face a substantial structural deficit. I explained also that a persistent structural deficit would inevitably lead to reduced investment in plant and equipment and therefore to lower levels of future real incomes. In the shorter term, the crowding out of direct investment would be postponed by a capital inflow from abroad as the rise in the dollar (that had already begun) depressed net exports. But I was convinced that such a capital inflow would be only temporary and that a persistent decline in domestic saving caused by budget deficits would depress investment by a comparable amount.[35]

I stressed the long-run adverse effects of the deficit: reduced capital formation, lower productivity, and a need for higher taxes in the future just to keep up with the interest costs. But, while stressing the long-run effects, I also recognized the myopia of the political process and therefore discussed ways in which the deficit could hurt the economy in the nearer term. The crowding out of investment and the decline in net exported meant a lopsided recovery, with manufacturing and construction depressed relative to service industries. I ar-

35. My research with Charles Horioka (Feldstein and Horioka 1980) had persuaded me that chronically lower domestic savings rates depress domestic investment by a nearly equal amount. I gave no weight to the so-called Ricardian equivalence idea that larger deficits might induce equal increases in private saving.

gued that a lopsided recovery was inherently less stable than a recovery with a sustainable balance of activities. In addition, the projection of large future deficits could actually depress the overall current level of private spending by raising real long-term interest rates.[36]

I emphasized the desirability of a "backloaded" multiyear strategy for dealing with the deficit. I wanted to see a budget enacted in 1983 that would present a reliable and predictable reduction in the deficit over time, leading to a balanced budget at the end of five years. The ideal path of deficit reduction would be "backloaded" with just enough deficit reduction in the first year to reassure markets that the deficit would actually decline in the future.

I explained the rationale for such a "reliable and predictable backloaded multiyear plan" both during our internal budget deliberations and, after the president submitted his budget plan, in speeches and testimony. It would be wrong to have a large fiscal contraction just as the recovery was beginning. In contrast, a reliable multiyear deficit reduction plan leading to a balanced budget would cause a reduction in long-term real interest rates and in the dollar as financial markets became convinced that deficit reduction would actually occur as predicted. After a further lag of about a year, the lower real interest rate and lower dollar would result in higher levels of investment spending and net exports. The increased aggregate demand from this future spending would balance the contractionary effect of the future deficit reduction.

I emphasized that there was, of course, no way to coordinate the exact timing of the fiscal contraction and the private economic response. The shift from deficit stimulus to increases in investment and net exports involved risks of a "timing mismatch" that could cause the predicted expansion to stall temporarily. But the best strategy for avoiding the permanent damage of persistent large deficits would be to enact a reliable multiyear deficit reduction plan.

The preliminary estimates for the budget to be presented in February 1983 implied that, with no change in taxes or spending, there would be substantial deficits in each of the next five years. Even with the spending cuts that could politically be proposed in the budget (but probably not enacted), the projected deficits would remain unacceptably large. To show significantly declining deficits over the next five years, some kind of tax increase would be needed.

This conclusion, coming on the heels of the 1982 tax increase, was strongly resisted. The only alternative was to increase the projected rate of economic growth. The key White House staff dealing with this issue (Chief of Staff Jim Baker and his deputy, Dick Darman) argued that, even if 4 percent growth was the most likely estimate, it would be politically much better to project a 5 percent annual growth rate. Adding "just one point" to the real GNP growth

36. My views of the adverse effects of structural budget deficits appeared as chap. 1 of the *Economic Report of the President* for 1983 and for 1984 as well as in congressional testimony and public speeches.

rate for five years would reduce the projected budget deficit by about 2 percent of GNP. That stronger growth plus the spending cuts that could be proposed in the president's budget would eliminate the budget deficit as an immediate political problem.

I resisted, pointing out that 5 percent for five years was extremely unlikely. They countered that it might not be likely but that five consecutive years with an average growth rate over 5 percent had actually occurred in the 1960s. I reminded them of the Vietnam War, the subsequent rise in inflation after that expansion had driven the unemployment rate down to an unsustainable 3.7 percent, and our commitment to low inflation. Even if there was some chance that such growth might occur, it was sufficiently unlikely that it would be a mistake to base policy on that assumption. Moreover, a prediction of a 5 percent GNP growth rate for five years would deny credibility to the forecast and to the budget based on it.

None of this was particularly persuasive to those who saw the budget as a political statement rather than a fiscal planning tool and who wanted to avoid a forecast that would force a choice between large deficits and another tax increase. But I was not going to be pushed into a forecast that I thought was implausible or a budget plan that I thought hid the problem. In the end, the CEA forecast was accepted as the basis for the budget.

The "supply-siders" in the Treasury also called for projecting stronger growth on the grounds that, once the recovery began, the revenue gains from the tax cuts enacted in 1981 would be so great that no further tax changes would be needed to eliminate the deficit. They also argued that, even if the deficit persisted, it would be better to allow the deficit to continue than to raise taxes since higher taxes would hurt incentives while there was no evidence that deficits actually did any harm.

The Treasury staff never explicitly raised the so-called Ricardian equivalence argument (that large budget deficits did not matter because any increase in the government deficit would induce an equally large increase in private saving), presumably because it would be impossible to persuade noneconomists to take it seriously. Instead, the debate focused on whether deficits raised real interest rates. There was no doubt that real long-term interest rates were extremely high by past standards. Some argued that this was due to the investment incentives of the 1981 tax legislation. Others argued that it was because of the instability of monetary policy. Treasury Secretary Regan strongly resisted the idea that budget deficits were responsible for high interest rates but occasionally said that budget deficits might raise interest rates because people in financial markets thought they did even though they didn't.

A small group of senior administration officials met for dinner soon after Christmas 1982 for a preliminary, informal discussion of the budget plan. Secretary of State George Shultz, who generally did not get involved in detailed economic policies even though he had been an OMB director and Treasury secretary in the Nixon administration, joined the dinner and proposed an energy tax and an energy import fee. These were to become the centerpieces of the tax component of the 1983 budget.

To deal with the resistance to any tax increase, Ed Harper and I suggested that, as a compromise, the tax increase be made contingent on the future deficit: the tax increase would be legislated in 1983 but would take effect only in 1985 if the deficit remained above a relatively low threshold level. I had no doubt that the deficit would exceed that threshold and therefore expected that the contingent "standby tax" would be "triggered on." If the "supply-siders" and other optimists were right in their belief that growth would be so strong that the deficit would shrink rapidly, the contingent standby tax would be no tax at all. The contingent feature also gave the White House staff and others the ability to talk about their own personal belief that growth would be stronger than our projected 4 percent and therefore that there would be no tax increase.

Either way, the budget with a contingent tax would meet the need for a reliable multiyear deficit reduction plan. With the standby tax, the deficit would shrink to 1.6 percent of GNP by 1987–88. Dave Stockman, who was also skeptical of the supply-siders' claims and eager for a plan that would actually reduce the outyear deficits, supported the contingent tax idea.

The combination of spending cuts and the "conditional" tax increase was accepted by the president as part of the February 1983 budget plan for fiscal year 1984 and beyond. When the budget was first made public, there was a generally favorable reaction to the "realism" of the forecast and the "flexibility" of the president in including the standby tax. Our conversations with the Democratic congressional leadership suggested that there might be a basis for developing a compromise that would actually provide for multiyear declining deficits.

But that was not what either the White House political strategists or Treasury Secretary Don Regan, following their lead, wanted. They had accepted the proposal for a tax increase as part of the president's budget only because that was the only way to make significantly declining deficits compatible with the CEA forecast. But they didn't want Congress to enact another tax increase that would be attributed to President Reagan. They made certain that it would not be enacted by asserting that the contingent tax increase would be acceptable to the president only if all the president's proposed spending cuts were also accepted by the Congress. By adopting a very tough no-compromise strategy in discussing the budget with the Democrats, the White House and the Treasury were able to create a legislative stalemate and then blame Congress for the continued deficits that the president had proposed to reduce.

