

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search
http://ageconsearch.umn.edu
aesearch@umn.edu

Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.

CEPR

CEPR Publ. 87

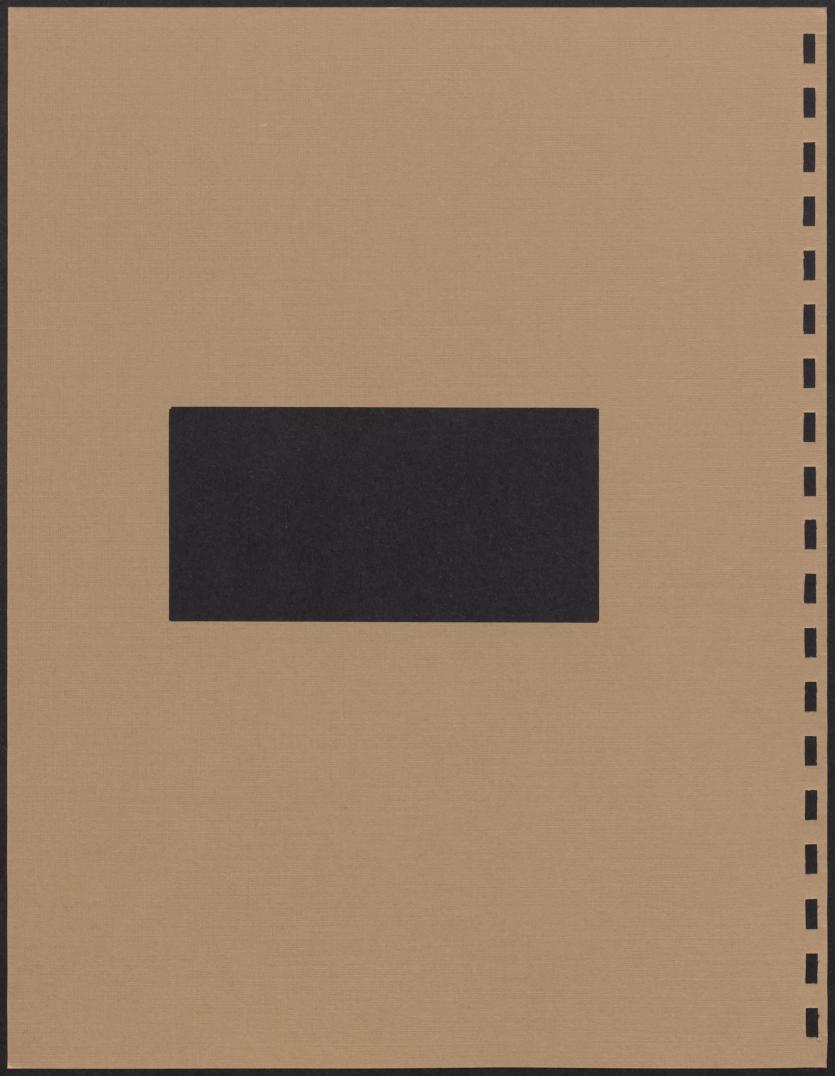
GIANNINI FOUNDATION OF AGRICULTURAL ECONOMICS

JUL 1 0 1989



CENTER FOR
ECONOMIC POLICY RESEARCH

STANFORD UNIVERSITY, * CEPR * PUBLICATION SERIES



This work is distributed as a Policy Paper by the

CENTER FOR ECONOMIC POLICY RESEARCH

100 Encina Commons Stanford University Stanford, California 94305 (415) 725-1874

March 1987

CEPR Publication No. 87

PERSPECTIVES ON THE TAX REFORM ACT OF 1986

by

Michael J. Boskin
Department of Economics
Stanford University
and
National Bureau of Economic Research

This paper was presented at the Annual Meeting of the National Tax Association, Hartford Connecticut, November 1986.

