

REDUCING THE TAX BURDEN ON SAVING



INVESTMENT COMPANY INSTITUTE

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December 1994



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Preface

The Investment Company Institute* from time to time publishes papers such as Dr. Penner's, on issues of importance to U.S. investment companies and their shareholders. Intended to contribute to a vigorous dialogue in public policy questions, such papers do not necessarily reflect the views of the Institute or its members.

Today, the low rate of national saving in the U.S. and the effect that low rate will have on economic growth, competitiveness, and future living standards are matters of deep concern to economists, policymakers, and business leaders. Some have urged that the U.S. consider substituting a consumption-based tax system for the current income tax system as a means of increasing the national saving rate. Proposals for consumption-based taxes have been advanced on a bipartisan basis by the Nunn-Domenici Commission on The Strengthening of America, by former Senators David Boren and John Danforth, by Representative Richard Armey and Representative Sam Gibbons, as well as by a host of prominent economists. This paper describes several possible consumption tax systems and examines what effect their adoption would have on the national saving rate. It also addresses some of the practical problems that would arise upon conversion to such a tax regime.

The paper's author, Dr. Rudolph G. Penner, is a Managing Director of Barents Group LLC of KPMG Peat Marwick in Washington and a member of the Nunn-Domenici, Strengthening of America Commission. He is a nationally known authority on federal budget and tax policy with a special interest in budget process debt management, social security, medicare, and medicaid. Immediately before joining the Barents Group LLC, Dr. Penner was a Senior Fellow at the Urban Institute. Prior to that, he was Director of the Congressional Budget Office. He also served in the Nixon and Ford Administrations at the Council of Economic Advisors, the Department of Housing and Urban Development, and as Chief Economist of the Office of Management and Budget. Prior to 1973, Dr. Penner was a Professor of Economics at the University of Rochester.

Dr. Penner has published widely both in academic journals and in magazines and newspapers and has consulted in a number of countries, including Canada, Tanzania, Liberia, and the Philippines.

*The Investment Company Institute is the national association of the American investment company industry. Its membership includes 5,510 open-ended investment companies ("mutual funds"), 471 closed-end investment companies, and 12 sponsors of unit investment trusts. Its mutual fund members have assets of about \$2.099 trillion, accounting for approximately 95 percent of the total industry assets, and have over 38 million individual shareholders.

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Executive Summary

A nation's savings provide the foundation for its economic growth. Nations that do not save will in the long run see their potential for increased income and wealth suffer. For that reason, the current savings rates in the United States, low by historical and international standards, raise concerns that the United States will grow more slowly than it should and that the standard of living of its citizens will be lower than it need be. The cause of the falling savings rate has been the subject of much debate. Although the cause is not clear, the trend may be reversed by reducing the tax burden on saving.

The current tax system both reduces savings and causes savings to be inefficiently used. With its byzantine structure of loopholes and exemptions, the current system induces people to change their behavior and invest in certain activities because of tax advantages. Since the costs of distortions are not directly paid, the distortions caused by the idiosyncrasies of the tax code are not obvious, but their effects are considerable in lowering the productivity with which our nation's savings are used. Reducing the tax burden on savings should enhance both the amount of savings and the effectiveness with which those savings are used, thereby making the United States more prosperous.

This report examines the effects on savings of the adoption of tax systems that reduce the barriers to saving. Examples include retail sales taxes, subtraction-type and credit-invoice value added taxes, income taxes that allow an unlimited savings allowance, cash flow taxes, and the Bradford X-tax. These taxes, collectively and somewhat inaccurately called consumption-type taxes, are diverse in nature and would have different implications for savings. As a group, they are receiving increasing attention from people of all political orientations who seek to increase savings rates.

Such taxes, when substituted for the current system, promote savings by increasing the after-tax return to saving, and also by putting more money in the hands of relatively high savers at all income levels. Such taxpayers would be expected to save a large portion of their tax cut. The tax substitution would, on the other hand,

raise the burden on those who tend to consume a lot. A large part of this tax increase would be financed by cutting back consumption. Although savers will pay less in taxes than nonsavers at any level of income, the tax need not, as is often believed, be regressive because of the tendency for people to save lower portions of their income at lower income levels. Taxes that allow deductions for saving can be made highly progressive by creating large exemptions and using a progressive rate structure.

Any adjustments to the tax system create shocks that were not anticipated by taxpayers. This is an important problem when proposed changes in the tax code are very large. People who have structured their finances with the current tax system in mind could face a higher tax burden with the new system. In the case of consumption-type taxes, a key problem is that people would pay taxes when spending wealth that was accumulated out of saving from income that was taxed by the old system. Thus, in the absence of transition provisions, a consumption-type tax would be not only a tax on future consumption, but also a tax on old wealth. There are many options for dealing with this transition issue, and they are described in the paper.

Ironically, some fear to relieve the burden on saving because they think that it would be too successful. They worry that a large rise in saving and a fall in consumption would shock the economy into a recession. This risk is analyzed and shown to be very small. It is small, basically, because current saving is so low that a large proportionate rise would today amount to a small proportion of GDP. It is also noted that many of the proposed reforms would encourage investment by allowing expensing. The consequent rise in investment could be expected to offset whatever fall in consumption occurs in the short run. In the longer run, consumption would be expected to rise because of faster economic growth.

The analysis also examines the effects of consumption-type taxes on economic growth and our international accounts and discusses techniques for handling the purchase of large items, such as houses and autos.

Introduction

The United States is facing a silent economic crisis. Its saving rate has fallen to such low levels that future economic growth is jeopardized.

Saving is necessary to provide resources for capital investment, and capital investment is necessary to improve the productivity of workers and to implement technological improvements. Without an increased saving rate and improved productivity growth, it will be impossible to attain the rates of growth of wages and living standards taken for granted in the past. Our generation is doing far less for our successors than our ancestors did for us. The issue is more than economic. It has a moral dimension as well. Do we have the right to deprive those yet unborn of their prospects for an ever growing standard of living?

Chart 1 illustrates the downward trend in net national saving as a percent of net national product.¹ After averaging close to 9 percent in the 1960s, the ratio has been falling sharply, reaching a low of 1.1 percent in 1992. The slight rise in 1993 is not reassuring. The ratio remained at about 2 percent. A significant part of the decline is related to the upward trend in the Federal deficit that exploded in the 1980s. However, the profligacy of individuals has paralleled that of the government. Personal saving has declined to an average of less than 5 percent of disposable income thus far in the 1990s, after having been on an upward trend in the 1960s and averaging almost 8 percent in the 1970s (See Chart 2). Although there are a number of reasons that these official figures may somewhat exaggerate the fall in the saving rate, the fall is alarming even after the official figures have been adjusted for probable biases.²

Not only is the U.S. saving rate far lower than in the past, it is far lower than the rates found among our major trading partners. As shown in Chart 3, the Japanese saving rate is nine times ours; the German rate is more than five times ours. The second worst country shown on the chart, the United Kingdom, saves at a rate that is double ours. Unless there is a major change in relative saving rates, the United States will significantly lag these major countries in its rate of per capita income growth.

Various researchers have attempted to explain the fall in the private saving rate, but without much success. For example, it has been hypothesized that capital gains and the effect of inflation on debt, which are not counted in the saving statistics discussed above, might make up for the fall in private saving. Demographic changes have also been investigated with great care and some have suggested that the proliferation of credit cards and the convenience of home equity loans have had a large effect. However, careful analysis of these and other phenomenon do not provide an adequate explanation of the sharp downward trend and it remains something of a mystery.

The fall in the saving rate has a number of consequences other than the direct effects on economic growth. It forces the United States to rely on foreigners to directly and indirectly finance a large portion of the capital formation that does occur. The cost of the investment is that we must divert some of our production to interest and dividends abroad. In addition, the low private saving rate implies that ordinary Americans are not preparing sufficiently for their retirement. A study of the saving habits of the baby boom

1 Net saving is gross saving minus the depreciation of the current capital stock. It indicates the contribution of saving to increases in national wealth. The saving represented by depreciation indicates the amount necessary to offset wear and tear of the existing capital stock. It is appropriate to compare net saving to the net national product which represents our total income after providing for depreciation. It is sometimes alleged that official data overstate depreciation in which case net saving is underestimated. But a reasonable correction for this bias would have only a minor effect on the disturbing trends discussed in this paper.

2 U. S. Congress, Congressional Budget Office, *Assessing the Decline in the National Saving*

FIGURE 1

Net National Saving

as a Percentage of Net National Product
U.S. 1960-1993

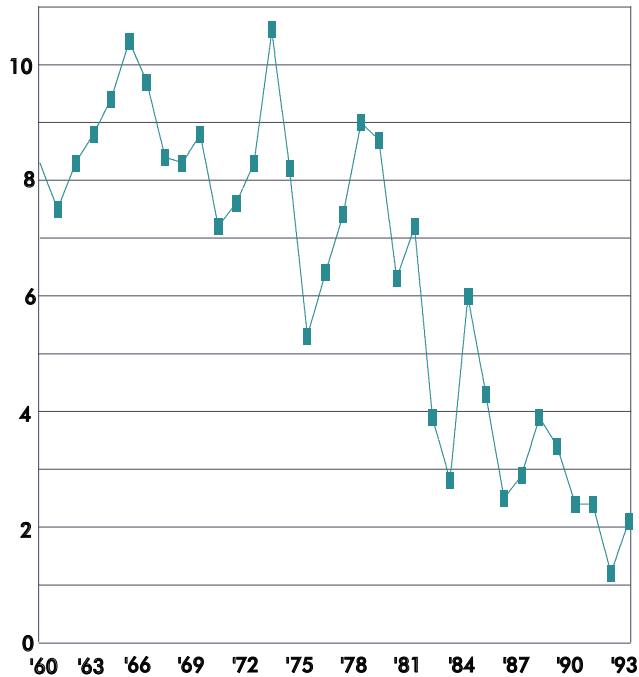
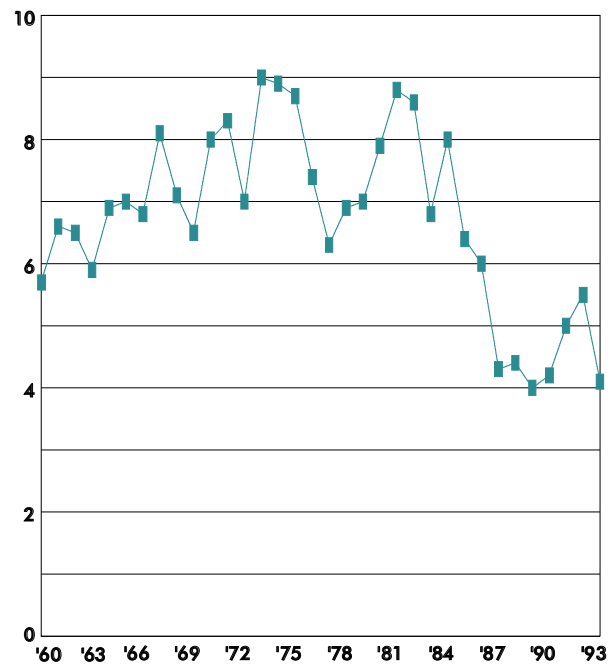