Although the tough position taken by the White House and the Treasury soon caused the press to declare the president's budget dead, it was never withdrawn. I continued to speak out loudly in favor of it, pointing out the harm of persistent deficits, stressing the president's desire to do something about them, and explaining the case for a multiyear reliable deficit reduction plan even if it had to include a tax increase. Moreover, even if the president's plan was dead for that year, I took the many opportunities that came along to educate the Congress and the pubic about the adverse effects of protracted deficits and the desirability of a backloaded multiyear strategy of deficit reduction.

My emphasis on the potential adverse effects of budget deficits and on the president's willingness to raise taxes as well as reduce spending made me unpopular with the White House political operatives, particularly with Jim Baker and Dick Darman. This led to a series of stories in the press about "the White House's" displeasure with my statements that many who were outside the administration incorrectly interpreted as reflecting the president's opinion.

I recognized that such "leaks" served many purposes. At the substantive political level, they positioned the administration on both sides of the budget issue: the president's chief economic adviser said that deficits are bad and taxes might be accepted as part of a program, while "the White House" said the opposite. Leaks also served as a potential form of intimidation, trying to stop my remarks or even to get me to resign. They never succeeded at either of those goals; indeed, when the press said I was being "silenced," I felt that I had no choice but to make further comments to show that I had not been silenced. Some of the White House staff also used leaks as "favors" to be given to friendly journalists in exchange for favorable press treatment for themselves.

When the leaks about me and the deficit got both loud and frequent, I eventually asked the president to review the parts of my "standard speech" that dealt with the deficit and the budget. He read the pages and gave his "OK" with only the suggestion that I mention the spending cuts in his budget plan before I talk about the proposed tax increases.

The February 1984 Budget

Although the Social Security legislation had improved the revenue outlook, the future deficit situation still looked very grim in the fall of 1983 when we began planning for the February 1984 budget. The economic forecast implied budget deficits of at least $200 billion a year for the next five years, despite steady economic growth and declines in interest rates on government debt that many outsiders considered to be too optimistic. Budget deficits of this magnitude would absorb more than two-thirds of net private saving, leaving a net national saving rate of only about 2 percent of GDP. We would either be dependent on substantial capital inflows from the rest of the world (with the associated massive trade deficit) or see a sharp decline in net investment in business plant and equipment and in housing.

The internal debate about this budget was in many ways a replay of the discussions of the previous year, but those who had opposed tax increases in 1983 were even less receptive to a serious deficit reduction plan now because of three developments: the strong economic growth of 1983; the failure of the budget discussions in 1983; and the upcoming 1984 election.

Real GNP had grown 7 percent from the fourth quarter of 1982 to the fourth quarter of 1983, more than twice the rate that we had projected. The Treasury supply-siders argued that the strong growth in 1983 was a harbinger of continued rapid growth that would generate much more revenue than we were projecting.

Dick Darman argued that the strong growth in 1983 justified assuming that we would grow at 5 percent for the next five years rather than at the 4 percent that we were projecting. The cumulative 5 percent of real GNP would mean additional tax revenue of about 2 percent of GNP by the end of the forecast period, making it unnecessary to propose any tax increase in the 1984 election-year budget.

While the very strong growth in 1983 made it harder to defend our five-year 4 percent forecast, I reiterated that our underestimate for 1983 was a matter of not knowing when the recovery would begin, that GNP growth in the first year of recoveries was generally in the 6 or 7 percent range, and that 4 percent was still the most likely growth over a five-year period. The only concession that I was prepared to make was to assume 4 percent for the next five years from the higher base at the end of 1983.

Despite the administration's seeming willingness to accept a tax increase as part of an overall package, the failure to reach any agreement on the previous budget proposal was also seen by some as an indication that there was no point in trying to compromise in the 1984 budget. In any case, we would be in an election year, when it would be politically attractive to argue that powerful economic growth would solve all problems.

Dave Stockman and I agreed that the deficit problem was too serious to ignore and that an effort had to be made to make some progress. Both of us had been very vocal over the past year about the need for budget action and did not want to go before Congress and the public in early January 1984 with a budget that called for no action and that projected that we would grow our way out of the problem.

I was also encouraged by several cabinet members, who agreed that the deficit had to be reduced and that a tax increase should be accepted as part of a plan for deficit reduction. This group included Special Trade Representative Bill Brock, Commerce Secretary Malcolm Baldrige, and Secretary of State George Shultz. Each had his own reason for not speaking out publicly about his views on this subject, but they all did make their position clear to the president on at least one occasion during the 1984 budget deliberations. Federal Reserve Chairman Paul Volcker urged deficit reduction both privately and publicly. Most of my academic economist friends also supported deficit reduction and agreed that the right tax increases were better than continued large deficits. There was no unanimity among businessmen, but the self-selecting group that spoke to me generally supported the view that deficit reduction, including higher taxes, was desirable. Too often, however, when a group of businessmen was given an opportunity to meet with the president, they would tell me privately how important the deficit reduction was and how they recognized that tax increases would have to be part of the package, but then not give the same message to the president. Instead, most of them would either settle for telling him what a fine job he was doing or say that they supported his call for deficit reduction without mentioning the need for higher taxes.

In my own meetings with the president during the fall of 1983, I tried to convince him of two things. The first was that he had already made dramatic reductions in nondefense spending (other than the Social Security and Medicare programs). After a political lifetime of campaigning against such spending, the president could hardly believe that he had actually succeeded in turning the trend around and cutting such spending by enough to bring the projected GDP share down to where it had been in the 1960s before the "Great Society" programs. I emphasized that just limiting such spending to the present real "current service level" that he had already achieved would bring the level of nondefense discretionary spending to about 3.2 percent of GDP by the end of his second term in 1988. There was no realistic scope for significantly reducing the projected budget deficit by further cuts in such programs.

My second major point was that we could not expect to grow our way out of the deficit through greater revenue associated with economic growth faster than the 4 percent a year that we were now projecting. With Social Security essentially off limits because of the 1983 Social Security agreement, some additional taxes would therefore be needed to shrink the deficit even if further progress could be made on discretionary programs and Medicare.

I think I did eventually persuade the president that he had succeeded in cutting nondefense discretionary spending and smaller entitlement programs substantially and that there was little scope for deficit reduction through additional cuts in those programs. But I don't think that I persuaded him that higher economic growth would not reduce the deficit by more than we were projecting. He accepted my economic projections as the basis for the budget and never tried to persuade me to change either the economic assumptions or the deficit implications, but I believe that he continued to hope that higher growth would come to his rescue.

I recall that on one occasion I said to him that, while economic growth at 5 percent a year for five years was "possible," it was very unlikely and it would not be prudent to base budget policy on such an unlikely event. When I reflected on that meeting later that day, I realized that saying that something was "unlikely" and "imprudent" was not a way of persuading Ronald Reagan. Such an argument might persuade a businessman who was accustomed to acting cautiously, but it was much less appealing to a politician, especially to someone with Ronald Reagan's life history. Here was a man who had gone from being a local sports announcer to a wealthy movie actor. When his acting career ended, he went on to become governor of the largest state in the nation, having never before held public office. And, after a resounding defeat in seeking the Republican presidential nomination a few years earlier, he won the

1980 nomination and went on to become president. And I was trying to tell him not to believe in something because it was unlikely!