ABSTRACT

The Tax Reform Act of 1986 was the most sweeping tax reform in decades, but came rapidly on the heels of six other tax changes in the previous eight years, and in the midst of an intense national debate concerning large and potentially pernicious budget deficits. These remarks highlight what I believe to be the most important general issues with respect to the 1986 Tax Reform Act, its likely impact on the economy and the likely evolution of tax policy. After discussing the major features of the Tax Reform Act, the paper points out that the reform is so complex that its net impact on the economy, both in the long-run and the short, will reflect the interaction of numerous features, as well as the interaction of the tax rules with monetary policy and general economic conditions.

However, it is likely on balance that the tax reform is proconsumption and anti-saving and investment. This is because the removal of the investment tax credit, slower depreciation, the full taxation of nominal capital gains as ordinary income, and the sharp limits on tax deferred savings are only partially offset by lower marginal tax rates and limitations on interest deductions.

After reviewing the recent history of taxation in the United States and the evidence concerning the response to incentives such as the capital gains tax reduction in 1978 and the "supply-side" tax cuts of 1981, each partially successful in achieving their goals, the paper dicusses alternative issues that may affect the evolution of tax laws. Large budget deficits, the need for technical corrections, the likely unworkability, inequity, or inefficiency of various anomalies of the new tax rules and the potential deleterious consequences on investment and saving will lead to successive rounds of reform in the years ahead.

The paper concludes that the new tax rules under which we are operating contain many desirable but many undesirable features. Whether the new tax law will be seen as an improvement over what it replaced depends heavily upon subsequent changes in the tax law. Restoration of more carefully crafted saving and investment incentives, handling the deficit in a way that does not raise rates substantially, broadening the tax base on personal consumption items, and stabilization of the tax rules for a span of years are all highly desirable future goals in improving tax policy.

Introduction

The Tax Reform Act of 1986 was a remarkable economic and political accomplishment. While its economic effects, to be discussed more fully below, are quite uncertain, so was its passage until the last moment. After several years of proposals, and two temporary derailments, we have a new tax law that is the most sweeping revision of the tax code in several decades. This would be remarkable in itself, but the timing is even more so. It comes rapidly upon the heels of six other tax changes in the previous eight years. The 1978 tax act began as President Carter's attack on the three-martini lunch and ended by cutting capital gains taxes; the 1981 Economic Recovery and Tax Acts (ERTA) phased in a 25% decrease in personal tax rates, accelerated depreciation in the corporate tax, and made numerous other important changes; the 1982 Tax Equity and Fiscal Responsbility Act (TEFRA) truncated some of the acceleration of depreciation enacted in ERTA, and raised other revenues; the Deficit Reduction Act of 1984 raised additional revenues; we also had the gasoline tax and Social Security tax increases enacted during this period. More amazing, the 1986 Tax Reform Act was enacted in the midst of an intense national debate concerning the large and potentially pernicious budget deficits. In the past, tax reform most commonly accompanied tax cuts. The opportunity to deflect criticism and attention from the budget deficit undoubtedly combined with the genuine interest in tax reform to keep the process moving.

My comments below are meant to highlight what I believe to be the most important general issues with respect to the 1986 Tax Reform Act, its likely impact on the economy and the likely evolution of tax policy. Space constraints forbid me from going into great detail into any of these features or to mention a myriad of other issues which might be

thought of as questionable tax policy although of second order of importance to the economy (such as the elimination of income averaging) relative to the issues upon which I focus

Description of the New Law

Table 1 compares the old law, the President's proposal, the bill passed by the House and by the Senate, and the final reform. Reading across each row, one sees the chronological treatment of each feature of the tax code, e.g., rates, deductions, etc. The Tax Reform Act of 1986 contained some elements of each of the early proposals, such as Bradley-Gephardt, Kemp-Kasten and Treasury I in addition to the President's original proposal, but the end product is not really close to any of them.

