Tax Reform and Personal Saving

By C. Alan Garner

Many policymakers and economists have pointed to the low U.S. saving rate as a source of sluggish economic growth and reduced international competitiveness. The personal saving rate has been lower in recent years than in much of the postwar period. Moreover, U.S. households apparently save less of their incomes than households in other industrial countries. Many observers find these developments alarming because lower saving could reduce labor productivity and aggregate output by providing fewer resources for business investment. As a result, a low saving rate could reduce future U.S. living standards.

Concern about the low saving rate was one motivation for the recent reductions in tax rates. When major cuts in personal tax rates were made in 1981, supply-side economists and some policymakers argued that lower tax rates would promote a higher saving rate by increasing the after-tax reward to saving. Partially for that reason, the 1986 tax reform bill again reduced personal and corporate tax rates. The success of tax reform cannot be judged solely by its effects on saving, however, because tax reform also was promoted on broader grounds of equity and economic efficiency.

This article examines the likely effects of recent tax reform on the personal saving rate. The first section of the article discusses possible consequences of a low saving rate and describes recent trends in U.S. saving. The second section considers the direct effects of lower personal tax rates on household saving, and the third section discusses other features of tax reform that might influence personal saving. Based on this examination, it is argued that the recent tax reform probably will not raise the nation's saving rate substantially.

Measuring and interpreting saving

By most measures, the U.S. saving rate has declined in the 1980s and is lower than in other industrial countries. Such a low saving rate, it

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is claimed, raises potential dangers for U.S. growth and productivity.

Reasons for concern about saving

Why should policymakers and economists be concerned about the saving rate? The chief reason is that saving provides resources for private capital formation, which, in turn, raises labor productivity and the standard of living. From a household's viewpoint, saving represents deferred consumption. From society's viewpoint, these deferred goods—or the resources that would have been used to produce them—can be used to create new productive capital. A larger capital stock enhances the productivity of workers, increases aggregate output, and raises income per person.

Productivity trends are an important economic issue because U.S. productivity growth has slowed in recent years. Output per hour grew around 3 percent a year, on average, in the 1950s and most of the 1960s. However, productivity grew only about 2 percent in the early 1970s and actually declined during some years in the late 1970s and early 1980s. Although productivity increased rapidly in the early part of the current economic expansion, it has grown at less than a 1 percent rate since mid-1984. The causes of this slowdown remain unclear. Nonetheless, many economists feel that higher saving and a larger capital stock would spur productivity growth, regardless of the slowdown's initial cause.

Another reason for concern about saving is the poor performance of the United States in international trade. The merchandise trade deficit reached a new high in 1986. A primary cause of the large trade deficit has been a major imbalance between domestic credit demand and saving. U.S. borrowing from abroad has been necessary to finance the gap between strong U.S. credit demand and weak domestic saving.[1] Foreign capital inflows contributed to the excessively high foreign exchange value of the dollar in 1984 and 1985, pricing many U.S. goods out of world markets. Higher domestic saving would reduce this dependence on foreign capital and thus promote a lower dollar and make U.S. goods more competitive.

Many economists believe, therefore, that higher personal saving is needed to spur domestic capital formation without continued reliance on foreign saving. Other ways of financing increased U.S. capital formation may be unachievable in the short run. The primary alternative is to increase the amount of funds available to finance capital spending by reducing federal budget deficits. While deficit reduction is desirable for this and other reasons, sufficient reduction in the federal deficit may not be achievable in the near term. Moreover, deficit reduction may not be sufficient in the long run to ensure adequate financing for business investment. Thus, while further cuts in the federal deficit are desirable, increased personal saving remains a key to greater U.S. capital formation.

Measures of the saving rate

All of the common saving measures suggest that the U.S. saving rate has declined in the 1980s.[2] For example, the personal saving rate, which is the ratio of personal saving to disposable income, has been significantly lower in the 1980s than in the 1970s, although only slightly lower than in the 1960s. Chart 1 shows annual U.S. personal saving rates from 1946 to 1986. The average personal saving rate was 6.7 percent in the 1960s and 8.0 percent in the 1970s. In contrast, the per-

[1] The dangers of heavy U.S. dependence on foreign capital are analyzed in Craig S. Hakkio and Bryon Higgins, "Is the United States Too Dependent on Foreign Capital?" *Economic Review*, Federal Reserve Bank of Kansas City, June 1985, pp. 23-36.