Dave Stockman tried a different approach to persuading the president that it would not be possible to cut spending enough to bring the deficit down to an acceptable level without additional tax revenue. Stockman divided the overall budget into dozens of small parts and prepared three sets of options for each part: small cuts that would probably be acceptable to Congress but that would in the aggregate produce very little overall deficit reduction; moderate spending cuts that would be hard to get through Congress but that nevertheless would add up only to a small overall spending cut; and deep spending cuts that would be impossible to enact and that the president probably wouldn't want to propose in an election year. The budget group spent several afternoons reviewing these options one by one with the president so that he could in each case choose one option. Not surprisingly, the president chose the middle option in almost every case. At the end, Stockman announced that even if all these could be enacted, the overall spending cut would be relatively small.

Although Stockman had hoped that this would convince the president, from the time that he first described his plan to me I felt that it would not succeed. After all, in each budget area Stockman was showing the president only a small number of possible budget changes. The president continued to believe that there were possibilities that he was not being shown. He kept hoping that there was some general overhaul of the domestic programs that would permit major savings rather than the small savings that came from looking at each program in detail and in isolation.

Although he probably believed that the future tax revenue would be greater than we were projecting and that there were ways of cutting spending through reorganization that Stockman had not discovered, the president was locked by his own decisions on the individual spending programs into a budget that projected very large deficits for the next five years. The only way to reduce them was through changes in tax rules.

The Treasury's Office of Tax Analysis prepared a list of detailed tax reforms, primarily aimed at technical aspects of the measurement of business income. The president agreed to incorporate these "revenue raisers" into his budget with the explanation that they were not really "tax increases" but were essentially closing loopholes so that businesses would pay the taxes that they should.

The final budget also included reductions in the requested levels of future defense appropriations. When the president met with the entire cabinet to describe the proposed budget that would be released the next day, he noted that it was intended to be flexible and a basis for negotiating with the Congress since "everything was on the table" with "no restrictions in advance." He said that he expected that the Congress would be pleasantly surprised by his willingness to compromise on a revenue increase and smaller defense spending and that this time it would be possible to find a basis for an agreement with the Democrats.

The deficit reduction plan was certainly not as much as Dave Stockman and I had originally hoped for, but it was much better than it might have been. In addition, the deficit cuts in this election-year budget were to be described as a "down payment" on the additional deficit reduction measures to be proposed after the election.

The process of presenting this budget to the public taught me an interesting lesson in political communication. Since the economic forecast is released at the same time as the budget, I was called on to brief the White House press corps. As a teacher who always tried to explain things as clearly as possible, I explained that our forecast was unchanged with 4 percent growth rates, and that substantial harmful deficits would remain if no action was taken, but that the president's new budget would reduce the deficit substantially by a combination of tax increases and cuts in the growth of defense spending as well as by lower nondefense spending.

The statement that the president's budget would include "tax increases" and "lower defense spending" coming from the mouth of the CEA chairman was more newsworthy than I had imagined. What I said was perfectly accurate and in line with the details that would be released later that day by Dave Stockman and others. But my language was too unambiguous. At the same time that I was saying that we favored "tax increases" and "smaller increases in defense spending," the president was giving a speech saying that his budget "would not raise taxes on hardworking American families" or "threaten America's safety through reckless defense cuts."[37] The evening television news could pair our statements and make it look like the administration was in disarray and that, "once again," I was calling for tax increases and less defense spending while the president was not willing to yield on either.

Of course, there was no conflict between our statements. The administration's proposed tax increases on business "would not raise taxes on hardworking American families," and the lower level of defense spending was not "reckless" and would not "threaten our nation's safety." But by Washington's standards I had been too unambiguous in my statement, instead of hiding behind phrases like "the administration's budget puts everything on the table."

The Democrats responded to the president's budget with proposals for much lower defense spending and with attacks on his proposed reductions in domestic spending. In the end, defense spending was lower than the president had requested, and business taxes were raised, but nondefense spending was treated as might have been expected in an election year.

Deficit Reduction after 1984

The combination of higher tax revenue and lower spending, both relative to GDP, reduced the deficit by 1.0 percent of GDP between 1984 and 1990 (and 2.1 percent of GDP if the deposit insurance payments are excluded). Taxes rose

37. These are not precise quotes but my recollections of the type of language used at the time.

from 18.0 percent of GDP in 1984 to 18.9 percent in 1990. This reflected in part the delayed effects of the tax changes that had been enacted in 1982, 1983, and 1984. It also reflected the continuing economic recovery and the drift of individuals into higher tax brackets.

Spending on nondefense programs (other than net interest and the deposit insurance payments) fell by 1.0 percent of GDP during these same years. With no net change in the Social Security and Medicare programs as a percentage of GDP, the entire fall in saving was in the domestic discretionary and small entitlement programs, which together fell from 7.1 percent of GDP in 1984 to 6.1 percent in 1990.

Part of the reduction in spending was achieved with the help of the Gramm-Rudman legislation, which set explicit multiyear deficit reduction targets and provided for automatic spending reductions ("sequestrations") if the targets were not met. The law provided that these automatic spending cuts would be divided equally between defense outlays and certain nondefense programs. Since Social Security, Medicare, and certain other nondefense programs were excluded from the automatic spending cuts, the imposted cuts were concentrated on a relatively narrow range of the budget, requiring very substantial proportional cuts in the remaining programs if the deficit targets were not satisfied. Because such cuts would be politically too painful, Congress and the administration colluded to evade the spirit of the Gramm-Rudman legislation through a series of budget tricks—shifting things on and off budget, moving items between adjacent years, etc. Nevertheless, I believe that Gramm-Rudman did help reduce the deficit by focusing attention on the size of the deficit, by setting explicit targets, and by "requiring" across-the-board spending cuts in the first year after enactment that politicians would not have had the courage to propose and enact explicitly.

The decade ended with the 1990 structural deficit (excluding deposit insurance payments) at $150 billion, or 2.8 percent of gross domestic product. This was a significant improvement from the earlier peak of the structural deficit (4.4 percent of GDP in 1985) and substantially less than it would have been without the legislative initiatives that began in 1982.

In retrospect, the deficit did not do enough short-run harm to force the administration and the Congress to accept the political costs of deficit reduction. Despite the deficit, the economy continued to grow throughout the decade in the longest peacetime expansion, while tight monetary policy kept inflation under control. The nation's net saving rate was greatly depressed, but the inflow of capital from the rest of the world helped maintain net investment. The consequences of the high budget deficit and resulting low rate of national investment were beginning to be felt in slower real economic growth, but the decline in growth was so small and gradual and its link to budget deficits so unclear to the public that it failed to induce the tough political actions that would be needed to eliminate the budget deficit and raise national saving.

1.4 The Dollar and the Trade Deficit

The sharp gyrations of the dollar and of the trade deficit in the 1980s were among the most novel and least understood economic developments of the decade. The rise and fall of the dollar's international value reflected the major changes that were taking place in American monetary, tax, and budget policies. These fluctuations of the dollar altered the relative prices of American and foreign goods. The nation's international trade responded to these relative price changes, producing a massive trade deficit by the middle of the decade, followed by a return toward trade balance after the dollar began to decline.

1.4.1 The Rising Trade Deficit

In 1980, America's international trade was nearly in balance. Our imports of goods and services exceeded our exports by only $15 billion, about 0.5 percent of GDP. Our net earnings on overseas investments were nearly twice as large, leaving us with a positive current account balance and therefore an ability to add to our investments abroad.

Just seven years later, the trade deficit had increased nearly tenfold to $143 billion, or more than 3 percent of GDP. Our growing debt to the rest of the world increased our nation's payments on foreign assets in the United States to a point where they were nearly equal to what we were earning on American assets abroad. The current account deficit in 1987 was $160 billion, and foreign investors increased their net stake in the United States by that amount.