The most important feature of the new tax law is the very sharp reduction in the tax rates in the personal income tax -- two rates of 15% and 28%, with a complicated surtax that will put some upper middle people in a 33% bracket. Thus, the top marginal tax rate in the personal income tax will have gone from 70% in 1980 to 28% by 1988, an astounding reduction, making our top marginal tax rate lower than the bottom marginal tax rate in many countries. The tax base in the personal income tax was broadened slightly with elimination of the deductibility of state sales taxes, substantial limitation of miscellaneous deductions, etc. A large increase in the personal exemption will remove approximately 6 million poor people from the tax rolls, and while their tax burden under the current personal income tax does not amount to very many dollars, this is sensible social policy and will reduce the burden on the IRS. A substantial fraction of additional

taxpayers will no longer itemize deductions, thereby simplifying their taxes. But for the overwhelming bulk of the population, the reporting requirements, tax forms, record keeping requirements, etc., will be reduced only slightly. As discussed above, the reduction in the number of tax rates is not closely related to simplifying the tax system. The reduction in the level of rates is -- at much lower rates, the incentive to try to shelter or reallocate income in order to reduce taxes is greatly reduced.

The next most important feature of the tax reform is a substantial shift (amounting to about \$120 billion over the next five years) of the tax burden from the individual to the corporate tax. This occurs despite the fact that the basic corporate tax rate is being reduced from 46% to 34%. Therefore, there will be a very substantial increase in the corporate tax base. This is achieved through the elimination of the investment tax credit (common to all the reform proposals), much slower depreciation, and a stiff alternative minimum tax for corporations (to insure that no corporation that reports current profits to its shareholders will avoid paying taxes). A large fraction of the tax increases are industry-specific, especially those with respect to defense contractors, real estate, and financial institutions. For example, banks will no longer be able to tax arbitrage tax exempt bonds; passive loss rules for real estate tax shelters will be tightened substantially; defense contractors will no longer be able to use the completed contract method of accounting; etc.

Other important features of the personal and corporate tax reforms reflect incentives to save and invest. The tax incentives to defer compensation are curtailed substantially. The tax deductibility of IRAs will be income-tested -- well-off individuals will no longer be able to

use them. Other tax deferred retirement accounts, such as 401(k) plans will be sharply limited in the amounts that individuals can contribute (the limit goes from \$30,000 per year to \$8,000 per year, with an offset to any contribution to an IRA); and, incredibly, capital gains will be taxed in full as ordinary income, with no inflation adjustment for the basis of the asset.

Economic Impact

The tax reform is so complex that its net impact on the economy in the short and long-run will reflect the interaction of numerous features as well as the interaction of the tax rules with monetary policy and general economic conditions. A few basic features deserve considerable attention, especially in light of the evidence accruing concerning the partial success of the "supply-side" structural tax cuts of 1981 on investment, and to a lesser extent, of IRAs on saving and the history and instability of tax reform.

First, it is likely on balance this tax reform is pro-consumption and anti-saving and investment. It is easy to overstate this fact by focusing only on the removal of specific incentives, such as the removal of the investment tax credit, slower depreciation, the full taxation of nominal capital gains as ordinary income, or the sharp limits on tax deferred saving. Partially offsetting these are lower marginal tax rates which should increase saving slightly, and more importantly, sharply reduce the incentive to borrow at both the corporate and personal level. Recall that with interest payments deductible, there is a tax advantage to debt financed (as opposed to equity financed) corporate investment and also that there is a substantial advantage in debt finance of many consumer purchases, such as automobiles.

In addition to the reduction in the incentive to borrow because the interest payments will be deductible at a much lower marginal tax rate for both corporations and individuals, is the elimination of the deductibility of consumer interest payments. At first glance, it might seem that it would be easy for homeowners to circumvent this by increasing their mortgage, and using the extra equity to finance desired purchases, such as an automobile, while deducting the extra interest. At least nominally, however, the new tax law confines the use of tax deductible interest payments on mortgages to housing, educational financing, and medical expenditures. Undoubtedly, this will be difficult to enforce, but combined with the lower marginal tax rates, we should be doing less borrowing on average over the business cycle in the years ahead.

Thus, while we may save less because of the structural tax changes, we also ought to borrow less. The net impact on our saving will reflect the mix of the two sets of incentives. It is likely that the tax bill will be somewhat anti-investment and saving, but the impact predicted by people who look only at the removal of specific items, will be partly offset by lower tax rates and other features.