[2] Alternative saving statistics also suggest that U.S. saving is low compared with previous decades and other industrial countries. Measures constructed using other definitions or statistical

sonal saving rate averaged only 6.4 percent during the 1980-85 period and declined further to 3.9 percent in 1986.

A broader measure, the private saving rate, also declined noticeably in the 1980s. Private saving is personal saving plus undistributed corporate profits, which, like personal saving, provide resources for business investment. The private saving rate is private saving divided by the sum of disposable income and undistributed corporate profits.[3] As Chart 2 shows, the private saving rate was lower in the 1980s than in the 1960s or 1970s. The private saving rate averaged only 8.6 percent in the 1980-85 period, down from over 11 percent in the preceding two decades, and decreased further in 1986 to 7.3 percent.[4]

A third measure, the national saving rate, also suggests a marked deterioration in U.S. saving during the 1980s. National saving is private saving minus the total government deficit. Government borrowing to finance a deficit is similar to a reduction in private saving in that it reduces the funds available for private capital formation. National saving, therefore, excludes foreign capital inflows used to finance domestic investment. The national saving rate is national saving divided by net national product. As Chart 3 shows, the national saving rate fell sharply in the 1980s. In addition to the reduction in private saving, the surge in government budget deficits contributed to the decline in the national saving rate to 2.6 percent in the 1980-85 period from 8.7 percent in the 1960s and 7.0 percent in the 1970s. In 1986, the national saving rate dropped to only 0.2 percent.

International comparisons, although difficult to interpret, are also consistent with the view that U.S. saving is low. Table 1 shows personal saving rates for the United States, Japan, the United Kingdom, and West Germany. The U.S. personal saving rate was 5.1 percent in 1985, compared with 22.5 percent in Japan, 11.9 percent in the United Kingdom, and 13.0 percent in West Germany.[5] Moreover, American households saved less than their Japanese and European counterparts throughout the 1970s and 1980s. Comparisons of saving in different countries must be made with caution, however, because countries differ in the average age of the populations, retirement and insurance systems, and availability of credit for home purchases. For example, one reason the U.S. personal saving rate is much lower than the Japanese rate could be that the United States provides more ample social security

procedures may convey somewhat different impressions about U.S. saving trends. Some alternative measures, for example, make the personal saving rate in the 1980s appear larger. Most calculations still show, however, that the private and national saving rates declined sharply in the 1980s.

Two important measurement issues involve consumer durable goods purchases and household capital gains. Much of the initial outlay for a consumer durable good is really an investment yielding a return in the form of future consumption services. Classifying consumer durable outlays as saving raises the U.S. saving rate relative to rates in other industrial countries. Some saving measures also include capital gains and losses on household financial assets. Including capital gains and losses increases the personal saving rate in the 1980s because higher stock and bond prices have raised household wealth.

Saving rates based on the Federal Reserve's flow of funds data reflect both changes in tangible household assets and capital gains or losses. These data record an average personal saving rate of 10.6 percent over the 1980-85 period, compared with 9.6 percent during 1970-79. However, the flow of funds data suggest that the private and national saving rates dropped significantly in the 1980s.

[3] For further discussion of these saving rates and more general problems in measuring saving, see Alan J. Auerbach, "Saving in the U.S.: Some Conceptual Issues," in Patric Hendershott, ed., *The Level and Composition of Household Saving*, Ballinger Publishing, Cambridge, Mass., 1985, pp. 15-38.

[4] The private and national saving rates for 1986 reflect only the first three quarters of the year. Corporate profits data needed to compute these rates for the full year were not available at time of publication.

[5] For cross-country comparisons of alternative saving measures, see Derek W. Blades and Peter H. Sturm, "The Concept and Measurement of Savings: The United States and Other Industrialized Countries," in *Saving and Government Policy*, Federal Reserve Bank of Boston, Conference Series No. 25, 1982, pp. 1-30.