Economists recognized from the start that the deteriorating trade balance in the early 1980s was a natural reaction to the rising value of the dollar. When I arrived at the CEA in the fall of 1982, the real trade-weighted value of the dollar had increased 35 percent since 1980. Although the closely watched merchandise trade deficit had not yet begun to deteriorate, I was soon warning my administration colleagues that, because of the strong dollar, the trade deficit was about to surge. It subsequently rose from $36 billion in 1982 to $67 billion in 1983 and $113 billion in 1984.[38]

Manufacturing industries were particularly hard hit as manufactured exports slumped while the imports of manufactured products surged. A commonly expressed concern was that the Midwest manufacturing areas had become a "Rust Belt" and that our industrial sector was being "hollowed out." At the same time, the economy as a whole showed remarkable resiliency; because unemployed workers shifted from one industry to another and from one region

38. For the view of Council of Economic Advisers about the trade deficit and the dollar, see chap. 3 of the 1983 *Economic Report of the President* and chap. 2 of the 1984 *Economic Report of the President.* The CEA's senior staff international economist was Paul Krugman in 1982–83 and Jeffrey Frankel in 1983–84. For a less technical summary of the same views, see Feldstein (1983d, 1985a).

of the country to another, the overall economy expanded, and total employment increased continually from the end of 1982 until 1990.

The weakness of manufacturing and the expansion of imports caused a national self-examination and self-criticism. The list of criticisms included shortsighted management, a poorly educated labor force, confrontational labor relations, inadequate capital formation, and a lack of corporate concern about competing in world markets.

Unfortunately, this self-evaluation did not produce a program of self-improvement. Instead, the political response was to restrict access to American markets while blaming foreign governments for the inability of American firms to export.

As the trade deficit rose, some business executives and Commerce Department officials argued vehemently that the increased trade deficit was due to foreign practices that had to be stopped and that justified a more active U.S. trade policy. There was no doubt that some foreign markets were closed to American products, that some foreign governments were subsidizing export industries, and that some foreign firms were pursuing strategies designed to increase market share rather than to earn a return on capital similar to that sought by American firms. But none of this was new. If anything, foreign markets were becoming gradually more open and export promotion less common. Foreign practices could not account for the explosion of the U.S. trade deficit, and economists both in the government and elsewhere generally opposed any moves toward protectionalism and managed trade.

Similarly, although many of the criticisms of American industry were justified, these problems did not arise in the few years that it took the United States to shift from an approximate trade balance to a massive trade deficit. Moreover, even if there had been a recent decline in the overall level of American productivity relative to that in other countries, that would not have been a reason for a sharp rise in the trade deficit. Most countries of the world have much lower productivity than the United States but manage to achieve trade balance or surplus. As the British economist David Ricardo pointed out a century and a half ago, trade is governed not by overall productivity but by the differences in the relative productivity of different industries in different countries. Even if the United States were less productive in every industry than our foreign trading partners—something that is clearly not true—we would still be able to balance our trade (and raise our standard of living in the process) by exporting those things at which we are *relatively* more productive than our trading partners. Some serious problems undoubtedly did affect the competitiveness of particular American industries in the 1980s, but the source of our rapidly growing overall trade deficit was the dramatic rise of the dollar rather than a sudden fall in the productivity of American industry as a whole.

There were, of course, some special factors other than the strong dollar that did adversely affect our trade balance in the first half of the 1980s. The international debt crisis that began in 1982 forced the Latin American countries to shrink their imports from the United States as well as from other countries. A second important development of those years was the sharp improvement in Chinese agriculture as a result of Deng Xiaoping's economic reforms. Those reforms transformed China from a major food importer to a nation that was essentially self-sufficient in agricultural products. Since the United States is a major food exporter, the events in China reduced the demand for American agricultural exports. And there is no doubt that some of the newly industrialized nations in Asia had become much more formidable competitors in world markets for manufactured products.

But the primary reason for the sharp rise in U.S. imports and the stagnation of our exports was undoubtedly the dramatic rise of the dollar. According to the Federal Reserve, the trade-weighted value of the dollar relative to ten industrial currencies rose 73 percent between 1979 and the first quarter of 1985 after adjusting for differences in inflation. With a 73 percent rise in the price of American goods relative to the prices of foreign products, it was not surprising that American firms had a hard time exporting. And, even though some foreign firms selling in the United States took advantage of the exchange rate shift to increase their profit margins by raising their prices rather than just increasing the volume of their sales, it is easy to see why a 73 percent rise in the value of the dollar would lead to a surge in imports.

1.4.2 The Rise of the Dollar

The rise of the dollar began in 1980, reversing a decline that started in 1971 and that had accelerated in 1978 as a result of our increasingly rapid rate of inflation and the low real return on dollar assets. The initial impetus for the dollar's upturn was the tightening of Federal Reserve policy at the end of 1979. The increase in the real interest rate and the reduced risk of runaway inflation made dollar securities more attractive to international investors.

The election of Ronald Reagan reinforced the expectation that the Fed would pursue a tough anti-inflation policy. The Reagan plans for cutting taxes and increasing defense spending implied larger future budget deficits and caused real interest rates to rise further, thereby increasing the attractiveness of dollar investments and raising the value of the dollar.

The idea that larger budget deficits could increase the dollar's attractiveness and raise its value seemed paradoxical to many noneconomists, who resisted the notion that the budget deficit was responsible for the dollar's rise and the resulting loss of competitiveness of American products. History seemed to teach the opposite lesson: that a country that had a large budget deficit would see its currency decline in value. One had only to look at Latin America to see countries in which large budget deficits were associated with rapidly declining currency values.

The difference, of course, was that large budget deficits in those other countries were usually accompanied by rising inflation because in those countries the central banks bought the increased debt and thereby added equal amounts to the nations' money supplies. In many less developed countries, this link was an inevitable consequence of the lack of domestic capital markets in which budget deficits could be financed by selling government bonds to the public. In such cases, the rapidly rising inflation caused the nominal value of the currency to decline at a correspondingly rapid rate.

But in the United States in the early 1980s it was clear that the Federal Reserve would not alter its tough anti-inflationary policy in response to the increased budget deficit. The budget deficit would therefore mean higher real interest rates with no increase in inflation. The market's response was therefore a rising dollar. Each percentage point rise in the real long-term interest rate would raise the dollar's exchange value by several percentage points. Investors would be content to hold what was clearly an "overvalued" dollar that they knew would fall in the future because they would be compensated during that decline by the higher interest yield on dollar assets than on foreign securities.

The dollar continued to rise in 1982 and 1983 even after it was clear that inflation had stabilized and that the Fed had allowed short-term interest rates to decline. This made it clear that the dollar's continuing rise was due not to a very tight monetary policy (as some monetarists continued to claim) but rather to the increasing budget deficit in the context of a monetary policy that would prevent deficits from leading to higher inflation.

Although much of the budget deficit's initial surge was due to the deep recession, it gradually became clear that the structural deficit would grow even after the cyclical deficit declined. The structural deficit rose from about $49 billion in 1982 to $108 billion in 1983 and $134 billion in 1984 (according to 1992 estimates by the Congressional Budget Office). It reached a temporary peak of $177 billion in 1985 and $185 billion in 1986 before dropping to $120 billion in 1987. As investors adjusted up their projections of the future deficits during 1983 and 1984, real interest rates and the value of the dollar rose accordingly.

1.4.3 National Saving and the Twin Deficits

Although economists understood the links from budget deficit, to real interest rates, to the dollar, and finally to the trade deficit, the logic of this process seemed less plausible to noneconomists. During my time as CEA chairman, whenever I explained this chain linking the budget deficit with our trade problem, I could see that the skeptics thought that there were too many invisible links for the process as a whole to be plausible. Their skepticism was encouraged by the strict monetarists (including Treasury Undersecretary Beryl Sprinkel), who argued that the dollar's value is determined by monetary policy alone, and by the supply-side extremists, who argued that the budget deficit could do no harm. Others claimed that the dollar's rise was due to an increased attractiveness of the United States as a "safe haven" for funds, although it is hard to imagine why the United States had suddenly become so much safer than Switzerland or Germany.