FIGURE 2

U.S. Personal Saving Rate

as a Percentage of Disposable Income
U.S. 1960-1993



Source: Economic Report of the President and survey of Current Business

generation by Douglas Bernheim indicates a massive shortfall between the assets that they are accumulating and the assets required to maintain their future consumption at preretirement levels.³

The future federal government dissaving rate, i.e., the budget deficit, is projected to be high enough to cause the public debt to grow faster than our income in the long run. This situation is not sustainable. Auerbach and Kotlikoff have estimated that given current benefits promised the baby boomers in their retirement and other spending and revenue trends, stabilizing the ratio of public debt to income will require a federal,

state, and local tax burden of over 80 percent of the incomes of future generations if some of the promises made to future retirees are not withdrawn or public spending is not otherwise greatly reduced.⁴

This paper will focus on the private side of the saving problem. It will argue that ending the current tax system's bias against saving will have a significant beneficial effect on the nation's saving rate. It is not necessary to fully understand the reason for the fall in the private saving rate in order to be able to advocate a remedy. The paper will examine various options for reducing the burden on saving and the major issues

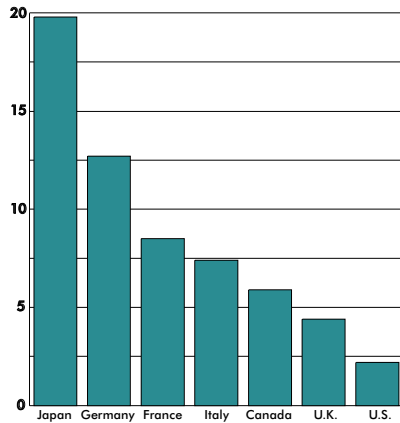
3 B. Douglas Bernheim, The Merrill Lynch Baby Boom Retirement Index, Merrill Lynch, July 14, 1994.

4 Alan Auerbach and Laurence Kotlikoff, "The United States' Fiscal and Saving Crises and Their Implications for the Baby Boom Generation," Report to Merrill Lynch & Co., Inc., February 1994.

FIGURE 3

Net National Saving

As a Percentage of GDP 1990



Source: OECD Historical Statistics 1960-1990

associated with individual options. It will also be shown that two frequent criticisms of such options—that they are regressive and that the transition problems associated with reform are very severe—are in the first case false and in the second case often exaggerated.

Throughout the analysis, it is important to consider not only the level of saving, but the efficiency with which it is used. The current tax system tends to pull saving toward the areas of economic activity in which

the tax burden is lowest. Those are not necessarily the areas in which the saving, when invested in capital goods, will provide the highest rate of return for the economy. That goal is more likely to be achieved if investors are induced by self-interest to invest in the most productive areas, i. e. the areas in which the pre-tax rate of return is highest. Tax reform can facilitate this process by increasing the role of the marketplace in deciding how saving is used and concomitantly reducing the role of tax law in distorting these important decisions.

There are, of course, other ways that the government could attempt to raise the national saving rate other than through tax policy. It has already been implied that reducing the government's budget deficit could be very effective. More speculatively, the government's safety net might be reducing the precautionary motive for saving. For example, social security may reduce private retirement saving, and cuts in social security may therefore raise the saving rate. However, it is unlikely that government would undertake cuts in its transfer programs solely to increase private saving. The evidence linking saving to transfer payments is highly controversial and transfer policy is much more likely to be based on the effectiveness with which transfer programs are deemed to be serving social goals rather than on their savings impact.

The Effect of Taxes on Saving

There is much debate among economists about the effect on the savings rate and individuals' work effort of cutting tax burdens. However, the debate involves the effects of an outright tax cut. That is not the policy option being discussed here. The proposals analyzed here involve *replacing* the current tax system with one that yields the same revenues, but imposes a lighter burden on the return to saving and/or investment. The *replacement* of one system for another should substantially increase saving.

In contrast, the impact on saving of a revenue reducing cut in marginal tax rates is theoretically ambiguous. For example, imagine a tax cut that raises the after-tax return for a particular type of saving from 7 percent to 10 percent. Before the tax cut, \$10,000 in saving could be used to finance \$10,700 in consumption one year from now. After the tax cut, the same saving will finance \$11,000 in added consumption. One would think that this added reward to saving would most surely increase the saving rate. But the person may not wish to consume \$11,000 one year from now. With the new, higher after-tax rate of return, they can consume \$10,900 in the future while reducing their current saving to \$999 or by \$91. In other words, the tax cut allows them to consume more both in the future and currently than they could before, and there is no reason to believe that taxpayers will not choose this option.

Making the same point another way, a person saving to attain some target, say a new car or a down payment on a house, will not have to save as much currently to attain that goal if the return to his or her saving is taxed at a lower rate. Using the same interest rate as assumed above, the tax cut allows the saver to continue consuming \$10,700 in the future, even if the amount saved is lowered from the \$10,000 saved

before the tax cut to \$9,727 after the tax cut. However, none of these examples definitely implies that saving would, in fact, be lowered. A person may respond to the increased reward for delaying consumption by saving a great deal more. The basic point is that economic theory does not provide a clear answer as to whether saving goes up or down, and empirical investigations have not resolved the issue.

While the effect of a straight tax cut has an ambiguous effect on private saving, it clearly would reduce revenues and increase the federal deficit and so increase public dissaving. Thus, an advocate of straight tax cuts on the return to saving must argue not only that private saving is increased, but that it is increased sufficiently to more than offset any increase in the budget deficit caused by the revenue loss to the government.

The impact on saving changes radically if one analyzes the impact of adopting a tax that eases the tax on the return to saving, i.e., taxes consumption more heavily, to replace another that taxes all income, where the two taxes provide the same revenue for the government. Because reducing the tax burden on saving reduces the tax base compared to the base of a pure income tax, tax rates will have to be somewhat greater than before the tax substitution. Defining a representative taxpayer as one who pays the same amount of taxes before and after the tax substitution, the increase in the rate of the new tax necessary to yield the same revenues makes it impossible for this representative taxpayer to increase consumption both in the future and currently as he or she could when there was a simple tax cut on the return to saving. Therefore, there is no temptation to reduce current saving. There is, however, a greater reward for postponing consumption under the new tax, and therefore, the effect of the substitution on the

representative taxpayer should unambiguously increase his or her rate of current saving.⁵

Although an average taxpayer will pay the same amount of taxes, other individuals will either pay more or less, depending on whether their initial propensity to save is less or more than average. The reduction in the aggregate saving of those suffering tax increases is likely to be less than the increase in the saving of those enjoying tax cuts, because those enjoying the largest tax cuts had the highest propensity to save in the first place. Put another way, those experiencing tax increases are likely to finance them disproportionately by cutting consumption while those experiencing tax cuts are likely to save a disproportionate proportion of the proceeds. The distributional effects of the tax increases and tax cuts may have a greater impact on the national saving rate than the increased reward to saving inherent in the new tax.⁶

There would seem to be little doubt that the substitution of a new “saver friendly” tax for the current income tax would have a significant beneficial impact on the national saving rate. It is difficult to provide well-based, empirical estimates of this effect, however. Although a great deal of research has explored the effect of changing after-tax rates of return on the saving decision, there has been considerably less work done on the effects of substituting one tax for another.

The above discussion is based on traditional economic analyses which assume that individuals respond knowledgeably and rationally to various economic incentives and penalties. Some observed saving behavior does not seem to accord with traditional economic theory. For

example, retired people seem to save too much or dis-save too little relative to the predictions of economic theory. There is also more controversial evidence that seems to suggest that IRAs had more of a positive impact on saving than economic theory would suggest.⁷

Economists may overestimate the extent to which individuals are well informed about the benefits of saving and the power of compound interest. When IRAs were more generous than they are today, banks and other institutions advertised such benefits. Taxpayers got a very visible tax deduction when they made their IRA deposits just before filing their tax returns. A large portion of IRA deductions was made just before filing when it would, for most, have been more beneficial to make the deposits earlier in the year.⁸

Senators Nunn and Domenici have proposed a tax that provides an unlimited IRA or saving deduction (described below). With an unlimited saving allowance, the tax benefits of additional saving would become very much more apparent and would probably be advertised by financial institutions. A retail sales tax or a VAT would not have these features. It is, therefore, conceivable that a Nunn-Domenici approach would have a larger impact on saving than suggested by economic theory. The Nunn-Domenici approach also lacks a problem facing traditional IRAs. Because they limit the deduction, they did not provide an extra incentive to save at the margin for many people. The Nunn-Domenici approach, being unlimited, avoids this problem.

5 Describing the issue using economic jargon, a straight tax cut has an income effect that tends to reduce current saving and a substitution effect that tends to raise it. There is no theoretical reason for believing that one effect is stronger than the other. A revenue-neutral tax substitution has no income effect on average. It has only a substitution effect that is beneficial to saving. See Laurence S. Seidman, *Macroeconomics*, San Diego: Harcourt Brace Jovanovich, 1987.

6 In a more rigorous examination of these issues, Auerbach and Kotlikoff establish a model in which the propensity to consume and income levels are solely age related. In such a model, the substitution of a consumption tax for an income tax is obviously most detrimental to the elderly. However, even if this distributional effect is wiped out with lump sum transfers, the substitution significantly increases the economy's saving rate and its capital-labor ratio. See Alan J. Auerbach and Laurence J. Kotlikoff, *Dynamic Fiscal Policy*, Cambridge, England: Cambridge University Press, 1987, Chapter 5.

7 A recent article questions the evidence that indicates that IRAs are effective in stimulating saving. See William G. Gale and John Karl Scholz, “IRAs and Household Saving,” *American Economic Review*, Vol. 84, No. 5, (December 1994), pp. 1233-1260.

8 Richard Thaler, “How to Get Real People to Save,” *Personal Saving, Consumption, and Tax Policy*, Marvin H. Koster, ed., Washington, D.C.: The AEI Press, 1992.

Increased Saving and Aggregate Demand

Although many economists are skeptical that a change in tax policy can be used to increase saving, many laymen and particularly sellers of retail goods worry that reducing the tax burden on saving will cause saving to rise so much and consumption to fall so much that the economy will be plunged into a recession.

This dire view of an increase in saving is based on extreme Keynesian theory. Keynesian theory is being questioned by many scholars for many reasons, but even within the context of Keynesianism, the theory that saving will rise too much as a result of a change in tax policy is difficult to accept.

The most important point to note is that both saving and investment are encouraged by most of the proposals for reducing the tax burden on saving. To the extent that such proposals have a business component, they generally allow the expending of investment. In Keynesian theory, a tax reform will be expansionary if it increases planned investment more than planned saving.

But let us consider the worst possible case and assume that there is no effect on planned investment at all, that is to say, the only impact of the tax reform is to

increase personal saving. In 1993, personal saving equaled 3 percent of GDP. If personal saving were increased by one third by the contemplated tax reform that would be a magnificent achievement, but the shock would only be equal to 1 percent of GDP. Such a shock could be easily offset completely by the monetary authorities. As will be explained later, some of the shock would also be offset by international feedbacks. Because some of the excess saving would flow abroad, the dollar would depreciate, the United States would become more price competitive, and the trade deficit would fall, thus stimulating the economy.