CHART 1

Personal saving rate

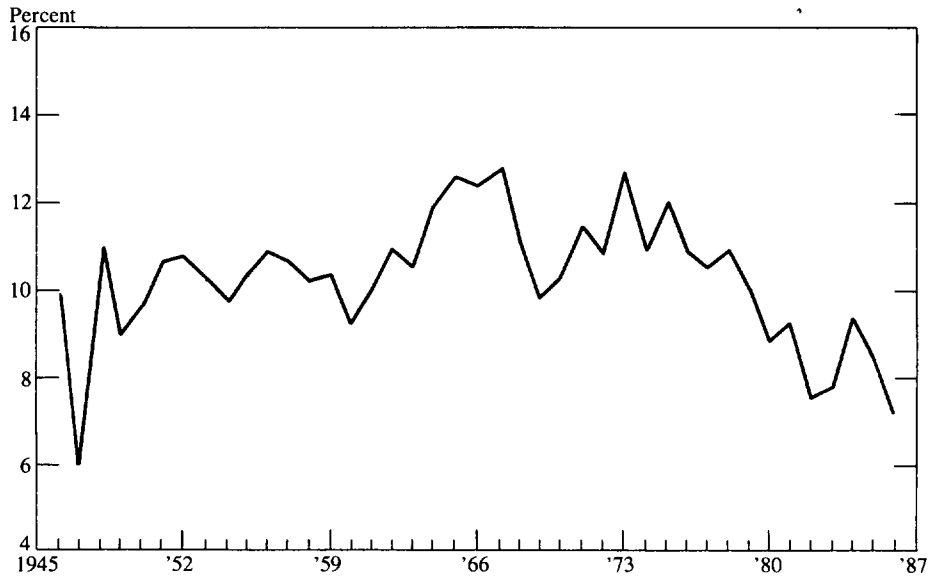
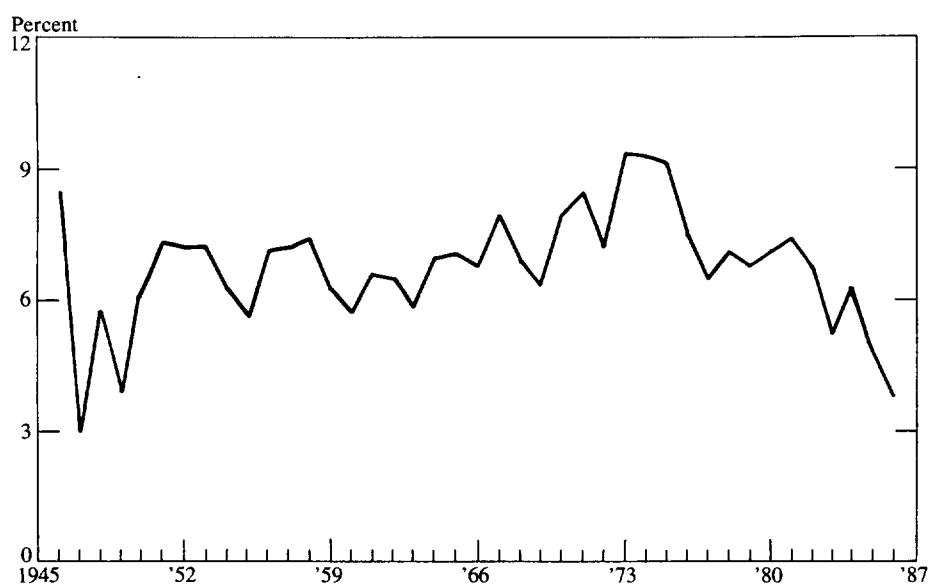


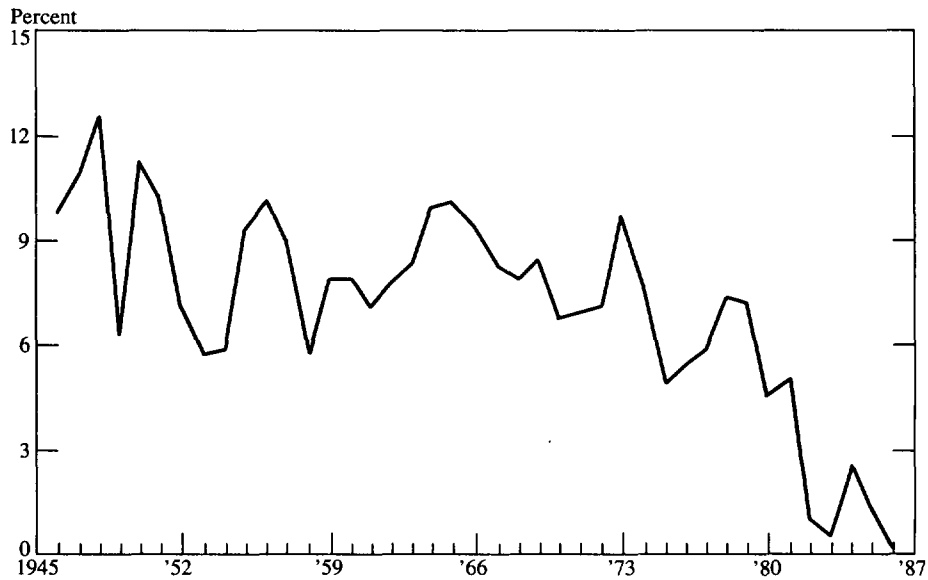
CHART 2

Private saving rate



Note: The saving rate for 1986 covers only the first three quarters of the year.