A more plausible alternative explanation was that the 1981 tax changes raised the return on investments in equipment and buildings, bidding up real interest rates and the dollar. Although I accepted that that could in principle help explain the dollar's strength, my judgment was that the magnitude of the decline in national saving was substantially greater than the increased demand for investment. But assigning relative weights to these two components was not relevant to the two key policy questions that were debated within the administration as well as outside it: Would a lower budget deficit help bring down the dollar's value and ease the trade deficit? Did shrinking the trade deficit require government action to block imports, to open foreign markets, and to subsidize U.S. exporters? As long as the budget deficit was a major cause of the dollar's strength, the answer to the first question was a clear yes and to the second question a clear no.

Because of the difficulty of persuading noneconomists (and some of the administration's economists as well) of the links from the budget deficit to interest rates and then to the dollar and the trade balance, I frequently emphasized a more direct explanation: A country's trade balance is just equal to the difference between the amount that it saves and the amount that it invests. When a country saves more than it invests, it has a surplus of output that can be exported to the rest of the world. Conversely, when investment in plant and equipment, in housing, and in inventories exceeds the amount that is saved by households, businesses, and government, the extra investment requires an inflow of resources from abroad. The rise of the dollar was only the price mechanism by which the budget deficit caused the United States to go from trade surplus to trade deficit.

A larger budget deficit reduces national saving and therefore forces an increased trade deficit unless private saving rises or investment declines by sufficient amounts. In fact, net private saving declined relative to GDP in the first half of the 1980s, while net private investment increased slightly relative to GDP. Given these conditions, the rise in the trade deficit was inevitable.

The advantage of this explanation is that the basic relation—that national saving (net of the budget deficit) minus national investment equals exports minus imports—is neither an economic theory nor an empirical generalization but a basic accounting identity. Skeptics who doubted the more complex chain of reasoning or who resisted the idea that the budget deficit raised interest rates could accept that the budget deficit was nevertheless responsible for the increased trade deficit.

Not everyone was persuaded, however. In early 1984, when Treasury Secretary Don Regan was testifying to the Senate Budget Committee, one of the senators read him a passage from the CEA's recently released *Economic Report of the President* in which the link between the budget deficit and the trade deficit was explained. The source of the passage was not revealed, and the secretary was asked what he thought of the statement that he had just heard. He said that it was wrong and that it should be thrown in the garbage. When the senator revealed the source of the quote, the secretary, who seemed to enjoy public disputes with me, did not alter his view of its appropriate disposition.[39]

The episode would just be humorous if it were not indicative of the difficulty of achieving decent policy. The president could see for himself that, contrary to much of the conventional wisdom, the budget deficit was not raising the rate of inflation. The secretary of the Treasury, who claimed to speak not only with the authority of his Wall Street experience but also on the basis of the expert advice of the Treasury staff, repeatedly denied my assertions that the budget deficit was reducing investment and creating a trade deficit that hurt manufacturing industries. Fortunately, although Don Regan resisted efforts to create a realistic package of deficit reduction measures, he did not compound the problem by supporting the trade protectionists and did not favor currency intervention to lower the dollar.

1.4.4 Pressure to Reduce the Dollar

Although some people might dispute the role of the budget deficit in raising the dollar's value, there was no doubt that by 1983 the strong dollar was inflicting significant pain on American manufacturing firms and their employees. Manufacturing employment in 1983 was 11 percent lower than in 1979–80, and manufacturing profits were 33 percent lower.

The value of the dollar had increased from 1.81 marks per dollar in 1980 to 2.55 marks per dollar in 1983, a rise of 40 percent. The dollar also rose more than 50 percent relative to the British pound during this same brief interval. The secular trend in the dollar-yen ratio that had lowered the dollar by 37 percent relative to the yen in the 1970s had ended, and the dollar had instead risen relative to the yen in the early 1980s.

Not surprisingly, American exporters and those firms that competed directly with imported products appealed to Washington to adopt policies that would lower the dollar's value. They were joined by European governments that did not like the inflationary pressures caused by the relative decline in their own currencies, particularly the higher costs of dollar-denominated energy imports.[40] The Japanese government also worried that the bilateral trade imbalance caused by the overstrong dollar would exacerbate anti-Japanese protectionist pressures in the United States.

The obvious desirable policy response would have been a reduction in the

39. When I testified to the same committee the next day, I was asked about my reaction to the secretary's remark. I said that his comment was "just a throwaway line," and the hearing moved on to a more substantive discussion.

40. Some European politicians also claimed that the strong dollar was slowing the pace of recovery in Europe. Although this may have been a politically useful assertion for some European governments, it was certaiuly not correct (see Feldstein 1983d). The apparent paradox of European governments objecting to the rise of the dollar that was creating an export boom for their economies is discussed more fully in Feldstein (1986e).

U.S. budget deficit. But, as a participant in the budget process during those years, I can say with confidence that the administration's budget policy did not respond to the trade deficit and the high dollar. Since neither the president nor the Treasury secretary recognized the links between the budget deficit, the dollar, and the trade deficit, there was no way that the goal of reducing the dollar and the trade deficit could cause a willingness to accept tax increases or other budget changes that would not otherwise have been acceptable.

Without a reduction of the budget deficit, I argued that the case for trying to reduce the dollar was doubtful at best. The only practical way to have reduced the dollar would have been by an easier monetary policy. The resulting rise in the price level would have reduced the dollar's nominal value, but it would not have changed the real value of the dollar. Since the trade balance depends on the real value of the dollar, the net result would have been higher prices, higher inflation, and no improvement in the trade balance. Only to the extent that the easier monetary policy also increased the fear of even higher future inflation and thereby reduced the attractiveness of dollar securities to international investors would there have been a reduction in the real value of the dollar. Hardly an attractive option!

There were, of course, those who hoped that a policy of exchange market intervention could have lowered the dollar's value without any change in monetary or fiscal policy. But a careful analysis of past experience summarized in an official international study by the finance ministries of the G-7 countries that was released in April 1983 (the Jurgensen Report) confirmed the long-standing academic conclusion that sterilized intervention (i.e., intervention that does not alter national money supplies) would have no significant, lasting impact on exchange rates.

Moreover, even if the real value of the dollar could somehow have been reduced, I worried that lowering the dollar without shrinking the budget deficit would have been counterproductive. A lower dollar would have meant a smaller trade deficit, but that would have meant a smaller gap between saving and investment. With nothing done to increase saving, the level of domestic investment in the United States would have declined. Lowering the dollar without shrinking the budget deficit would have reduced the pain felt by exporters and by those who competed with imports but only by transferring the pain to other sectors of the economy that were directly sensitive to higher interest rates. If anything, without the trade deficit, the crowding out caused by the budget deficit would have been concentrated on a smaller number of industries and, therefore, even more painful. Moreover, the reduced level of investment in plant and equipment would have left the economy in a worse position for future years.

In short, the trade deficit was a safety valve by which the pressures caused by a massive budget deficit could be partly reduced through the resulting inflow of capital. The inflow of capital was the natural market response to the fall in national saving. There seemed no reason to believe that shrinking the trade deficit without lowering the budget deficit would represent an improved allocation of resources.[41]

Fortunately, despite the political pressures for currency intervention to drive down the dollar, the noninterventionists prevailed. Paul Volcker had an instinctive dislike for a lower dollar and understood that the Fed could lower the dollar's value only by returning to higher inflation. The Treasury also supported the view that intervention would be inappropriate. Treasury Secretary Regan liked to argue that the high value of the dollar was an indication of the strength of the U.S. economy and the high regard of investors worldwide for U.S. economic policies.