Granted, personal saving is small relative to gross business saving, which consists of depreciation and retained earnings, but it is hard to imagine how the tax reform could cause planned business saving to rise more than business investment.⁹ The overall conclusion is that it seems highly unlikely that any excess of an increase in planned saving over the increase in planned investment would be so great as to depress the economy by an amount greater than that which can be offset by monetary policy.

⁹ There is some question as to whether individuals let changes in saving by business influence their own saving behavior. This is an important issue, but if individuals do take account of business saving decisions, it would seem even less likely that planned saving would rise more than planned investment.

Effects on Economic Growth and Efficiency

To say that a tax reform that lightens the burden on saving while maintaining tax revenues would have a significant, beneficial effect on the saving rate does not, by itself, say much about the effect of the tax reform on living standards. It is necessary to ask how efficiently saving will be used in the new tax regime and how much the added saving will increase economic growth.

If a tax that totally exempted the return to saving were used to substitute for the current hodgepodge that we call an income tax, there would be a significant improvement in the efficiency with which savings are used. Today, the tax burden on different types of saving and investment varies greatly from sector to sector and among different types of plant and equipment. Sometimes the differences in tax burden reflect explicit policy choices and sometimes these differences occur by accident, partly because of problems in measuring the true economic return to capital (as will be elaborated later). But whether by design or accident, variations in tax burdens cause capital to be diverted away from its most productive uses and toward those areas favored by the tax law. Because a pure saving-exempt tax would not tax the return to capital at all, it creates a completely level playing field in which the uses to which savings are put in financing investments are determined solely by the marketplace.

This effect, by itself, should result in a significant gain in economic efficiency and living standards even if there were no change at all in the national saving rate. Dale Jorgenson has estimated that the inefficiencies related to the distorted behavior caused by the burden that the personal income tax places on capital income cost \$1.017 for every dollar of revenues collected.¹⁰ If this cost could be lowered as a result of tax reform, there would be an appreciable increase in U.S. living

standards. Jorgenson estimates that the replacement of the current tax system with a consumption tax would improve efficiency so much that the same level of national welfare could be attained with more than one trillion dollars less wealth. In other words, after tax reform, the nation could go on a consumption binge and immediately consume that much wealth while still attaining the living standards likely in the future given our current inefficient tax system. None of these estimates includes the costs of collection and compliance. If these can be lowered by tax reform, the efficiency gains would be even higher.

Although the efficiency gains from tax reform could have a substantial impact on living standards, the increase in national saving will itself increase economic growth and living standards in the long run. The quantitative size of this impact depends crucially on the extent to which the added saving is converted into added U.S. domestic investment, flows abroad, or does neither, because it simply depresses aggregate demand in the economy. Since it was concluded above that the effect on aggregate demand is unlikely to be significant, the main issue that remains is whether the added saving moves abroad or remains at home.

It has already been noted that several of the prominent proposals to ease the tax burden on saving would simultaneously provide investment incentives. To the extent that both investment and saving are encouraged, there need be no concern that the excess saving will flow abroad.

But let us assume for the moment that initially the tax change only encourages saving. If the United States were a closed economy, interest rates would ideally fall to the point that sufficient extra investment would be created to absorb the increase in saving with or without

10 Dale W. Jorgenson, and Kun-Young Kim, "The Excess Burden of Taxation in the United States.," *Journal of Accounting, Auditing & Finance*, Fall 1991, pp. 487-508. The proposition that consumption taxes are much more efficient also gains *considerable support from Auerbach and Kotlikoff*.

the help of the monetary authorities. In an open economy, there will be some leakage abroad as savers and investors seek higher yields in foreign countries when U.S. returns begin to fall. The extent of this outward flow will depend on the degree of perfection in international capital markets. The possibilities range from all the extra saving flowing abroad to all of it staying in the United States. One analysis suggests that the right answer is about half and half.¹¹ The portion flowing abroad has probably increased significantly over recent decades as international capital markets have become more integrated.

Whether the additional saving flows abroad or remains at home, it still contributes to the growth of U.S. income. If it flows abroad, Americans enjoy the return to the capital less any taxes levied by foreigners. That return to capital income raises the American standard of living. If the savings stay at home, however, Americans not only enjoy the return to capital, but wages also rise because U.S. laborers become more productive as they have more capital with which to work. If the rate of return is higher abroad, foreign investment will enhance total income somewhat more, but American laborers are unlikely to benefit as much from the investment. Hence, whether or not the extra saving flows abroad has consequences for the distribution of income as well as the rate of economic growth.

How much does an increase in U.S. saving and investment increase the rate of growth of the economy? In the typical model of economic growth for the

United States, a very large portion of economic growth is the result of technological change. If new technologies could be implemented without investment, then saving and investment would appear to make a relatively minor contribution to economic growth. However, investment is often necessary before technological advances can be used, and therefore, investment is crucial to the growth process. Every percent increase in the U.S. capital stock adds close to one third of a percent to U.S. productive capacity, not counting its role in implementing technological progress, and probably considerably more than that once its complementarity with technical progress is fully taken into account.

In analyzing the relation between saving and economic growth, it is important to examine the effect of increases in saving on the height of the growth path instead of on the growth rate. As the proportion of national income saved rises, the growth rate of the economy first accelerates, but then slows again because the rate of return to capital begins to diminish as the capital stock becomes larger relative to the labor force. Eventually a new equilibrium is reached in which the growth rate is the same as before. But because of the higher growth rates in the interim, per capita income is now growing along a higher path. Because the equilibrium growth rate is now applied to a higher base, the absolute difference in living standards between the old and new path also grows through time.

11 John F. Helliwell, "The Fiscal Deficit and the External Deficit: Siblings, but not Twins," *The Great Fiscal Experiment*, Rudolph G. Penner, Ed., Washington, D.C.: The Urban Institute Press, 1990.

Different Approaches to Reducing the Tax Burden on Saving

There are many different approaches to reducing the tax burden on saving. Recently, there has been a significant increase in interest regarding such tax reform in academia, think tanks, and in the Congress. For example, the Nunn-Domenici Commission on The Strengthening of America recommended a progressive tax with an unlimited saving deduction that will be described in detail below,¹² and Senators Danforth and Boren introduced a business activities tax that is similar to a value-added tax. Representative Gibbons of the Ways and Means Committee has long been an advocate of the type of value-added taxation used in the European Economic Union. More recently, a flat tax with a base very similar to that used by Nunn and Domenici has been advocated by Richard Arme, the Majority Leader of the House of Representatives. Various approaches to reducing the taxation of saving are outlined below.

Retail Sales Tax

The tax best known by most Americans that generally exempts saving is the retail sales tax, levied by all but five states and by a significant number of cities. The tax is often levied on business transactions and sometimes the purchase of capital goods is taxed as well, but the bulk of the burden remains on consumption. Studies of the retail sales tax that are based on the consumer expenditure survey (CES) suggest that the retail sales tax is highly regressive with respect to income; that is to say, it constitutes a higher portion of the income of low-income groups than of high-income groups. The CES indicates that, at the bottom of the income distribution, people are consuming far more than their income, and are, therefore, heavily burdened by any sales tax.

(See the appendix for a summary of different consumption-based taxes.)

There are a number of reasons to believe, however, that such studies significantly overstate the regressive nature of the tax. First, those at the bottom of the income distribution, who are shown to be consuming far more than their income (high negative saving), may be doing so because they expect to be at the bottom only temporarily. Indeed, consumption tends to be much less erratic than income, and if periods of more than one year are studied, consumption is much more proportional to income. Consequently, any general sales tax also appears more proportional if studied for periods covering more than one year.¹³

Second, the distribution of consumption shown in the CES may not be accurate. By definition, a household's saving should equal its change in net worth. However, balance sheet surveys that measure saving by changes in net worth show saving to be more proportional to income than suggested by the CES. In particular, much less dissaving is shown at the bottom of the income distribution. If the distribution of retail tax burdens is estimated using balance sheet data, the tax appears less regressive.

Third, almost all studies of the distribution of the sales tax burden assume that it is directly passed forward in the form of higher prices for the taxed goods. While this is a very likely outcome, it is far from certain. If sellers have difficulty passing the tax burden forward to customers because of bad economic times or other factors, it ultimately must fall on business owners and employees. To the extent that this occurs the tax is likely to become less regressive. To the extent that the tax is passed forward into prices, it is important for any study to note that those depending on indexed transfers, such as social security, or other indexed

12 Center for Strategic and International Studies, *The CSIS Strengthening of America Commission*, Washington, D.C., 1992.

13 Joint Committee on Taxation, *Methodology and Issues in Measuring Changes in the Distribution of Tax Burdens*, Washington, DC: Government Printing Office, 1993.

forms of income, are essentially held harmless from the tax.

In fact, economists know very little about who actually bears the burden of various taxes once all these complications are considered. Even if the data were not of questionable quality, it would still be difficult to predict taxpayers' behavioral responses to various taxes. Distribution tables published by various government agencies and reproduced by the media convey a false sense of precision. At best, they are crude approximations to reality and at worst, they can be very misleading.

Despite these problems, however, it is probably safe to say that retail sales taxes have a regressive impact even if it is not as severe as implied by many studies. Certainly, a general sales tax will be more burdensome on the poor than the current personal income tax which essentially exempts everyone under the poverty line.

To counter the regressive nature of the sales tax, most states and cities exempt many necessities, such as food, medicine and clothing from their sales taxes. It is remarkable how rapidly a few exemptions can complicate a tax. For example, Canadians exempted food, but not snacks, from their general sales tax. They then decided to regard a purchase of a few doughnuts as a snack, but the purchase of a lot of doughnuts as food. Similar problems arise with the definition of clothing. Is a football jersey clothing or athletic equipment? When the tax law and regulations have to make such distinctions, the whole system becomes vulnerable to ridicule and leads to large, wasteful political battles.

If a retail sales tax is designed to replace part of the income tax, the regressive nature of the former can be countered by making what remains of the income tax more progressive through the use of refundable credits and other devices.¹⁴ This sort of tax would therefore be less progressive than the current system once the taxpayer got beyond the basic exemption, but it is important to note that mathematically, even in the

current system, much of the rise in the average rate as the tax base rises is due to the basic exemption and zero bracket amounts and not to the progressive rate structure.

Value-added Taxes

Value-added taxes come in many forms and can, in theory, be levied on all the goods and services produced in the economy. However, value-added taxes are typically levied only on consumption goods and services and have economic effects similar to those of a retail sales tax.

The type of value added tax proposed by Senators Boren and Danforth is often called "a subtraction-type VAT," although they dub their version "a business activities tax." The Strengthening of America Commission proposes a very similar tax on business. In these approaches, a business adds up all its sales to domestic purchasers and subtracts the value of all goods and services purchased from other businesses, including investment goods. The sum so derived is the base for the VAT.

Note that if investment goods were not deductible, the tax base for an individual business would equal its depreciation, wages, interest, rent (paid to individuals only), and profits. This amount represents the value that a business adds to a product's worth. As the product passes through various stages of production, the total value added by various businesses becomes exactly equal to the price at which the product is sold to the final consumer or investor. If the tax allows the investor to deduct the cost of investment goods purchased, as does Danforth-Boren, the tax base for the country as a whole becomes the value added in the production of consumer goods and services. Nonprofit institutions and governments are exempt from the tax. Danforth-Boren and most VATs around the world do not apply to exported goods and services, but would be levied on imports.