CHART 3
National saving rate



Note: The saving rate for 1986 covers only the first three quarters of the year.

benefits. Nevertheless, these international comparisons are consistent with the view that the United States has a low saving rate.

Effects of lower personal tax rates

Recent policy debates have focused on whether a cut in personal taxes would raise the personal saving rate. Supply-side economists believe personal tax cuts will raise U.S. saving. However, theoretical arguments and empirical evidence do not clearly support this supply-side view.

Supply-side economics and recent tax reductions

Supply-side economics provided some of the arguments supporting the personal tax rate cuts in 1981 and 1986. Supply-side economists argue that tax cuts raise the after-tax incentives to work, save, and invest. In this respect, supply-side analysis is firmly rooted in conventional economic theory. However, supply-side economists often believe in a much larger or faster response to tax rate cuts than most other economists do.

Supply-side economists contend that cuts in marginal tax rates are an effective way to stimulate domestic personal saving.[6] A marginal tax rate—the fraction of the next dollar of income that

[6] The basic supply-side view is stated in Norman B. Ture, "The Economic Effects of Tax Changes: A Neoclassical Analysis," in Richard H. Fink, ed., *Supply-Side Economics: A Critical Appraisal*, University Publications of America, Frederick, Md., 1982, pp. 33-69. The influence of supply-side economics on recent tax reform proposals is evident in *The President's Tax Proposals to the Congress for Fairness, Growth, and Simplicity*, U.S. Government Printing Office, Washington, D.C., May 1985, p. 1. Some supply-side economists, however, do not believe

TABLE 1
Personal saving rates in the United States and other industrial countries
(percent)

	United States	Japan	United Kingdom	West Germany
1970-74	8.5	20.6	10.1	14.9
1975-79	7.5	22.7	12.4	14.2
1980-84	6.6	21.0	12.9	13.6
1985	5.1	22.5	11.9	13.0

Source: Robert M. Giordano, "Myth and Reality of Japanese Influence on the U.S. Treasury Securities Market," *Financial Market Perspectives*, Goldman Sachs Economic Research, September-October 1986.

a household would pay in taxes—differs from the average portion of income paid in taxes because of deductions, exemptions, and the graduated tax rate structure. Economic theory implies that marginal tax rates, rather than average tax rates, affect household saving decisions. Marginal tax rates rose in the 1970s as inflation pushed many households into higher tax brackets.[7] Supply-side economists believe this "bracket creep" eroded household incentives to save. For a given interest rate, a higher marginal tax rate reduces the after-tax return from another dollar of saving. Supply-side economists argue that lower marginal tax rates can restore saving incentives and promote domestic capital formation.

Although supply-side economic arguments were prominent in the debate leading to the 1981 cut in personal taxes, the decline in the personal saving rate in the 1980s does not clearly refute these arguments. Defenders of the supply-side view could argue that the beneficial effects of lower tax rates are not evident yet because the tax rate cuts were introduced gradually and may affect household saving patterns with a long lag. Other factors, such as the changing age distribution of the U.S. population and the rise in stock market wealth, also may have offset the effects of lower marginal tax rates. Presumably because of these complications, some supply-siders continue to claim that further cuts in marginal tax rates will increase saving.

The tax reform of 1986 continues the experiment in tax rate reduction by lowering marginal tax rates further. Personal tax rates will be cut in two steps, first in 1987 and again in 1988. The highest tax bracket will be 28 percent beginning in 1988, although many taxpayers will actually

lower personal tax rates necessarily raise the measured personal saving rate. For this view, see Alan Reynolds, "How Supply-Side Triumphed," *Challenge*, November-December 1984, p. 17.

The supply-side argument for lower tax rates does not depend entirely on personal saving. Supply-side economists also believe lower tax rates increase the labor supply through higher labor force participation and greater individual work effort. Moreover, lower tax rates reduce the temptation to evade taxes by not reporting income to government revenue agencies. Therefore, many supply-side economists probably would advocate lower marginal tax rates for households even if personal saving rates were unchanged.