The issue was discussed with the president as part of the preparation for the Williamsburg summit. He had heard from many businessmen who were being hurt by the dollar's strong value, urging some action or international agreement to lower the dollar's value. We knew that President Mitterrand of France would argue at Williamsburg for an agreement to lower the dollar and to stabilize its exchange rate, leaving the details of how that might be accomplished to be worked out later. The president himself expressed a nostalgia for the days when exchange rates were fixed and worried about the damage that the dollar's rise was doing to the industrial sector of the economy. But, after a brief flirtation with the idea of a currency policy, the president was persuaded that the exchange rate is a price that, like other prices, was better left to the market without government interference. He went to Williamsburg prepared to argue this case to the French.

1.4.5 The Dollar's Decline

Economists recognized that the dollar would eventually decline. A rise in any country's real interest rates causes a temporary surge in the international value of its currency leading to a trade deficit and resulting capital inflow. In this process, the currency temporarily overshoots its long-term sustainable value. After this initial increase, if there are no further jumps in the country's real interest rate, the currency can then be expected to decline gradually at a speed that balances the higher interest rate, thereby eliminating both the desire of investors to flee the currency and the prospect for a new rise in the currency's value. As a result, the trade deficit itself could be expected to decline in the future.

My own research some years earlier had shown me that changes in domestic saving rates would temporarily be offset by international capital flows but that

41. I discussed these ideas within the administration and in testimony and talks. I also wrote an article for the *Economist* magazine spelling out these reasons for believing that, without a reduction of the budget deficit, it would be wrong to try to reduce the value of the dollar (see Feldstein 1983d).

for periods of a decade or longer the domestic rate of investment would adjust to domestic saving (Feldstein and Horioka 1980). I was convinced that that decline in the capital inflow would be brought about by a natural decline of the dollar leading to a smaller trade deficit.

There was much confusion in the early 1980s about the notion that the dollar was "overvalued." A currency can be willingly and rationally held by private investors even if it is overvalued in the sense that it leads to an unsustainable trade deficit and that everyone agrees that the currency's value will eventually fall. Investors are prepared to hold an "overvalued" dollar despite its expected decline if the interest rate on dollar bonds is high enough, relative to the interest rate on foreign bonds, to compensate the investors for the dollar's expected rate of decline.

The interest differential between dollar bonds and foreign bonds in the early 1980s implied an expected rate of dollar decline that might or might not be realized in practice. If the budget deficit were eliminated rapidly, the interest rate might fall quickly and bring with it a rapid fall of the dollar. Alternatively, if the budget deficit persisted, U.S. interest rates might remain high, with the dollar falling only as the risk to foreign investors associated with an increased share of dollar assets in foreign portfolios outweighed the interest differential. But, at each point in time, the actual level of the dollar was sustained by the market's belief that its expected rate of decline was balanced by the risk-adjusted interest differential.

In practice, the decline of the dollar was delayed by the rising levels of projected structural budget deficits and real interest rates. Each such reevaluation of the likely future budget deficit ratcheted the dollar higher through 1983 and 1984.

By early 1985, however, the dollar had reached a level relative to the Japanese yen and the deutsche mark that could not be reconciled with the existing interest differentials. Even if the dollar declined from that level at rates equal to the interest differentials between U.S. bonds and Japanese and German bonds, the U.S. current account deficits would grow explosively. While the dollar would eventually be low enough to eliminate the trade deficit, the amount of U.S. debt held by foreigners (and foreign investment in the United States) would by then cause our annual interest and dividend payments to foreigners to be rising faster than our GDP was growing.

Such an explosive growth of our current account deficit and our international debt was not possible. A speculative bubble had pushed the dollar too high at the end of 1984 and early 1985. Many private economists, as well as Fed Chairman Paul Volcker, recognized that the dollar was now overvalued in the more fundamental sense that a smooth decline at a rate of 3 or 4 percent a year (the interest differential) was no longer possible.

When the inevitable rates of decline of the dollar became greater than the interest differentials, some investors would lose money by being in dollar bonds rather than in Japanese or German bonds. As investors came to recognize that the dollar was irrationally overvalued in this sense, the speculative bubble burst, and a sharp decline in the dollar began in February 1985.

The change in the leadership at the Treasury from Don Regan to Jim Baker in early 1985 combined with the decline of the dollar to induce a change in the government's avowed policy. Baker would probably have wanted to have "his own policy" in this area and one that was more favorably regarded by foreign governments and the press. Moreover, the significant fall of the dollar between February 1985 and mid-summer (bringing the dollar down by 15 percent relative to the deutsche mark and nearly 10 percent relative to the yen) meant that the Treasury could no longer continue to claim that the dollar's value was a measure of the high international regard for the United States and its economic policies.

Baker and Volcker met with the finance ministers and central bank heads of the other G-5 countries (Germany, Japan, France, and Britain) at the Plaza Hotel in September 1985 and announced to the world that the G-5 had agreed that the dollar's value should decline. There was an immediate sharp drop of a few percentage points, followed by a resumption of the same overall rate of decline that had prevailed since February. Although the dollar's average rate of decline in the six months after the Plaza meeting was the same as in the prior six months (Feldstein 1986b), the world press persistently credited the Plaza meeting with causing the dollar's decline.

A falling currency is usually regarded as an indication of a finance minister's poor performance, but that was not so with Jim Baker. Baker was able not only to disregard the administration's previous rhetoric about the dollar as a measure of American virtue but even to turn the dollar's decline into a personal advantage by arguing that, if other countries did not do what the United States wanted (i.e., expand their domestic demand so that the U.S. trade deficit would decline), the U.S. dollar would be reduced. It was a relatively safe prediction—if foreign demand did not rise, the dollar would fall to shrink the trade deficit—but it gave the impression of a powerful U.S. Treasury secretary defending American interests. It was one of the unfortunate consequences of the apparent success of the Plaza meeting in lowering the dollar that it gave credibility to this type of claim.

Between the first quarter of 1985 and the first quarter of 1987, the real trade-weighted value of the dollar (as measured by the Federal Reserve's ten-country index) had fallen 36 percent, reversing more than 80 percent of the dollar's climb from 1979 to its peak in early 1985. Although it took about a year for importers and exporters to adjust their behavior, our trade balance then began to decline rapidly. Between the middle of 1986 and the middle of 1988, the real volume of U.S. exports rose by 35 percent, and the real trade deficit fell by nearly 40 percent.

1.4.6 Stabilizing the Dollar

A further decline of 15–20 percent in the value of the dollar during 1987 and 1988 might have eliminated the trade deficit before the end of the decade and saved the United States and the industrial world more generally from an increase in trade barriers and government-managed trade. If market forces had been left alone, the dollar might well have made that adjustment.

But that was not to be. The U.S. Treasury and the Federal Reserve worried that the falling dollar would substantially increase inflationary pressures in the United States. Foreign governments worried that the dollar's decline was undermining their ability to export to the United States and to compete with American imports in their domestic markets, thus increasing the risk of recession in their own countries. Instead of focusing on domestic monetary policies to achieve their desired macroeconomic goals, the finance ministers of the seven major industrial countries met at the French Finance Ministry in the Louvre in February 1987 and agreed to try to stabilize the dollar at approximately the then current level.[42] To do that, the United States raised short-term interest rates; the Federal funds rate rose from 6.1 percent in February 1987 to 7.3 percent in October 1987. Although the dollar did continue to decline for a few months, the finance ministers and central banks eventually persuaded the financial markets that they were serious about preventing a further slide of the dollar—even if that meant a substantial change in domestic monetary policy and, in the case of Japan, a backdoor purchase of dollar securities of the same magnitude as the U.S. current account deficit.