The Danforth-Boren tax, which applies to both corporate and noncorporate business would replace only the corporate tax and one half the employer's share of

¹⁴ A different approach has been suggested by Stephen Moore of the Cato Institute. He has suggested replacing the whole tax system with a retail tax that has a large exemption given every individual. He envisions issuing each taxpayer a credit card with transactions tracked by a central computer. The taxpayer could use the card to purchase goods up to the exemption amount without paying taxes. Beyond the exemption, the tax would be effectively a proportional tax on consumption.

the payroll tax. The Strengthening of America Commission proposal or the Nunn-Domenici business tax replaces the corporate tax, the entire employer's payroll tax, and the business taxes collected from non-corporate businesses on Schedule C. In addition, Nunn-Domenici proposes a progressive tax on individuals that would replace the current personal income tax and some of the employee payroll tax. Their personal tax allows an unlimited deduction for saving.

Because the Danforth-Boren proposal retains the personal income tax, they had to be concerned that corporations would shelter income from the personal tax by retaining it rather than distributing it as dividends. For this reason, Danforth-Boren had to add a special tax on retained earnings. Danforth and Boren counter the inherent regressivity of their VAT by increasing the standard deduction in the personal income tax.

Much of the complexity inherent in the Danforth-Boren approach illustrates the difficulty of reforming only one part of the tax system—in their case, the business part—without also reforming the personal part. Their business part reflects the philosophy that the return to saving should not be taxed and that consumption forms a better tax base, while today's personal tax remains essentially intact under their reform and remains based on the philosophy that income is the better tax base. The inconsistency in philosophy leads them to the contortion of levying a special tax on net business saving, thus moving part way back to an income tax philosophy. Nunn-Domenici's more complete reform of both the business and personal tax systems leads to a much more consistent, simpler, and understandable result. One can argue philosophically about the choice of a tax base, but equity, efficiency, and simplicity are usually better served if the base for business and personal taxes is the same.

As noted above, the Danforth-Boren and Nunn-Domenici proposals are essentially subtraction-type VATs. In contrast, the VATs used in the European Community are called credit-invoice VATs. In this approach, a tax is levied on the sales of a business. Taxes paid as part of payments to other businesses are noted on invoices and credited against the tax imposed on sales.

There is a large literature on the relative advantages and disadvantages of subtraction-type and credit-invoice VATs.¹⁵ The differences are most important

Exempting the Return to Saving from Taxation

Imagine a taxpayer paying a marginal tax rate of 20 percent. He or she buys a \$10,000 bond yielding 10 percent. The purchase is deductible under a cash flow tax and the deduction of \$10,000 reduces the taxpayer's tax bill by \$2,000. It might be said that the government financed \$2,000 of the bond's cost and that the taxpayer really invested only \$8,000.

Suppose that after one year the taxpayer sells the bond, collecting \$10,000 in principal and \$1,000 in interest. These proceeds are taxable under a cash flow tax assuming that they are not reinvested. Therefore, with a 20 percent tax rate, the \$11,000 cash inflow nets the taxpayer only \$8,800. $[(1 - .20) \times 11,000]$ But since the net cost of the investment was only \$8,000 to the taxpayer, he or she has still earned an after-tax rate of return of 10 percent, the same as the before-tax rate of return. In a tax system in which interest earnings were tax exempt, an investment of \$8,000 at 10 percent would also yield the taxpayer \$8,800 after one year. It is for this reason that it is said that the cash flow approach is equivalent to exempting the return to savings from taxation.

Very similar arithmetic applies to a taxpayer borrowing \$10,000 at 10 percent interest. In a cash flow system, borrowing adds to the tax base; so a \$10,000 loan increases the same taxpayer's tax bill by \$2,000. The net proceeds of the loan would, therefore, be only \$8,000. But when the loan is repaid with interest, a cash flow tax allows a deduction. If after a year, the taxpayer pays his or her creditor \$11,000, the net cost of a loan that netted \$8,000 is only \$8,800. Again, the before- and after-tax interest rates on the loan are equal at 10 percent. The cash flow system has exactly the same result as a system in which the taxpayer is allowed to borrow \$8,000 without it affecting his or her tax base, but in which no deduction is allowed for the \$8,800 repayment in the next year.

In contrast, an income tax system creates a difference between before- and after-tax interest rates. An investor putting \$8,000 into bonds gets no tax benefit for the investment, but pays a 20 percent tax on the assumed \$800 in interest. The net proceeds at the end of the year with a 20 percent tax rate is only \$8,640 and the after-tax interest rate is only 8 percent. Similarly, if a borrower can deduct the interest on a loan, the after-tax borrowing rate is lowered below the before-tax rate by the tax deduction while the proceeds of the borrowing do not have to be put into the tax base.

when a country wishes to levy different tax rates on different goods or industries or eliminate their tax burden altogether. A credit-invoice approach is more flexible if different rates are desired. Different tax rates can be levied on final sales. For example, a higher

FIGURE 4

Tax Treatment of Savings Under Cash Flow Tax and Income Tax

	CASH FLOW TAX	INCOME TAX
Before-tax income to be saved	\$10,000	\$10,000
Tax payment (at a 20% marginal rate)	Exemption for savings	\$2,000
Bond value	\$10,000	\$8,000
Effective amount of investment paid by taxpayer	\$8,000*	\$8,000
Portion effectively financed by government	\$2,000	\$0

* Taxpayer can be said to have invested only \$8,000 since the government, by providing a deduction, financed \$2,000 of the bond's cost.

AFTER 1 YEAR	CASH FLOW TAX	INCOME TAX
Value of bond principal (does not change)	\$10,000	\$8,000
Interest on bond (10% of bond value)	\$1,000	\$800
Amount subject to tax	\$11,000*	\$800
Tax payment (at a 20% marginal rate)	\$2,200	\$160
After-tax value of principal and interest	\$8,800	\$8,640
Effective amount of investment paid by taxpayer (from above)	\$8,000	\$8,000
After-tax interest received by taxpayer	\$800	\$640
After-tax return	10%	8%

* Under a cash flow tax, taxation on savings is deferred until withdrawal. The principal and interest of the bond are then taxable. For the income tax, the tax on the principal was not deferred and has already been paid.

rate might be applied to luxury products. That becomes the tax rate on the entire value added for the affected good, because the tax burden applied at earlier stages of production is wiped out by the credit applied to purchases from other businesses. A good is said to be zero rated if no tax applies to sales, but a credit is still given the seller for goods purchased from other businesses. A good is said to be exempt if no tax is levied on its sale and no credit is given for taxes paid on purchases from other firms. If an exempt good is purchased by another business, no credit is available for the taxes paid at earlier stages of production and when the buyer pays taxes on its sales, the tax burden cascades. Under a credit-invoice system, it may actually be a disadvantage to be exempted from the tax.

Exemptions for entire industries work better under a subtraction-method VAT, since there is no need to give a credit for purchases. However, it would be very cumbersome to levy different rates for different goods under a subtraction-type approach. Thus, the credit-invoice approach does provide more flexibility to policy makers. Some economists favor the subtraction approach for just this reason. They fear that the credit-invoice approach creates too strong an incentive for politicians to try to provide special benefits throughout the system and that a complicated monstrosity is likely to emerge from the American process for creating tax laws. To the extent that different rates on different goods are aimed at achieving distributional goals, those goals can be much better achieved by altering the credits, exemptions and rate structure of

15 See, e.g., Sijbren Cnossen, Harvey Galper, and Charles McLure, Jr., "The Value Added Tax: Coming to America," Conference paper, July 16, 1993.

the individual income tax. As noted above when discussing the retail sales tax, it is remarkable how rapidly a tax becomes hopelessly complex when it tries to apply different tax burdens to different goods and industries.

To reiterate, the economic effects of the VATs proposed for the United States are almost identical to the effects of a retail sales tax. Economists are prone to assume that a retail sales tax is passed forward and is incorporated in the prices of goods and services. Consequently, most economists assume that VATs are also passed forward into prices. However, the accuracy of that assumption was previously questioned with regard to retail sales taxes and it can also be questioned with regard to VATs.

All the taxes discussed here can be defined to have exactly the same base, but they are collected differently. A retail sales tax should be collected only from the final seller of a consumption good, although in the United States 30 to 40 percent of retail taxes are collected on business-to-business transactions. A VAT is collected from all businesses, regardless of whether they sell to final consumers or to other businesses. A credit-invoice VAT is recorded for each individual sale as a retail sales tax is. A subtraction-type VAT can be computed from the books of a company and paid annually with interim estimated tax payments. It need not be recorded with each individual transaction.

In other words, a subtraction-type VAT can be collected very much like the current corporate tax. It is, in fact, a tax on corporate profits plus wages, depreciation, and interest, minus investment. But while many economists would assume that this type of VAT is passed forward in higher prices, it is not conventional for economists to assume that taxes on corporate profits are entirely passed forward into prices. Note that the subtraction-type VAT is levied on wages and, in many proposals, is supposed to replace all or some portion of the employer payroll tax. It is conventional for economists to assume that payroll taxes are passed back to the worker in the form of lower wages. Yet, when wages are taxed in a very similar fashion as part of a subtraction-type VAT, it is conventional to assume that the tax is passed forward into prices. In fact, the distributional impacts of taxes are

likely to vary with macroeconomic conditions and the microeconomic characteristics of specific firms and industries. The generalizations used by economists are useful if carefully applied, but are dangerous if applied too rigidly by policy makers and the public.

Although the long-run burden of a tax generally falls on individuals other than the people or businesses actually conveying the money to the government, the type of collection technique used is often important politically. There is an illusion that the person or business that hands over the money is the only taxpayer burdened by the tax. The collection technique that is chosen may also have a political impact by making the tax appear more or less burdensome to the general public. For example, many conservatives fear that rates under a retail sales tax or a credit-invoice VAT would be continually increased and the tax would become a money machine for the government, because such taxes are collected in small increments, transaction by transaction, and allegedly are not noticed by the population. Conversely, a subtraction-type VAT that would be collected in much larger increments from individual businesses would be much more noticed by the business sector, even though it is collected on exactly the same tax base. Presumably, the danger of it becoming a money machine is very low, because the business sector would act as a natural constituency against tax rate increases.

As noted above, the Nunn-Domenici tax reform would also replace the personal income tax with an income-type tax that has an unlimited saving allowance. Since this type of tax is not as well known as retail sales taxes or VATs, it will be described in some detail in the following section. Other taxes that have similar effects will also be explored.

Progressive Consumption-type Taxes

Variants of the Nunn-Domenici personal tax have in the past been advocated by Nicholas Kaldor, a British socialist economist,¹⁶ by the U.S. Treasury in *Blueprints for Tax Reform*, inspired by William Simon, a fiscally conservative Secretary of the Treasury,¹⁷ and by the Meade Commission in the

16 Nicholas Kaldor, *An Expenditure Tax*, London: George Allen & Unwin, Ltd., 1955.

17 Published as David S. Bradford, and the U.S. Treasury Tax Policy Staff, *Blueprints for Basic Tax Reform*, Arlington, Virginia: Tax Analysts, 1984.