[7] One recent set of estimates indicates that the average marginal income tax rate rose from 24 percent in 1970 to 30 percent in 1980. The average marginal tax rate peaked at 31 percent in 1981 before declining to 27 percent in 1983. See Robert J. Barro and Chaipat Sahasakul, "Average Marginal Tax Rates from Social Security and the Individual Income Tax," *Journal of Business*, October 1986, pp. 555-566.

face an effective marginal rate of 33 percent. The tax reform package contains other features, however, such as restrictions on IRA's and higher capital gains tax rates, that raise the effective marginal tax on investment income. Other provisions of tax reform could affect personal saving indirectly by changing the rate of return on business capital investments.[8]

Theoretical analysis of a lower personal tax rate

Although supply-side reasoning is consistent with conventional economic theory, theoretical arguments alone do not prove that a cut in personal tax rates will raise the saving rate. An increase in the after-tax return on saving has opposing theoretical effects so that the net change in saving could be either positive or negative.

Economic theory assumes that households base their saving decisions on the real after-tax rate of return, the rate of return a saver would realize after adjustments for taxes and inflation. Suppose, for example, that the interest rate on a corporate bond is 10 percent. An investor with a 25 percent marginal tax rate receives only 7.5 percent from the bond after taxes. If prices are rising, part of this return compensates merely for the declining value of money. An inflation rate of 4 percent implies a real after-tax return of 3.5 percent.

A change in the real after-tax return has two effects. One is the substitution effect, which implies that a cut in the personal tax rate increases personal saving. Normally, households prefer to consume now rather than later. However, a positive after-tax return on saving provides an incentive to save now in order to consume more in the future. A personal tax rate cut raises the after-tax real return, implying today's saving will grow to an even larger sum in the future. Households thus have a stronger incentive for current saving. The substitution effect implies that a higher after-tax return induces households to save more now to increase their future standard of living.

The overall impact of a personal tax rate cut on saving is unclear, however, because the second effect, the income effect, could offset the substitution effect. Higher after-tax earnings on personal saving increase the total lifetime resources available to the household. Consumers use these resources to increase lifetime consumption, raising current spending as well as planned future spending. The higher current consumption caused by the income effect could partially offset the substitution effect or, in principle, even outweigh it. So a cut in tax rates could raise or lower the saving rate, or leave it unchanged.

Another argument sometimes made against the supply-side view is that some households may be target savers. Many people may save with a specific target amount in mind, perhaps the downpayment on a house, a college tuition, or a target sum for retirement. A higher after-tax real rate of return reduces the saving that must be done now to achieve the target amount by a given date. Thus, a personal tax reduction could reduce the personal saving rate if most households are target savers.

Economic theory, therefore, does not clearly predict the effects of a personal tax rate cut on saving. As a result, economists have tried to answer this question by empirical studies.

Empirical evidence on saving behavior

Several recent studies have examined U.S. historical data in an effort to determine how changes in the rate of return affect saving. These studies relate either consumer spending or sav-

[8] This article discusses only a few provisions from the complex tax reform bill. A convenient summary of the new tax law is *The Price Waterhouse Guide to the New Tax Law,* Bantam Books, New York, 1986.

ing to some interest rate variable used to measure the return on savings. The studies also try to control for the effects of such basic consumption determinants as income and wealth. These statistical studies produce a wide range of estimates, from no interest-sensitivity of saving to a sizable positive response. Little evidence, however, supports the theoretical possibility that higher after-tax returns could lower current saving.

Any empirical study of saving behavior faces certain difficult research issues. Empirical studies have produced a wide range of statistical estimates because researchers have handled these issues differently. Among these research issues are the proper definition of saving, the calculation of real after-tax returns, and the need to control for other influences on saving. One influential study found a substantial sensitivity of saving to after-tax return.[9] Other economists discovered, however, that the empirical results could be quite different when the statistical model was changed in small ways.[10] Empirical studies, therefore, have not provided definitive evidence on the sensitivity of saving to after-tax returns.

What then can be said about the response of saving to after-tax returns? Economic theory does not give clear-cut predictions because of the offsetting substitution and income effects. The available empirical evidence also reaches mixed conclusions, with estimates ranging from no effect on saving to a fairly substantial positive effect. Moreover, the poor saving performance of the United States after the income tax reductions in 1981 gives little evidence that saving responds strongly to higher after-tax returns, although other factors may have kept this response from being observed. In short, the evidence suggests that personal saving may increase somewhat in response to tax rate reductions, but that the response is unlikely to be large enough to remedy major deficiencies in domestic saving. As a result, most economists would be skeptical about claims that the lower income tax rates resulting from the recent tax reform bill will provide a major boost to personal saving.