If there was ever an example of a sterilized intervention that was large enough to matter, it was the Japanese government's purchase of approximately $100 billion of dollar securities. I recall commenting to a Japanese Ministry of Finance official at the time that I thought that his government would lose a substantial amount on that "investment" since the dollar was then at 150 yen per dollar. He replied that his government did not mind the expectation of losing money since it would be cheaper than the cost of unemployment benefits and lost tax revenue that would result if the dollar were allowed to continue falling and weakening the ability of Japan to compete. Supporting the dollar would give Japanese industry time to develop new ways to be competitive at the higher yen-dollar rate that they knew was coming.

1.4.7 International Policy Coordination

On the basis of the apparent success of the Plaza meeting, Jim Baker pursued a policy of well-publicized "international policy coordination" meetings

42. I was and remain opposed to such attempts to target specific values of the dollar or to achieve "exchange rate stability" by diverting monetary policy from its task of managing domestic demand (see Feldstein 1987a, 1987b, 1987e, 1988a, 1989a).

among the G-7 finance ministers. Frequent meetings of those ministers after September 1985 produced communiqués promising to promote economic growth and currency stability with a variety of detailed promises for domestic policies, particularly in the United States and Japan.

In practice, discussion at the international policy coordination meetings focused on setting and revising exchange rate targets. Ironically, this was generally done without consulting the central banks and without any commitments on monetary policy among the finance ministers themselves.

I was (and remain) strongly critical of such public pursuit of policy coordination (see Feldstein 1987f, 1987g, 1988d, and 1988e). To the extent that such coordination meetings actually produced action to target exchange rates, it was necessary to sacrifice the domestic goals of monetary policy. These actions encouraged the tightening of monetary policy in the United States in 1987 that contributed to the 1987 stock market crash and to the easing of monetary policy in Japan that led to overvalued real estate and equity prices. The exchange rate targets themselves were also objectionable because they were generally set to achieve "stability" of whatever happened to be the current nominal rates rather than on any more objective basis.

In addition to their attempt to manage exchange rates, the international policy coordination meetings focused on encouraging macroeconomic expansion, emphasizing the interdependence among countries and the positive effect of expansion in one region on the level of GDP in the others. In fact, however, the degree of such interdependence among the United States, Europe, and Japan is quite limited. An extra dollar of GDP in one area has only a very small effect through trade flows on the GDPs in the other regions, an effect that could easily be achieved or offset by domestic fiscal or monetary policy.[43]

The highly publicized policy coordination meetings of the finance ministers unfortunately served as a substitute for much needed policy changes at home. They gave domestic voters the impression that "something was being done" and offered the promise that international coordination would achieve stronger economic growth, greater price stability, and a more stable environment for international trade.

European and Japanese promises to stimulate their economies were, of course, not commitments to particular actions. If stronger growth did not materialize, it could always be blamed on external forces. Because of the congressional form of government and the independence of the Fed, the U.S. Treasury could easily claim that it was powerless to make firm commitments. The undertakings of the U.S. Treasury at these meetings, which emphasized promises to reduce our budget deficit, simply corresponded to restatements of the budget requests that the administration had previously submitted to Congress.

Despite these problems in defining and enforcing agreements about macroeconomic coordination, it was convenient to blame any problems of domestic

43. See Feldstein (1983d) and Stanley Fischer's estimates in Feldstein (1987f).

economic performance on the failure of foreign governments to live up to their promises. International policy coordination not only failed to coordinate policy but actually created international tensions among the participants.

It was, of course, naive to expect that governments would sacrifice their own national interest in the spirit of international coordination. Unlike trade or arms negotiations, where the quid pro quo is explicit and tangible, macroeconomic coordination involves promises that are neither explicit nor tangible.

The frequent repetition of the theme of mutual interdependence eventually persuaded many in the United States that our economic performance depended more on decisions in Frankfurt and Tokyo than on decisions in Washington. This may have been a convenient excuse for U.S. officials, but it frightened the American public and financial investors in particular that an unwillingness of foreign governments to act in the American interest could do substantial damage to the American economy. The very public conflict between the United States and Germany in October 1987 over Germany's unwillingness to pursue a more expansionary policy was undoubtedly one of the factors that frightened financial markets and contributed to the stock market crash.

The stock market crash caused a temporary shift away from using monetary policy to target the dollar. Alan Greenspan, the recently appointed chairman of the Federal Reserve, announced at the time of the crash that the Fed would provide the liquidity needed to prevent the stock market collapse from becoming an economic downturn, and the Treasury secretary announced that economic policy would focus on the domestic economy, regardless of the consequences for the dollar. Interest rates were lowered, and the dollar declined. The public displays of international policy coordination and the attempts to target the dollar were over for a while (Feldstein 1987d).

But, by the middle of 1988, it was clear that the stock market crash would not precipitate a recession. The Federal Reserve began to raise interest rates and to withdraw the excess liquidity that had been provided after the crash. The Treasury resumed its old rhetoric about stabilizing the value of the dollar.

Having seen that the United States and other key countries were willing to use monetary policy to manage the dollar's exchange rate, many participants in the financial markets accepted the government's forecast that the dollar's value would remain in a relatively narrow range—generally assumed to be 120–40 yen to the dollar and 1.7–1.9 marks to the dollar. The combination of this expected dollar stability and the higher interest rates that prevailed on dollar bonds than on yen bonds or German bonds induced international financial investors to buy dollar bonds. Investors reckoned that, if a dollar bond paid 3 percent more than a yen bond, the extra yield of more than 20 percent over seven years would more than offset any minor fluctuations of the dollar-yen rate that might occur over that time.

Economists and other analysts who emphasized the fundamental determinants of the exchange rate warned that the higher rate of inflation in the United States than in Japan, our substantial remaining trade deficit, and Japan's massive trade surplus meant that the dollar-yen exchange rates would eventually shift and probably by much more than enough to outweigh the 3 percent a year interest differential. But the majority of market participants were prepared to go along with the implicit promise of the finance ministers to stabilize the dollar. And, as they bought dollar bonds, they bid up the value of the dollar. This rise in the dollar caused those portfolio investors who trade currencies on a so-called technical momentum basis rather than on the basis of "fundamentals" to be attracted to even further dollar buying.

By the early summer of 1989, the dollar had risen in value to more than two marks and 150 yen. The improvement in the U.S. trade deficit had run out of steam, and the outlook shifted to an increasing U.S. trade deficit in 1990. The attempt to use international coordination to stabilize the exchange rate had actually caused the exchange rate to move further from equilibrium and to worsen the U.S. trade deficit.

When the G-7 finance ministers met at the IMF–World Bank meeting in September 1989, they recognized publicly that the exchange value of the dollar had to decline. Although continuing to stress the desirability of stable exchange rates, their communiqué also noted (in the internally inconsistent manner not uncommon in such communiqués) that the dollar was then "too high to be consistent with long term fundamentals." To leave little doubt about their meaning, the central banks of the G-7 countries engaged in extensive exchange market intervention during the following weeks, selling dollars in exchange for other currencies. The Federal Reserve also continued to ease monetary policy and to lower U.S. interest rates while foreign central banks raised their interest rates.

By the late fall, the interest rates on U.S. Treasury bonds and on German government bonds had reached equality. Investors could no longer justify buying dollar bonds instead of deutsche mark bonds because of the higher yields. The U.S. current account deficit was at an annual rate of more than $100 billion, while Germany's current account surplus continued to exceed $50 billion. In that context, there was a sharp rise in the value of the deutsche mark, from 1.98 marks per dollar in June 1989 to 1.68 marks per dollar a year later.