United Kingdom.¹⁸ Nunn and Domenici call their tax a “universal saving allowance” tax or a USA tax. Such taxes have also been called expenditure taxes, consumption taxes, and cash flow taxes.¹⁹ None of these labels perfectly fits actual proposals that have been made, but it is also true that the tax we call a personal income tax is a long distance from being a pure income tax. In discussing variants on the theme, the label that comes closest to fitting the proposal being analyzed will be used.

An explanation of a pure cash flow tax will be followed by a discussion of departures from this concept that might be undertaken for reasons of equity and ease in administration. As this is written, not all the details of the Nunn-Domenici approach are known, but in broad outline, it might be referred to as a cash flow tax with a number of exceptions.

A pure cash flow tax could operate as follows. The taxpayer would fill out a tax form that is similar in many respects to today’s 1040. Wages, interest, rents, royalties, and dividends would be added up, much as they are today. To this sum would be added the proceeds from asset sales and borrowing. The taxpayer would then deduct asset purchases, lending, the repayment of loans and interest, and increases in bank balances. The calculation is equivalent to adding up cash income and deducting cash saving. The result equals cash outlays on consumption and the payment of taxes during the year. Estimated taxes would presumably be withheld from income over the year or paid periodically as are estimated taxes currently.

The above calculation provides the gross tax base. Generous exemptions for the taxpayer and each dependent would be provided and deducted from this base. A progressive tax rate structure can be applied to what remains. The end result can be highly progressive if that is what policy makers desire. Conversely, a flat tax can be applied to exactly the same base.

A standard deduction and various itemized deductions can be considered, but every additional deduction will increase the marginal tax rates necessary to raise the same revenues as our current system. To the extent that the special provisions affect the return to saving and investment, the efficiency with which these resources are allocated may also be reduced significantly.

The ability to deduct saving from the tax base is equivalent to exempting the return to savings from taxation. Understanding this equivalence is crucially important to understanding the effects of such a tax. As noted above, the deduction of saving is accomplished by reducing the tax base by all asset purchases and adding the proceeds of all asset sales. The deduction when the asset is purchased provides a tax benefit that, if invested, exactly pays the tax liability occurring when the asset is eventually sold, presuming that tax rates remain the same. In other words, there is no effective tax liability on the return to the asset, just as there would be no tax liability, if the return to the investment was tax exempt. A further explanation of the arithmetic underlying this result can be found in the accompanying sidebar and Figure 4.

If a taxpayer’s marginal tax rate remained constant throughout his or her taxpaying life, it would be perfectly accurate to call the cash flow tax, described above, a saving-exempt tax or a consumption tax. In reality, however, individual taxpayers will face very different marginal rates at different times. Marginal tax rates change both because the law changes frequently and because people move from one tax bracket to another, even during those periods when the tax law remains constant. Over the past thirty years, the top marginal tax rate facing Americans with the highest incomes fell from 77 percent to 28 percent over the period 1964 to 1988 and as this is written in 1994, is back up to close to 40 percent. In certain ranges of income, where exemptions and deductions are phased out, the effective marginal tax rate can exceed 40 percent.²⁰ Whatever the rate

18 J.E. Meade, *The Structure and Reform of Direct Taxation*, Boston: George Allen & Unwin, 1978.

19 Laurence S. Seidman, “A Better Way to Tax,” *The Public Interest*, 114, Winter 1994, pp. 65-72

20 In certain ranges of income, exemptions and deductions are phased out. In these ranges the effective marginal tax rate can exceed 40 percent.

structure, the typical taxpayer moves up into higher brackets as his or her career progresses and then moves back into lower brackets upon retirement.

Changes in marginal tax rates have a major impact on after-tax rates of return in a cash flow system. Imagine a person in the top tax bracket deducting a \$10,000 Keogh contribution in 1980. At that time, the top marginal rate was 70 percent. The tax saving was \$7,000 and the after-tax cost of the contribution was, therefore, \$3,000. Suppose the contribution was allowed to accumulate at a return of 10 percent until 1988 when it was withdrawn to finance retirement. The total deposit would have grown to \$21,436. At a top rate of 28 percent, the tax would be \$6,002 and the taxpayer would net \$15,434 on an investment with an after-tax cost of \$3,000 in 1980. The after-tax rate of return would have been almost 23 percent per annum compared to a before-tax rate of 10 percent.

Conversely, imagine a person in the 28 percent bracket making a \$10,000 Keogh deduction in 1988. The after-tax cost of the deduction would be \$7,200. Assume that the deposit is accumulated until 1993. The account would total \$16,105. If it is withdrawn and a top rate of 39.6 percent is applied, the after-tax proceeds are \$9,727. The after-tax rate of return is 6.2 percent, far lower than the 10 percent before-tax rate of return. Indeed, the person would have been better off investing \$7,200 in 1988 in a fully taxable account and paying taxes on the return on a year-by-year basis.

These examples are extreme in that they consider savings made soon before and withdrawals made soon after changes in marginal tax rates. For most saving, before- and after-tax rates of return would not differ as significantly. Nevertheless, the examples are instructive in that they indicate the importance of assuming that tax rates were constant in the above examples to show the equivalence of the cash flow approach and exempting the return to capital from taxation.

Under a cash flow tax, all saving would be treated like the Keogh deductions and withdrawals of the previous example. Thus, as tax rates change, a cash flow tax sometimes penalizes and sometimes subsidizes saving.

On average, it may come close to being equivalent to exempting the return to saving from taxation, but for individual taxpayers in particular circumstances, the result may be far from equivalent to an exemption. Consequently, calling a cash flow tax a saving-exempt tax or a consumption tax is not quite accurate, although it is no more inaccurate than calling the current system an income tax system.

Because of the difficulty of finding a proper name for the type of new tax discussed in this study, David Bradford calls his variant on the theme an X tax.²¹ He describes two types of X tax. Each has a business and a personal component. In one type, the business pays a tax on sales minus wages, purchases from other businesses, and investment. The business tax base then equals profits, interest, and depreciation minus investment. The personal tax exempts capital income. Thus, it becomes a progressive tax on wages. The business tax rate is set equal to the highest rate applied to an individual's tax base. The X tax on individuals is equivalent to taxing cash flow over a lifetime if marginal tax rates remain constant for the taxpayer and if all income is consumed during a lifetime. If all income is not consumed during a lifetime, it becomes important how accumulated wealth is treated at death—a point that will be discussed later.

In another variant of the X tax, that will not be discussed in depth, the business is not allowed to deduct wages, but wages are not taxed again at the individual level. Progressivity is achieved by giving individuals refundable tax credits to reflect the fact that business paid a wage tax on their behalf.

Although the individual part of the X tax may be called a wage tax, the compensation that is taxed usually consists of components that are too complex to be adequately described by the term, "wages." To take an extreme example, a sports star earning \$7 million per year would be taxed on the entire \$7 million under the Bradford approach. A large part of the \$7 million in compensation is a return to an extremely rare innate talent. Economists sometimes call this portion an "economic rent." Another part of the compensation is a return to years of training and hard work. This part might be called a "return on an investment." Only a small part of total com-

21 David F. Bradford, *Untangling the Income Tax*, Cambridge: Harvard University Press, 1986.

pensation can be called a payment for time spent with a sports team—what we commonly call wages. While the sports star is an extreme example, most people’s compensation has all the same elements.

Similar ambiguities exist at the business level. Not all profits are the result of physical investments. Some might be the result of a brilliant idea that involves no cash outlays.

There are many similarities between the Bradford X tax and the cash flow tax described above. At the business level, the expending of investment and putting the return into the tax base is, as described above, equivalent to exempting the return to capital from taxation if the business tax rate remains constant. The return to capital is explicitly exempted at the personal level and that is equivalent to the cash flow approach if rates remain constant.

Although personal taxes would be paid at different times under a cash flow and X tax, their present value is identical for someone consuming all their income over a lifetime. Imagine a person with wage income of \$100,000 in 1998 who plans to save \$30,000 to finance consumption when he or she retires in 1999. Assume a rate of return of 10 percent on the saving and that the tax rate is 20 percent.

Under an X tax, the tax payment would be made in the year that wages are earned. The total tax liability would be \$20,000 in 1998 and zero in 1999. Under a cash flow tax, the amount saved in 1998 could be deducted from the tax base, but the amount withdrawn in 1999 would be taxable. The person would owe \$14,000 in 1998 [$0.2 \times (\$100,000 - \$30,000)$] and \$6,600 in 1999, that is to say, 20 percent of the \$30,000 withdrawn from savings and 20 percent of the interest of \$3,000.

Thus under an X tax the person would have a tax bill over the two years of \$20,000 while the two-year bill would be \$20,600 under the cash flow tax. But \$14,000 of the latter would be paid in the first year and \$6,600 would be paid a year later. With a discount rate of 10 percent the extra payment of \$6,000 in the first year under an X tax is the equivalent of the \$6,600 paid in the second year under the cash flow tax.

A number of points come out of this analysis. First, the two taxes are equivalent only if the marginal tax rate remains the same. If the tax rate was increased at

the beginning of 1999, the cash flow tax would be more burdensome than the X tax on the taxpayer described above. Conversely, if the tax rate fell in 1999—and that could happen because the person was in a lower bracket during retirement—the taxpayer would be better off under a cash flow tax.

The analysis has, thus far, looked at the two taxes from the point of view of the individual taxpayer; the two taxes have an equivalent present value with constant tax rates, because it was assumed that the taxpayer’s discount rate was the same as the rate of return to saving. However, the government’s discount rate will equal its cost of borrowing and that may be different.

In the above example, with a cash flow tax, \$6,000 of the tax payment is postponed to 1999, but then \$6,600 is owed. Suppose the government can borrow the \$6,000 in 1998 at 5 percent. In 1999, the government repays \$6,300, but gets a tax payment of \$6,600. The government has earned a “profit,” because the taxpayer has earned a rate of return in excess of the government’s borrowing rate.

In other words, the present value of the tax payment was greater to government under the cash flow tax than under the X tax, because its discount rate is only 5 percent. If the taxpayer had only earned 3 percent on the investment, the reverse would have been true.

Hence, the government has an important stake in the relative success of private investors under a cash flow approach. It should be emphasized that the government is also taking risks with the taxpayer and the government’s profit might be called a risk premium. The government’s stake in the investment is not realized, however, until the success of the investment manifests itself as consumption. To the extent that returns to capital are reinvested, the tax collection is postponed.

The X tax approach has a number of advantages over the cash flow approach:

1. It is the essence of simplicity for individual taxpayers. Only wages have to be recorded on the tax form. The taxpayer does not have to keep track of other cash flows related to investing and drawing down assets.
2. The purchase of expensive consumer durables creates problems under a cash flow system that

will be discussed later. An X tax avoids this problem. There are, however, mechanisms available for mitigating this problem under a cash flow tax.

3. An X tax creates fewer transition problems. If no exclusion is provided, a cash flow approach would tax the drawdown of saving accumulated under the old tax system and used to finance consumption under the new system. This would cause special problems for retirees who could rightly claim that their old saving is being taxed a second time. By definition, retirees have no wages and would not be subject to the individual portion of the X tax. The business portion does, however, create transition problems similar to those created by the cash flow tax to the extent that it is passed forward in the price of consumer goods. Note also that it is theoretically possible, though perhaps unlikely, for the individual wage tax to be ultimately passed forward into the price of consumer goods. In that instance, the transition problems of the cash flow tax and the X tax would be identical.
4. The X tax may appear to provide fairer treatment to someone who becomes unemployed. Because his or her wages cease, the tax burden ceases. Under a cash flow tax, the person would still pay taxes if consumption exceeded any basic exemptions and zero bracket amount. A special concession can be made for such people in a cash flow system, if it is decided that they merit tax relief.