Other effects of tax reform on saving

The tax reform includes many provisions besides lower personal tax rates that could affect the saving rate. Some reforms affect households directly, while others might affect personal saving indirectly through business investment returns. Like the effects of the personal tax rate cut, the effects of these reforms tend to offset each other, making the likely overall effect on personal saving small.

Effects on households

The provisions of the tax reform directly affecting households do not work uniformly to raise personal saving. While some provisions may increase saving incentives, others reduce saving incentives.

Individual retirement accounts. One provision of the tax reform that could reduce saving incen-

[9] Michael J. Boskin, "Taxation, Saving, and the Rate of Interest," *Journal of Political Economy,* April 1978, pp. S3-S27. Some criticisms of Boskin's study are found in E. Phillip Howrey and Saul H. Hymans, "The Measurement and Determination of Loanable-Funds Saving," *Brookings Papers on Economic Activity,* 1978:3, pp. 655-685. Empirical estimates similar to Boskin's are obtained in Thorvaldur Gylfason, "Interest Rates, Inflation, and the Aggregate Consumption Function," *Review of Economics and Statistics,* May 1981, pp. 233-245.

[10] One study found that the estimated effect of the rate of return on saving is quite sensitive to the choice of the variable used to measure the rate of return. When the theoretically preferred after-tax real interest rate was used, the estimates suggested that saving did not respond to changes in the rate of return. See Gerald A. Carlino, "Interest Rate Effects and Intertemporal Consumption," *Journal of Monetary Economics,* March 1982, pp. 223-234. Other studies finding little sensitivity of saving to the rate of return include E. Phillip Howrey and Saul H. Hymans, "The Measurement and Determination . . . ," and Robert E. Hall, "Real Interest and Consumption," National Bureau of Economic Research, Working Paper No. 1694, August 1985.

tives is new restrictions on Individual Retirement Accounts (IRA's). Previously, all wage earners could contribute to an IRA, regardless of their participation in company-sponsored retirement plans. That contribution could be fully deducted from the wage earner's income in computing federal taxes. Now, the deductibility of an IRA contribution is limited if the wage earner already has a pension plan. For example, a single taxpayer earning over $35,000 per year and covered by a pension plan can no longer deduct an IRA contribution.

For some savers, the new IRA limitations may reduce the after-tax marginal returns on saving and thus may tend to lower the personal saving rate. The effects of IRA's on personal saving are widely debated but are hard to assess. The plans have been available on a widespread basis only since 1981. Some observers argue that IRA's affect only the composition of household saving, with little effect on the personal saving rate. In this view, savers take funds they would have saved anyway and place them in IRA's to postpone taxes. Others argue, however, that these accounts increase retirement saving because saving is sensitive to after-tax return. The little empirical research that has been done on the effects of IRA's seems to support this latter view.[11] Therefore, greater restrictions on IRA's may offset part of any improvement in saving incentives from tax rate reduction.

Capital gains taxes. Another feature of tax reform that discourages personal saving is the higher tax rate on long-term capital gains. The maximum tax rate for long-term capital gains in 1987 is 28 percent, up from a top rate of 20 percent under the old tax code. Beginning in 1988, capital gains will be taxed as ordinary income subject to the taxpayer's top marginal rate. Because long-term capital gains were previously taxed at a lower rate than the investor's wage or interest income, many savers invested in growth stocks, real estate, and other assets yielding a high proportion of their returns as capital gains. The effective marginal tax rate on investment income, therefore, was less than the personal income tax rate. The higher capital gains tax could discourage household saving by reducing the after-tax return from these investments. Thus, the higher tax rate on capital gains could partially offset any stimulus to saving from lower personal income tax rates.

Distributional effects. Tax reform also has distributional effects that could affect the personal saving rate.[12] Tax reform affects some income groups more than others, and these groups may save more or less than average. The biggest tax breaks go to low-income households. Some low-income households will be removed from the tax rolls entirely and will, therefore, have larger disposable incomes. These households have low saving rates, however, and probably will spend most or all of their tax reductions. High-income households, which save a larger than average portion of their incomes, may also pay much lower taxes. Thus, the distributional effects of tax reform partially offset each other, making their net impact on personal saving indeterminate.