Although the yen also appreciated from its low point during the summer of 1989, it only rose enough by the end of the following year to return to its level at the time of the Louvre agreement despite the fact that the prices of tradable manufactured products had increased by 15 percent in the United States during that interval and had not increased at all in Japan. By achieving nominal currency stability at the level prevailing at the time of the Louvre, Japanese policy, encouraged and assisted by the United States, had caused the yen to fall 15 percent in real terms, exacerbating the bilateral trade imbalance and the associated political friction.

1.4.8 No More Twin Deficits

By 1990, the dollar and the trade deficit had resumed their decline. The overall national income measure of the trade deficit in 1990 was less than 1.5 percent of GDP. The budget deficit had also declined from its peak but still represented 3 percent of GDP. This experience confirmed that the close parallel relation between the budget deficit and the trade deficit was only a temporary one (Feldstein 1992a). The decline in the dollar and the resulting decline in the trade deficit meant that the budget deficit was now crowding out domestic investment to a greater extent that it had before.

Experience thus confirmed that a country with a low national saving rate will eventually have a correspondingly low rate of domestic investment. The ability to raise our national saving rate will be an important determinant of our economic success in the 1990s and beyond.

References

Feldstein, Martin. 1992a. The budget and trade deficits aren't really twins. *Challenge* 35, no. 2 (March/April): 60–63.

———. 1992b. The Council of Economic Advisers and economic advising in the United States. *Economic Journal* 102 (September): 1223–34.

———. 1992c. The recent failure of U.S. monetary policy (the 1992 January Tinbergen Lecture of the Netherlands Royal Economic Society). Working Paper no. 4236. Cambridge, Mass: NBER. (Reprinted in the *Economist,* vol. 141, no. 1 [January 1993].)

———. 1989a. The case against trying to stabilize the dollar. *American Economic Review* 79, no. 2. (May): 108–12.

———. 1989b. FSLIC funding belongs off-budget. *Wall Street Journal,* 1 March.

———. 1989c. How the CEA advises presidents. *Challenge* 32, no. 6 (November/December): 51–55.

———. 1988a. Feldstein on the dollar. *Economist,* 3 December.

———. 1988b. Imputing corporate tax liabilities to individual taxpayers. *National Tax Journal* 41, no. 1. (March): 37–59.

———. 1988c. Keynesian economics at Harvard College. *Challenge* 31, no. 4 (July/August): 42–46.

———. 1988d. *Rethinking international economic coordination: A lecture on the occasion of the fiftieth anniversary of Nuffield College, Oxford.* Oxford Economic Papers, no. 40, pp. 205–19. Oxford: Oxford University Press.

———. 1988e. Thinking about international economic coordination. *Journal of Economic Perspectives* 2, no. 2 (Spring): 3–13.

———. 1987a. Correcting the trade deficit. *Foreign Affairs* 65, no. 4. (Spring): 795–806.

———. 1987b. The dollar must keep falling. *Wall Street Journal,* 18, February.

———, ed. 1987c. *The effects of taxation on capital accumulation.* Chicago: University of Chicago Press.

———. 1987d. The end of policy coordination. *Wall Street Journal,* 9 November.

———. 1987e. Fed policy shouldn't target the dollar. *Wall Street Journal,* 8 May.

———, ed. 1987f. *International economic cooperation.* Chicago: University of Chicago Press. (See also *International economic cooperation: A summary report.* Cambridge, Mass.: NBER, 1987.)
———. 1987g. A self-interested way to avoid death in Venice. *Financial Times,* 20 May.
———, ed. 1987h. *Taxes and capital formation.* Chicago: University of Chicago Press.
———. 1986a. A gamble with capital formation. *Wall Street Journal,* 19 May.
———. 1986b. New evidence on the effect of exchange rate intervention. Working Paper no. 2052. Cambridge, Mass.: NBER, October.
———. 1986c. Supply side economics: Old truths and new claims. *American Economic Review* 76, no. 2. (May): 26–30.
———. 1986d. Tax reform: Harmful if passed. *Wall Street Journal,* 14 February.
———. 1986e. U.S. budget deficits and the European economies: Resolving the political economy puzzle. *American Economic Review* 76, no. 2 (May): 342–46.
———. 1985a. American economic policy and the world economy. *Foreign Affairs* 63, no. 5 (Summer): 995–1008.
———. 1985b. How to get the deficit under $100 billion. *Time,* 4 February.
———. 1985c. The social security explosion. *Public Interest,* no. 81 (Fall): 94–106.
———. 1985d. A tax reform mirage. *Wall Street Journal,* 20 November.
———. 1984a. '85 is the year to correct the imbalance. *New York Times,* 18 November.
———. 1984b. Reagan is Reagan on the economy. *Wall Street Journal,* 12 September.
———, ed. 1983a. *Behavioral stimulation methods in tax policy analysis.* Chicago: University of Chicago Press.
———. 1983b. *Capital taxation.* Cambridge, Mass: Harvard University Press.
———. 1983c. *Inflation, tax rules, and capital formation.* Chicago: University of Chicago Press.
———. 1983d. The world economy today. *Economist,* 11 June.
———. 1982a. The conceptual foundations of supply side economics: Supply side economics in the 1980s. In *Proceedings of a conference sponsored by the Federal Reserve Bank of Atlanta and the Emory University Law and Economics Center, March 18, 1982.* New York: Dean Witter Reynolds.
———. 1982b. Inflation and the American economy. *Public Interest,* no. 67 (Spring): 63–76.
———. 1982c. Why short term interest rates are high. *Wall Street Journal,* 8 June.
———. 1981a. Budget policy without fine tuning. *Wall Street Journal,* 12 March.
———. 1981b. *Hospital costs and health insurance.* Cambridge, Mass.: Harvard University Press.
———. 1981c. The retreat from Keynesian economics. *Public Interest,* no. 64 (Summer): 92–105.
———. 1981d. The tax cut: Why the market dropped. *Wall Street Journal,* 11 November.
———. 1980. Tax rules as the mismanagement of monetary policy. *American Economic Review* 70, no. 2 (May): 182–86.
———. 1974. Social Security, induced retirement and aggregate capital accumulation. *Journal of Political Economy* 82, no. 5 (September/October): 905–26.
———. 1973. The welfare loss of excess health insurance. *Journal of Political Economy* 81, no. 2, pt. 1 (March–April): 251–80).
Feldstein, Martin, and E. Allison. 1974. Tax subsidies of private health insurance: Distribution, revenue loss and effects. *The economics of federal subsidy programs: A compendium of papers submitted to the Subcommittee on Priorities and Economy in Government of the Joint Economic Committee.* Pt. 8, *Selected subsidies.* 93rd Cong., 2d sess., Washington, D.C., 29 July.

Feldstein, Martin, and Douglas Elmendorf. 1989. Budget deficits, tax incentives and inflation: A surprising lesson from the 1983–84 recovery. *Tax Policy and the Economy* 3:1–23.

Feldstein, Martin, and B. Friedman. 1977. Tax subsidies, the rational demand for insurance and the health care crisis. *Journal of Public Economics* 7: 155–78.

Feldstein, Martin, and C. Horioka. 1980. Domestic savings and international capital flows: The 1979 W. A. Mackintosh Lecture at Queen's University. *Economic Journal* 90: 314–29.

Feldstein, Martin, and Gilbert Metcalf. 1987. The effect of federal tax deductibility on state and local taxes and spending. *Journal of Political Economy* 95, no. 4: 710–36.

Feldstein, Martin, and Lawrence Summers. 1979. Inflation and the taxation of capital income in the corporate sector. *National Tax Journal* 32, no. 4:445–70.

Laffer, Arthur. 1981. Government exactations and revenue deficiencies. *Supply Side Economics.* Cato Journal. Spring.

This Page Intentionally Left Blank