The cash flow tax may, however, have a large political advantage over the X tax. In the cash flow tax, government shares in the return to capital received by individuals. If the individual enjoys a huge return, government enjoys a huge return when the proceeds are converted into consumption. For those below the highest tax bracket, a huge return may push them into a higher tax bracket in which case government earns a disproportionate share of the return. The X tax's total exclusion of capital income at the personal level means that government gets no share of individuals' windfalls. The proponents of the X tax will argue that capital income has already been taxed once at the highest tax bracket at the business level, but it will be argued on the other side that individuals can still enjoy large windfalls and that government should share in them in some manner.

The cash flow tax also has some administrative advantages. Since a high proportion of wage income will

be taxed at a rate lower than that applied at the business level to interest and dividends, there will be an incentive for closely-held businesses to convert capital income into wage income. Such things as stock options and other forms of deferring income will be harder to deal with under an X tax. They will have to be valued. Under a cash flow tax, they can be ignored until cashed in, since until then they are the equivalent of deductible saving.

The Armev flat tax is simply the X tax with a single rate instead of a progressive rate structure. A single rate could also be applied to the base of a cash flow tax.

Either the X tax or the cash flow tax can be made revenue-neutral and designed to extract the same amount of tax from each income class, broadly defined, as current law. If the population is divided into income classes by quintile, the top rate necessitated by a quest for distributional neutrality under a cash flow system need be little different from today's top rate under the income tax system if the new tax base is defined broadly enough, that is to say, if few special exemptions and deductions are created.

If income classes are divided up more narrowly, it becomes more difficult to emulate the current distribution of the tax burden accurately and the top rate has to rise. At the very top of the income distribution, say the top one-half of one percent, the rate would have to be so high as to be unadministrable because of the intense search for tax avoidance schemes and illegal evasion that would be provoked by very high rates.

However, it is crucially important to emphasize that these difficulties arise because distributional neutrality is being defined with respect to income classes. With the exceptions noted above, cash flow taxes are similar to consumption taxes. If the country makes a philosophical commitment to consumption-type taxation and decides that consumption is a more equitable tax base than income, then distributional issues should be decided with respect to consumption rather than income classes. The top tax rate necessary to make the top consumption class pay the same tax burden as it pays currently is very much lower than the top rate necessary when distributional neutrality is defined with respect to income classes. Later, the equity ramifications of using consumption as a tax base will be explored in further detail.

The Distribution of Wealth

It has just been shown that contrary to common wisdom, a cash flow, consumption-type tax can be designed to be very progressive. It has also been implied, however, that it is very difficult to design a cash-flow type system that would not lower the average tax burden on the very top of the income distribution. Very rich people would reap a bonanza from the type of tax reform discussed above unless they consumed much more of their incomes than is common among upper income groups.

Some, who are otherwise committed to the principles and goals of reducing the tax burden on saving, worry about the advantages to the very rich and are concerned that the enhanced accumulation of wealth resulting from the lower tax burden at the top may convey undesirable amounts of political power, create new dynasties, and increase political tensions between the haves and the have-nots.

It might be argued, in opposition to this view, that the rich are not very dangerous and that the main goal of a progressive system should not be to punish the very rich, but to protect the very poor from the burden of heavy taxes. It can also be noted that the savings of the rich benefit the economy just as much as saving by the middle class and the poor and that, in any case, all wealth is consumed eventually by some generation or another, so that we are really talking about the postponement of the tax burden if the same tax system remains in effect forever.

If such arguments are not accepted and a desire to limit the wealth accumulation by the very rich remains, there are various approaches to the problem. There might be a special income tax on top of a consumption-type tax for the very top of the distribution, say the top 1 percent. However, the top 1 percent now is responsible for over one quarter of all individual income tax revenues and over 15 percent of total revenues. Creating a special tax of this type would create a very messy and complicated tax system for very significant contributors to total revenues.

Another approach is to tax accumulated wealth by taxing bequests and gifts heavily. The current gift and estate tax does that, but it might be tightened up by preventing generation skipping and eliminating other avoidance devices. Alternatively, gifts and bequests can be considered consumption by the donor and, if not reinvested, by the recipient as well. This consumption would be taxed according to the regular cash-flow type tax schedule.²²

However, every additional tax burden on wealth acts as a discouragement to saving for those who wish to leave bequests and intensifies the search for tax avoidance schemes. High marginal tax rates, whether they be on income, consumption, or transfers of wealth, eventually become very difficult to administer.

22 This approach is suggested in Henry J. Aaron and Harvey Galper, *Assessing Tax Reform*, Washington, D.C.: The Brookings Institution, 1985.

Some Practical Problems

Transition

Proposals to reduce the tax on the return to saving and investment may have considerable appeal, but there is always the problem of how you get there from here. All tax reforms create transition problems. Individuals who undertook legitimate actions in response to the old tax systems often find that they experience large losses when a new system is implemented. Others may enjoy sizable capital gains.

The seriousness of such problems vary with the scope of the tax reform. Minor adjustments to the tax system create the same type of capital gains and losses as major reforms, but they tend to be small quantitatively and are, therefore, generally ignored. When tax laws are changed more significantly, various devices are used to ease the transition. For example, some changes are phased in slowly and some investors are grandfathered. There is no practical way, however, to make everyone whole after a major tax change. The 1986 Tax Reform Act scattered huge capital gains and losses throughout the economy without making much of an effort to compensate losers.

A VAT or a cash flow tax on individuals is often characterized as a tax on consumption plus a lump-sum tax on the cost basis of old wealth existing at the time that the new tax is implemented. It is considered a lump-sum tax on old cost basis, because the people who purchased assets under the old tax system, under which saving was taxed, expected to be able to use that wealth tax free. If a VAT is suddenly imposed on consumption or a cash flow tax is imposed, the old cost basis can no longer be converted into as much consumption as under the old tax system and therefore, the wealth is worth less. This is true whether the taxpayer planned to consume it or whether he or she planned to pass it along to a future generation.

When a relatively small VAT is discussed as an add-on to the present tax system, this transition issue is rarely discussed. But even a 5 or 6 percent VAT—and smaller ones are not worth the administrative bother—represents a significant tax on old cost basis.

Consequently, proponents of using major VATs or cash flow taxes are forced to confront this important issue and to develop some mechanism for dealing with transition. Such issues are politically sensitive, because they are of most interest to the politically powerful elderly. They own much of the wealth that would exist on the day of transition; they derive little from eliminating the income tax; and yet, they would be subject to any consumption tax as they draw down their wealth.

An analogous problem exists for old debt. A pure cash flow tax system puts borrowing in the tax base, but allows a deduction for the repayment of debt and interest. Since the proceeds of borrowing were not in the tax base in the old system, it is not appropriate to allow a deduction for repayments of old debt in the new system.

Some believe that the transition problem is the Achilles Heel of any radical reform that would substitute consumption-type taxation for the present system, but it is not as much of a problem as is commonly believed. It is true that not everyone can be totally protected from transition problems. That is never possible with any type of tax change. It is possible, however, to eliminate transition problems for the vast majority of taxpayers.

The reason that transition is not as difficult as commonly believed is that saving rates are so low that few taxpayers have accumulated assets out of saving on which they previously paid taxes. The vast bulk of saving in most households is either invested in pension funds or in a house. Payments into pension funds are largely deductible under the current system, as they would be under a cash flow system, and should pay a tax under a consumption-type system when they are withdrawn. Savings invested in housing have been treated with extraordinary generosity by the current income tax system, actually bearing a negative income tax burden. It will later be argued that housing transactions and consumer debt should be kept out of the new tax system and thus, old equity in houses would

not be taxed under the new system. That leaves the problem of nonpension financial assets, and only a tiny portion of households has a significant quantity of nonpension assets. The typical American family has only \$1,500 in financial assets and \$6,600 on the eve of retirement, excluding pensions.²³

A large number of options exist for dealing with old wealth held by individuals on the day of transition. At one extreme, the liquidation of old cost basis could be treated just like the liquidation of new wealth. In other words, it could be added to the tax base. This would be unfair, however. The old wealth has already been taxed once.

At the other extreme, old wealth could be identified and the individual could be allowed to use it tax free for any purpose including the purchase of new tax-deductible assets. At first sight, it might appear that people would quickly convert all old assets into new assets so as to reduce their immediate tax bill. With sufficient old wealth, a taxpayer could avoid taxes for years.

However, people taking this approach would not be avoiding taxes forever. They would only be delaying the tax burden. When the new assets are liquidated to finance consumption, both the principal amount and accumulated interest would be added to the tax base. In other words, the tax would then be paid with interest. It would still be worth delaying the payment, if the person expected to be in a lower tax bracket when the assets are liquidated. If they are in a higher bracket, however, they would be penalized. They would be better off holding on to old cost basis and using it tax-free to finance consumption whenever the liquidation of new wealth would put them in a higher tax bracket. The incentive to liquidate old wealth could be reduced further for all by indexing old cost basis using the nominal interest rate. Using arithmetic too complex to be described here, it can be shown that the indexing of old basis using the interest rate makes the transition rule completely neutral with respect to when the taxpayer decides to liquidate old basis.

Some may not intend to consume their assets, intending instead to leave an estate to their children. Then the merits of switching from old to new assets would depend on how assets are treated at death.

It is unclear how many people would take advantage of the unrestricted ability to gain an immediate tax advantage by shifting from old to new assets. The government probably cannot take the chance of finding out. Although the system can be constructed to be neutral under the assumption that the new tax system will remain in place forever, many taxpayers may regard a bird in the hand as being better than one in the bush and take advantage of the privilege because they are not certain that the new law will remain unchanged. This could create a major disruption in the government's revenue flow and a resulting need to issue more government bonds than the market can easily absorb. It would probably not help for government to argue that the tax payment has only been delayed.

To reduce the risk to the government, it has been suggested that government initially impose some absolute or relative restriction on the amount that a taxpayer's tax bill can be reduced in any one year by shifting from old to new assets.²⁴

Quite another approach to the use of old wealth has been suggested by Ernest Christian. When an old asset is used to purchase a new asset, the deduction for the purchase of the new asset would be reduced by the taxpayer's cost basis in the old asset. Any capital gain in excess of the cost basis will not have been taxed by the old tax system and would be treated the same as any saving under the new tax system. That is to say, its liquidation would be added to the tax base, but there would be an offsetting deduction for any reinvestment of the gain. A taxpayer would only be able to use the old basis tax free when consumption exceeds income plus the sale of new assets. This would clearly restrict the use of old basis and limit the government's immediate revenue loss. This approach does encourage gaming, however. A taxpayer might seek to concentrate consumption in a particular year

23 David A. Wise, "IRAs and Saving," *Personal Saving, Consumption, & Tax Policy*, Marvin H. Koters, Ed., Washington, D.C.: The AEI Press, 1992.

24 Henry J. Aaron, and Harvey Galper, *Assessing Tax Reform*, Washington, D.C.: The Brookings Institution, 1985.

in order to force consumption above income and to use the old basis tax free.