Other effects. Changes in pension vesting rules also could lower the personal saving rate. Some economic research implies that households reduce their nonpension saving somewhat when they expect higher pension benefits.[13] However, a dollar increase in "pension wealth" is likely to

[11] See R. Glenn Hubbard, "Do IRAs and Keoghs Increase Saving?" *National Tax Journal*, March 1984, pp. 43-54; and Steven F. Venti and David A. Wise, "IRAs and Saving," National Bureau of Economic Research, Working Paper No. 1879, April 1986.

[12] Maury N. Harris, "Tax Reform and the Economy," *Perspective*, Paine Webber, October 3, 1986.

[13] For example, see R. Glenn Hubbard, "Pension Wealth and Individual Saving: Some New Evidence," *Journal of Money, Credit and Banking*, May 1986, pp. 167-178.

reduce nonpension asset holdings by less than a dollar. Tax reform is likely to increase some households' expected benefits by shortening the pension vesting period. Instead of the old maximum of ten years for full vesting, pension plans must either be fully vested after five years or vested in phases over seven years. As a result, more employees will establish pension benefits before changing jobs or leaving the labor force. The resulting increase in pension wealth could reduce the saving rate and partially offset any stimulus from lower personal tax rates.

Other features of the tax reform could change household incentives to save. Loss of the consumer interest and sales tax deductions makes current consumption more expensive and, thereby, encourages saving for future purchases.[14] Other changes discourage saving, however, by lowering after-tax returns. High-income taxpayers have less opportunity to reduce their effective tax rates by investing in tax shelters. Tax-oriented limited partnerships are less attractive because "passive" losses from tax shelters can no longer be used to offset regular wage or interest income. Also, the alternative minimum tax for individuals has been strengthened and expanded. These changes designed to limit tax avoidance could reduce saving by high-income households because after-tax returns may be less under the new law.

In summary, the offsetting nature of many tax reform provisions suggests that large increases in the personal saving rate are unlikely. Some reforms, such as limited deductibility of IRA contributions and higher capital gains taxes, may reduce after-tax returns and, as a result, decrease saving incentives. These changes may partially offset any tendency for the personal saving rate to rise because of tax rate reductions.

[14] Sales taxes are no longer deductible as of January 1, 1987. Consumer interest deductibility will be phased out over five years, with 65 percent still allowed in 1987, 40 percent in 1988, 20 percent in 1989, 10 percent in 1990, and none thereafter.

Effects on businesses

To complicate the problem further, tax reform affects the personal saving rate indirectly through its effects on after-tax business profits. Some economists claim that households take business saving decisions into account in making their own saving plans.[15] For example, owners of common stock have a share in corporate profits whether the profits are paid out as dividends or retained to increase the value of the firm. Other households may not own corporate stock directly but may share in business saving indirectly through pension plans or mutual funds. If companies invest retained earnings wisely, the value of the corporation and the price of the stockholders' shares will increase. This increase in shareholder wealth may cause some households to reduce their personal saving rates, although total private saving might be roughly the same as before.

The reduction in corporate tax rates is one provision of the tax reform that could reduce the personal saving rate. The new law reduces the top corporate tax rate from 46 percent to 34 percent. This change tends to increase the after-tax return from business investment. A higher after-tax return may encourage total private saving, but the effect on personal saving is less clear because households may reduce their saving in response to the greater value of corporate shares. This decrease in saving would not be alarming from a macroeconomic viewpoint, however, because the greater business saving would provide resources for productive investments in plant and equipment.

[15] These views are discussed in Barry P. Bosworth, *Tax Incentives and Economic Growth*, Brookings Institution, Washington, D.C., 1984, pp. 86-89. Bosworth's tentative conclusion is that "individuals do in large part pierce the veil between corporate and household saving and are aware of the future benefits of corporate retentions, as reflected in the market value of the corporate stock."

Several other provisions of the tax reform raise business taxes, however. The investment tax credit was repealed retroactively for property placed in service after 1985. With the repeal of this credit, businesses have less incentive to reinvest profits in machinery and equipment because the after-tax rate of return is lower. Moreover, changes in business depreciation rules are expected to give smaller depreciation deductions to most companies. Real estate investments were among the hardest hit areas, with residential rental properties now depreciated over 27.5 years and nonresidential properties over 31.5 years, compared with the previous 19-year tax lifetime. In addition, a new corporate minimum tax was introduced, and the corporate capital gains rate of 28 percent was repealed so that capital gains will be taxed at the same rate as ordinary corporate income. These changes discourage business saving by raising the effective tax rate on corporate income.