Yet another approach is based on the fact that a new consumption tax imposes a lump-sum tax on old wealth. Taxpayers could be partially compensated with a lump-sum benefit. On the day of transition, taxpayers would compute their “net basis,” their cost basis in old assets minus outstanding debt. That amount could be written off at a constant absolute rate that depends on age. For example, a deduction of \$2,000 per year could be allowed those under 60 and a deduction of \$10,000 could be allowed for those 60 and above. If housing is kept out of the system, most people would be through with the transition in less than two years, because there is no cost basis in pension assets. (They were already deducted.) Those who are very wealthy would, on the other hand, never be able to deduct their full net cost basis. This would, therefore, be a highly progressive approach to the problem of transition. A less progressive solution would be to allow old wealth to be written off at a percentage rate with a minimum absolute deduction provided that is based on age.

Once net basis was declared, there would no longer be any need to differentiate old from new assets or debt. All asset liquidations and debt repayments would be treated as though the assets and debt had been acquired after the date of transition.

A major disadvantage of the lump-sum approach is that very rich taxpayers who have complicated balance sheets would find computing their net basis to be a very difficult task. Worrying about old basis transaction by transaction spreads the work out over time.

The lump-sum approach to transition has several important advantages, however. It is extremely simple for most people. There is no need to keep track of how old basis is used once it has been declared on the date of transition. Because of the lump-sum nature of the benefit, there is no distortion of behavior. The process cannot be gamed. In addition, the revenue loss is relatively easy to predict, and by choosing the size of the deduction, policy makers can decide to spend whatever they want on the transition problem. On the other hand, the approach may be considered to be unfair by those who have more of a net basis than they can realistically expect to write off during their lifetime.

A compromise solution is to devise a limited transaction-by-transaction system that could be used by the very wealthy and provide an option to use a lump-sum system for those with a minimal amount of old basis, say, \$50,000.

What about someone who has not realized large capital losses accrued under the old system? Should someone who paid \$100,000 for a stock now worth \$10,000 be allowed to write off the entire \$100,000 cost basis in some manner, even though the new tax will only apply to \$10,000 if the stock is sold to finance consumption?

In a pure income tax system, the loser should be allowed to write off the entire \$90,000 loss in the year in which it occurred. But our current system is impure in that the loss must first be realized and then the amount that can be written off is limited in various ways. This proposed tax reform’s limit on the rate at which old basis is written off can be considered an analogous device to preserve revenues and to reduce gaming. It, therefore, makes sense to allow the entire \$100,000 loss to remain in the taxpayer’s computation of his or her cost.

The treatment of old wealth is the primary transition problem affecting individuals. A number of similar and some different problems afflict business. Businesses have old assets that have not been entirely depreciated, and they have inventory for which the costs of production have not been deducted. They also have old debt on which the interest is deductible under the current system.

In addition, businesses have what might be called tax assets. They have unused foreign tax credits, accumulated losses, minimum tax credits, etc. Individuals will also have some unused deductions, such as the capital loss deduction discussed above, but the problem is minor compared to that facing the business community.

It is not difficult to devise systems for writing off old assets and amortizing old inventory. Old debt can easily be identified and the interest deduction on old debt can be grandfathered. Some credits and deductions can also be provided for tax assets. However, every concession of this type implies that the tax rate will have to be higher during the transition period. It is, therefore, unlikely that policy makers will want to adjust for every problem of this type.

In general, the problems raised by transition are more political than technical. Balancing the generosity of transition measures against the level of the marginal tax rate will be a difficult trick that will involve a large amount of negotiation. During the debate on the Tax Reform of 1986, the desire to keep the tax rate low proved to be a powerful force which severely limited the extent to which those experiencing transition problems were compensated.

Averaging

The problem of averaging arises in two contexts with any tax that raises the burden on consumption. One involves the purchase of consumer durables. Technically, the purchase of a consumer durable is an investment. Consumption occurs over time as the good depreciates. The second problem relates to individuals who experience a very large drop in income, because of illness or being laid off, and they may find it difficult to adjust consumption downward quickly.

Clearly, it would be impractical to estimate the depreciation of every consumer durable and to define it as consumption for the purposes of administering a consumption-type tax. On the other hand, if the purchase of a large consumer durable is treated as consumption when the purchase is made, the lumpy nature of the purchase will significantly raise the purchaser's tax bill in that year and under a progressive tax may drive the taxpayer into a higher tax bracket.

The simplest way of handling this problem under a cash flow tax is to differentiate consumer loans from other types of loans. The proceeds of a consumer loan would not be added to the tax base, but there would also be no deduction for the repayment of principle and interest. In essence, by choosing to finance a consumer durable purchase by borrowing, a taxpayer would be postponing his or her tax bill and would be paying added taxes gradually as the good depreciates and true consumption is occurring. Note, however, that technically speaking, a cash flow tax with an exemption for consumer borrowing is no longer a cash flow tax.

Under current law, the differentiation of loans with different tax implications seems absurd, because we know that the proceeds of loans are fungible. For example, a home equity loan with deductible interest can be used to buy consumer goods in the place of using a consumer loan on which the interest cannot be deducted. This sort of problem does not exist under a cash flow tax, however. It was noted earlier that putting the proceeds of a loan into the tax base and allowing a deduction for interest and principal repayments is the exact equivalent of not putting the proceeds in the tax base and allowing no deduction so long as the tax rate remains constant. Therefore, people utilizing the loan that does not add to the tax base are not enjoying any particular advantage over those who do not choose this option.²⁵ "Consumer loans" can be defined very loosely in this approach. In the current system, people who happen to own a home and who can finance consumption with interest-deductible home equity loans do have an unfair advantage over nonhomeowners whose only borrowing option is to finance consumer durable purchases with ordinary consumer loans on which the interest is not deductible.

Individuals will choose to borrow or not to borrow to finance a consumer durable purchase based in part on their expectation of their future marginal tax rates, and this may be considered to be gaming. But it is more appropriately considered to be averaging and as such is not objectionable.

Even if consumer durables were not a problem, it would be necessary to identify some borrowing as consumer borrowing or else the taxpayer would face a difficult recordkeeping problem. If, for example, a person has not paid an electric bill at the end of the year, he or she is technically borrowing from the electric company. A pure cash flow tax would put that borrowing in the tax base. Clearly, some mechanism has to be devised to avoid the recordkeeping implied by such purity, and the easiest way is to define such incidental borrowing as consumer borrowing that does not add to the tax base and is not deductible when the bill is paid.

25 When not all loans are put into the tax base, the taxpayer can delay the payment of a certain portion of his or her taxes for a very long time. Because the proceeds of loans are fungible, a taxpayer could take out a consumer loan near the end of the year and use it to buy a deductible asset, thus reducing the year's tax burden. If the asset was sold early in the next year, the burden would then rise, but this could be washed out by repeating the process at the end of the next year. However, the process would have to be repeated year after year and transactions costs would mount through time. It is doubtful that many taxpayers would pursue this strategy over a long period of time.

The purchase of a home represents the largest consumer durable purchase made by most households. Under current income tax law, homeownership is heavily subsidized. Mortgage interest and real estate taxes—two major homeownership expenses—are deductible, but the income from owning a home, namely the in-kind services that a home provides as indicated by the saving in rent, is not added to the tax base. Thus, the taxpayer is given tax deductions without having to recognize offsetting income. An investment in a home is, in other words, subjected to a negative tax (the value of the deductions) while business investments often face very heavy tax burdens. In addition, capital gains in houses are not taxed if used to finance the purchase of a new house, and a large one-time capital gains exclusion is given older homeowners. These large tax distortions draw capital into housing and away from more productive business investment. Many economists see the distortions related to homeownership as being one of the most inefficient features of the current tax system.

One approach to housing under a cash flow tax would be to treat it the same as business investments. A business investment is fully deductible, but the return to the investment adds to the tax base. Any borrowing to finance the investment reduces the immediate deduction, but the repayment of principal and interest in the future is deductible.

The problem with applying exactly the same treatment to housing is that the return to the investment would have to be computed and added to the tax base and it is in the form of in-kind consumption, i.e., the in-kind services provided by the house obviate the need for the homeowner to pay rent. It would be a major administrative and compliance burden to estimate this rent equivalent.

However, there is an alternative. As noted above, the treatment of business investment in a cash flow system is equivalent to allowing a tax exemption for the return to investment, if tax rates remain constant.

The equivalent to a tax exemption for housing would result from allowing no deduction for the purchase of a house and ignoring the in-kind flow of services from the housing investment. In addition, mortgage borrowing would have no impact on the tax base and the repayment of interest and principal would not be deductible. The same treatment would be given equity loans and second mortgages. The end result is that the housing investment is treated similarly to other investments. There is no tax burden on the rate of return.²⁶

The tax subsidy now provided to homeownership is one of the most politically sacred elements of our current tax system. It is also one of the most costly of all tax subsidies in terms of revenue lost and reduced economic efficiency. Would a shift from a negative tax to a zero tax be politically tolerable?

It would obviously not be easy. One of the prototype versions of the Nunn-Domenici system makes the political concession of continuing the current tax treatment for housing.

The second issue of averaging involves individuals experiencing a large drop in income. Opponents of a cash flow approach to taxation sometimes argue that it would be unfair to people whose income fell dramatically due to unemployment, illness, or some other cause. A new VAT or a retail sales tax would create similar problems. It is always difficult to reduce consumption and such people might be hit with a very large tax bill relative to their resources.

It must be emphasized that this issue is not relevant to poor people. They will be exempted from a cash flow tax in any case. It is a middle-class issue. How fast should one who loses income be expected to make lifestyle changes?

It can legitimately be argued that we should not feel sorry for such people at all. If they can afford a middle-class level of consumption, they should be able to afford a middle-class level of taxes.

26 As noted previously, the after-tax rate of return to business and other houses may be lower or higher than the before-tax rate of return, depending on whether the tax rate applied to the proceeds is higher or lower than the tax rate applied to the deduction when the investment was made. This housing proposal implies that the before- and after-tax rates of return to housing would always be equal.

Nevertheless, relief in such instances would be available if the proceeds of consumer and home equity loans were not put in the tax base. A person whose consumption exceeded his or her income would have a choice among consumer borrowing, borrowing against assets, and selling assets. If consumer borrowing was chosen, the person's tax bill would be lower relative to consumption immediately, but higher relative to consumption in the future when the non-deductible loan was being paid off. If the sale of assets or borrowing against assets was chosen, taxes would have to be paid in the current year, but note that the original purchase of the asset deferred taxes, and borrowing against assets creates a deduction in the future.

As already noted, the X tax has an advantage over the cash flow tax when one considers a person who unexpectedly loses employment. Consumption financed by selling assets or by borrowing would not be taxed by an X tax. On the other hand, there will be many whose wages are expected to be erratic over time and whose consumption will be smoother. In the absence of any averaging devices, such a person would have a lower lifetime burden under a cash flow tax, all else equal.

Other Considerations

So far, it has been argued that the United States faces a very serious saving problem that can be mitigated by moving toward a tax system that is less hostile to saving. But exempting from taxation all or part of the return to saving from taxation has consequences that go far beyond the impact on saving behavior. Some of the most important of these will be discussed below.