In summary, business tax reforms may not make more resources available for private capital formation, even if they raise the personal saving rate. The net effect of tax reform will be to raise corporate taxes because changes in the investment tax credit and depreciation rules more than offset the lower corporate income tax rates. As a consequence, total corporate taxes will be $120 billion higher over the 1986-91 period, according to Congressional staff estimates. The higher corporate tax burden could be expected to reduce business saving and, thus, encourage personal saving somewhat. However, a shift in the composition of private saving without an overall increase in saving would probably not make more resources available to improve U.S. productivity and international competitiveness.

Effects on aggregate income

Because of its scope and magnitude, tax reform could have broad effects on the levels of economic activity and income. These macroeconomic effects will influence the personal saving rate and the total volume of private saving. Although economists differ on the size and timing of these effects, tax reform is expected to reduce economic growth in 1987 and have little effect on growth in the long run.

Such an economic scenario, if correct, does not favor aggregate saving in the short run. Business economists have identified several reasons why tax reform may reduce economic growth in 1987.[16] Federal revenues are expected to rise in fiscal 1987 because many tax deductions and credits are phased out before the full tax rate cuts are instituted. Also, investment in nonresidential structures, apartment buildings, and business equipment may be affected adversely by tax reform. As a result, some economists feel tax reform will reduce economic growth in 1987. The expected slowing of income growth in 1987 would be expected to result in slower growth of private saving.

The long-run effect of tax reform on economic growth is much less certain, though. If tax reform improves the efficiency of investment decisions, as hoped, growth in aggregate income and, therefore, aggregate saving could be increased. However, reduced investment incentives, such as repeal of the investment tax credit, could outweigh any gains from greater investment efficiency. Therefore, the long-run effect of tax reform on aggregate income and saving is uncertain.

Thus, the tax reform bill contains many com-

[16] See, for example, Roger E. Brinner, "The Best Countercyclical Policy (is None)," *The Data Resources Review of the U.S. Economy,* December 1986, pp. 1-6; Maury N. Harris, "Tax Reform and the Economy;" and Gordon B. Pye, "Effect of Tax Reform on Investment Values," *Economic View from One Wall Street,* October 1986. An alternative view that tax reform will stimulate the economy in 1987 can be found in Gary Wenglowski, Jason Benderly, and Edward McKelvey, *The Pocket Chartroom,* Goldman Sachs Economic Research, September 1986.

plex provisions that, directly or indirectly, could offset any saving stimulus from lower personal tax rates. Household saving decisions could be influenced by such factors as IRA limitations, higher capital gains taxes, and loss of consumer interest deductibility. Because households ultimately own business enterprises, personal saving also could change as tax reform alters business saving and, therefore, household wealth. Finally, many economists expect tax reform to have broader effects on real GNP and interest rates that could lower personal saving. The net effect of these provisions is hard to determine, but they could provide a substantial offset to any saving incentive from lower personal tax rates.

Conclusion

The desire to stimulate saving was one motivation for the tax rate reductions legislated in 1986. Tax reform could increase the personal saving rate by raising after-tax returns on household assets. However, economic theory is ambiguous about the response of saving to lower tax rates, and available empirical evidence is mixed. Thus, while lower tax rates may generate some extra saving, the effects are unlikely to be large. In addition, tax reform makes other changes, such as IRA limitations, higher capital gains tax rates, and changes in business taxation, that might offset any stimulus to saving. Tax reform, therefore, seems unlikely to produce substantial improvement of the personal saving rate.

Failure to raise the saving rate does not necessarily mean that tax reform is undesirable, however. Lower personal tax rates still may increase labor force participation and, thereby, increase the aggregate supply of goods and services. Tax reform also was motivated on broader grounds of equity and economic efficiency. Many people feel that such changes as limiting tax shelters and dropping low-income households from the tax rolls will produce a fairer tax system. In addition, tax reform may encourage more efficient allocation of capital in the long run since investments will depend more on economic returns and less on tax advantages. Although several years will be needed before the effects of tax reform can be assessed fully, tax reform could have numerous benefits that would justify its passage even if it does not lead to increased saving.

A low personal saving rate, however, may remain a policy concern in the immediate future. Additional research is needed on the determinants and measurement of household saving and possible policies to raise the saving rate. One policy option clearly is to restore past saving incentives such as IRA deductions for higher income households. More fundamental changes might include a consumption tax, elimination of the double taxation of corporate dividends, or repeal of capital gains taxes. In the meantime, the most effective alternative is to reduce the federal deficit to make more of existing savings available for private capital formation.