Equity

Earlier analysis examined the distributional consequences of tax reform. Although it is clearly possible to have a tax that exempts saving and retains considerable progressivity, whether judged by income or consumption classes, there is much more to judging tax equity than examining the degree of progressivity, however measured. The tax base must be judged to be fair. Equals must be treated equally and it is therefore vitally important how equality is measured.

Although it was pointed out earlier that it is not always accurate to call the tax options discussed here saving-exempt or consumption taxes because of the tax burden on saving and investment created by marginal tax rate increases and the closely related fact that a new tax of this type also taxes old wealth, there is little doubt that such tax reforms would, in the long run, reduce the tax burden on saving and investment and increase the burden on consumption. It is, therefore, important to discuss the equity implications of moving from today's income tax philosophy, however much violated by current law, to a consumption tax philosophy, even though the reforms discussed here are not quite pure consumption taxes.

Early philosophical backing for consumption taxes came from Thomas Hobbes more than 300 years ago.²⁷ He argued that consumption was the better tax base, because it roughly measured what a person extracts from the economy as opposed to income which roughly measures what a person contributes to the

economy. In other words, saving— which is there for the economy to use and perhaps to inherit— should not be taxed. Hobbes is essentially saying that the inherent social worth of saving is greater than that of consumption.

In contrast, income taxation is not motivated by an assessment of the inherent worth of the activities related to the production of income, but rather, by the ability-to-pay philosophy of taxation. People with equal income are deemed to have an equal ability to pay taxes (horizontal equity) whereas people with higher incomes are deemed to have a greater ability to pay taxes (vertical equity).

However, it is not clear that income is a very good measure of ability to pay. Wealth is also a factor and for some, income is highly variable. Under current law, variable income tends to increase a person's lifetime tax bill above the level that would apply to someone with the same lifetime income received more smoothly. For all households, consumption tends to be much smoother over a lifetime than income in that it reflects expected income as well as past income. It might be argued that consumption typically reflects a taxpayer's own assessment of economic well being and therefore, ability to pay taxes. That, in turn, implies that both horizontal and vertical equity should be judged according to how the tax burden is spread over consumption classes rather than income classes.

Income taxation faces another severe practical problem. Economic income is unambiguously defined to include income from capital. It is, however, very difficult to measure capital income accurately for the purposes of the tax law. The difficulties become especially severe during times of significant inflation. Inflation causes illusory capital gains that are currently taxed. It also raises nominal interest rates to reflect the

27 Thomas Hobbes, *Leviathan*, New York: Penguin Books, 1985 (first published 1651).

eroding value of assets and debts, and this inflation premium in interest rates influences tax liabilities, even though they should be ignored for tax purposes. And inflation means that depreciation allowances based on historical costs are inadequate. Even in the absence of inflation, it is difficult to measure physical depreciation which is important to deriving an accurate measure of the return to physical capital. It is also impractical to tax capital gains when they accrue, which would be appropriate in a pure income tax. Taxes are not now levied until gains are realized. To the extent that the return to capital is mismeasured by the tax law, there are inequities and inefficiencies as capital is drawn artificially into areas where the return is understated.

The attempt to measure capital income is also a major contributor to the complexity of current law. Attempts to distinguish capital from current expenditures for business tax purposes have become extremely complex, and it is always difficult to distinguish capital gains from regular income, to specify appropriate depreciation allowances, to differentiate debt from equity, and on and on through the tax code. Thus, consumption-type taxation has considerable pragmatic appeal. It does not have to worry about defining capital income and is, therefore, inherently simpler.

Dissatisfaction with the Current Tax System

The complexity inherent in defining capital income is only one of a number of reasons that our tax code has become horrendously complicated. Attempts to use tax policy for purposes of social and economic engineering have led to a mind-numbing number of exemptions and exclusions. In addition, individual and corporate minimum taxes have been ladled on top of the system in case an individual or corporation responds too vigorously to the numerous incentives that have been provided.

Large corporations have had to create their own administrative bureaucracies to deal with the corporate tax. As a result, a schism develops between management and the tax law and it is not clear whether the many incentives, such as job credits, are very effective. The tax bureaucracy often searches for those things

retroactively to see if the corporation qualified for any extra credit or deduction by accident.

The corporate tax now creates a large number of distortions and reduces the return to some investments very severely. Nevertheless, for a highly burdensome tax, it raises very little revenue. Over the next few years, revenues are expected to be about \$130 billion or about 2 percent of GDP. In the 1960s corporate tax revenues sometimes exceeded 4 percent of GDP. It is now probable that, if one adds up the government's administrative cost, the corporate compliance costs, and the inefficiencies caused by the tax's distortion of behavior, the total of these costs exceeds the revenues collected by the tax.

While frustrating to the corporate manager, the corporate tax is not yet politically unpopular with ordinary citizens. They worry more about the personal income tax. There is a wide belief that its complexities can be exploited by the affluent to greatly reduce their tax burdens. When asked to name the least fair tax in 1993, 36 percent of respondents named the personal income tax, 26 percent named the property tax and only 16 percent named state sales taxes.²⁸ In earlier years, it was the property tax that bore the brunt of citizen hostility.

These poll results constitute a serious indictment of the income tax, occurring after a broad-reaching attempt was made at reform in 1986. The unpopularity of the income tax does not lead automatically to support for the type of tax reform that is suggested here, but it does suggest that the problem may be beyond something that tinkering can fix. The whole basis of the tax must be rethought. It depends so crucially on voluntary compliance that a growing perception of the tax as unfair could have serious consequences for the way it operates.

International Considerations

Japan and countries in the European Union rely heavily on value-added taxes that are not applied to exports but are levied on imports. Many American businessmen believe that this puts them at a disadvantage, because the United States levies a burdensome corporate tax that does not enjoy the same privilege of border adjustability granted value-added taxes in Japan and much of Europe.

28 Advisory Commission on Intergovernmental Relations, *Changing Public Attitudes on Governments and Taxes*, Washington, D.C., 1994.

The effects of border adjustability are more complex than many believe. There is a good chance that the type of tax reform discussed here would improve the U.S. trade balance, but it would do that because of its effect on saving and investment and not because the business component of the tax is applied to imports and not to exports. A nation's international current account balance must equal the balance on its international capital account by definition. Its international net capital inflow must, in turn, equal the excess of its investment over its saving, where saving is defined to be private individual and business saving minus government deficits. Consequently, a change in taxation cannot change a country's trade balance unless it also changes the difference between domestic saving and investment.

It was implied above that a truly comprehensive tax reform of the Nunn-Domenici variety would be likely to increase planned saving more than planned investment, because the relief of the tax burden on saving in the personal tax reform is probably more important than the effect on investment of expending under the business tax. If that occurred, the trade balance might improve because the economy would be depressed and the demand for imports would fall relative to exports. However, it was also suggested that any effect of this type would be offset by the Federal Reserve. The resulting fall in interest rates would lower inflows of international capital and depress the dollar's value, thus heightening the international competitiveness of American firms. The trade balance would then improve.

As noted, these forces would be set in motion whether or not there was border adjustability. However, border adjustability would ease the adjustment process. If border adjustability were introduced somehow without changing saving and investment, the exchange rate would appreciate and wash out its effects. With the combination of border adjustability and the effects on saving and investment expected from comprehensive tax reform, there would be two opposite impacts on the exchange rate, and therefore, it would not be expected to move very much in either direction.

It is quite possible that a less comprehensive tax reform that affected only business taxation would increase planned investment more than planned saving. The trade balance would then deteriorate and there would be a greater capital inflow. This would not be a bad thing. It would reflect the fact that more resources were being drawn from international markets to fund American investment. The added production resulting from the investment can be used to pay interest and dividends abroad in the future. This situation is very different from one in which borrowing from abroad increases to finance additional consumption.

Conclusion

The nation is suffering from a severe lack of saving. The problem involves both federal government dissaving in the form of a large budget deficit and a steep downward trend in private saving. The problem is especially dangerous because it is not noticeable. The destruction that it causes occurs gradually. It takes the form of a slow but steady erosion in our prospects for improving the nation's standard of living. The impact is in fact so slow that it makes little difference to the generation now in the labor force. Because of the effects of compounding, it is, however, a matter of great import to our children and grandchildren. They will be hit by the double blow of having lower wage growth than preceding generations while having to support expensive promises made long ago to retired baby boomers when the prospects for economic growth seemed much brighter.

This analysis focused on the private part of the saving problem. It argued that private saving could be increased, if the tax burden on the return to saving was lowered through revenue-neutral tax reform. The efficiency of the use of saving would also be increased, because all investment would effectively be tax exempt and saving would be allocated entirely by the marketplace, going to those areas in which it was most productive.

There are two major arguments that are generally raised in opposition to easing the tax burden on saving and by implication increasing it on consumption. First, there is the illusion that such a tax must be highly regressive. It has been shown such a tax reform can be made highly progressive by using the cash flow type approach advocated by Nunn and Domenici among others. Second, it is argued that the transition problem is insurmountable. This analysis has shown that it is, in fact, barely relevant to the vast majority of taxpayers if a proper approach is taken to housing. The reason it is not relevant is that the saving rate is so low for most Americans, they barely have any financial assets outside the pension system (which would be treated under the new system almost identically to the way that it is treated currently).

It is precisely because the transition problem is so manageable, that is to say, there are so few assets requiring special transition rules, that the need for a tax reform to increase the American saving rate is so urgent.

Consumption-type Taxes

NAME	CONGRESSIONAL SPONSORS	BASE	METHOD OF COLLECTION	EFFECT ON CURRENT TAX SYSTEM	COMMENTS
RETAIL SALES TAX	n/a	Percent of value of retail sale	Final point of sale	n/a	
VATs (1) Subtraction-type VAT	(a) Boren & Danforth "business activities tax" (b) Nunn & Domenici Strengthening of America Commission	Business sales to domestic purchasers minus value of all goods and services purchased from other businesses	Annually computed from business's books, so there is no need for each individual transaction to be recorded	(a) Retain personal income tax with additional special tax on retained earnings (only replaces corporate tax and one half employer's share of payroll tax) (b) In addition to replacing corporate tax, this proposal advocates imposition of a progressive consumption-type tax on individuals that would replace the current personal income tax (see section 3, below)	The tax base for an individual business equals the value that the business added to the final product's worth if the cost of investment goods produced is deductible, as under the Danforth-Boren tax, then the tax base for the country becomes the value added in the production of consumer goods and services
(2) Credit-invoice VAT (EEC-type)	n/a	Value of business sales with tax credit for payments to other businesses	Point of sale, regardless of whether the sale is final or intermediate; must be recorded for each individual sale, much like the RST		
PROGRESSIVE CONSUMPTION-TYPE TAX (1) Progressive Cash Flow Tax	Nunn & Domenici "unlimited saving allowance" or USA tax	Cash income minus cash savings (gross tax base)	Would tax savings only when dissaved (consumed) in subsequent period		Comparing Cash Flow tax and Bradford X tax under present value principles, the amount of tax paid under each system over a lifetime is the same, <i>if</i> :
(2) Bradford X Tax		(a) Business tax: profits, interest, and depreciation investments (b) Personal tax: exempts capital	Would tax wages in period wages were earned		(a) The tax rate remains constant (b) All income is consumed over a lifetime



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