It seems clear that the investment tax credit and depreciation schedules are very powerful determinants (in addition to expected general business conditions) of investment. Two reasons for the sharp reduction in investment spending in 1986 were the uncertainty about what tax rules would ultimately prevail and that all the major reform proposals proposed removing the investment tax credit retroactively to January 1, 1986. My NBER colleague, Larry Summers, estimates that investment tax credits and depreciation allowances are very important

because corporations use extremely high rates of discount for future cash flows.³ Thus, cash flows in the near future, such as those that occur instantly with the investment tax credit and very quickly with accelerated depreciation, are given disproportional weight in investment decisions. I believe that there is something to this argument and that, other things being equal, the net impact of the tax bill will be to retard capital formation. My own estimates are that the cost of new capital will rise about 10% (more if inflation rates rise above 4%). But other things may not be equal. The investment rate will also reflect general economic conditions, the level of real interest rates (heavily affected by monetary policy), etc.

A major problem confronting the United States is its very low national saving rate, and low, but somewhat higher, domestic investment rate. As a source of increased productivity, disseminating new technologies, possibly raising our long-term growth rate, and allocating resources efficiently over one's lifetime, capital formation is necessary, and it is clear that as a society, the U.S. consumes too much of its income and does not save enough. This creates all sorts of problems besides just financing the future retirement for today's workers or financing enough investment to equip our growing labor force with an adequate amount of new capital. The shortfall of our national saving from our domestic investment, caused heavily by our federal government deficits and by our low private saving rate, tends to make us a substantial importer of capital. In the short-run this prevents interest rates from rising still further and helps us to finance domestic investment. But in the long-run, the returns to this extra saving will accrue to foreigners, not to Americans. Therefore, these assets and the returns to them will not be available to finance the

retirement of the baby-boom generation, for example.

Put another way, it makes little sense to have an anti-investment and saving structural tax reform, which if continued indefinitely, would generate fewer <u>private assets</u> in the hands of American citizens. This is especially so because we have had rapidly growing national debt relative to income, and hence, are leaving our children and grandchildren greater <u>public liabilities</u>. We should be contemplating methods either to reduce the growing public liabilities, or at least preventing ourselves from reducing our private assets simultaneously.

These specific changes in capital income taxation, such as the removal of the investment credit, slowing depreciation, full taxation of capital gains, and limits on tax deferred saving accounts are a complete reversal of a historical trend that began about a decade ago. The easiest way to understand this is to recall the distinction between an income tax, which taxes saving and investment twice (first when it is earned as part of income and then when it earns its own return), and a consumption tax, which taxes saving and investment only once (when it is ultimately consumed). The U.S. personal and corporate income taxes have always been something of a hybrid of the two. Some types of saving and investment are taxed only once, whereas others are taxed twice. Housing, the universal Individual Retirement Accounts, etc., are examples of types of saving taxed only once. Saving in ordinary money market instruments, such as bank accounts, or saving and loan deposits, is an example of saving taxed twice.

On the corporate income source side, the story is a little more complex -- equity income is taxed first at the corporate level and again at the personal level when dividends are paid or capital gains received

from the retained earnings. (Treasury I echoed the 1978 proposal of President Carter in proposing dividend relief; President Reagan's kept the principle alive with a 10% deduction.) But the tax on the capital gains tax is deferred, debt financed investment is favored, and a variety of investment incentives reduce the burden on new investment. It is fair to say that the tax system had been moving, until this latest tax reform, closer toward the consumption tax norm than the income tax norm, i.e., toward taxing a weighted average of all saving and investment in the economy closer to once than twice. Examples are the reduction in capital gains tax rates in 1978, the investment tax credit extension, the acceleration of depreciation in 1981 (truncated in 1982), universal Individual Retirement Accounts, etc. But this continued the very uneven taxation of types of saving and across types of assets.4 Substantial variation remained, despite the fact that the variability was less than in the pre-1981 law. Many economists, myself included, thus favor cleaning up the tax system by moving toward the consumedincome tax mentioned above, as outlined in the Treasury's Blueprints For Basic Tax Reform or the Hall-Rabushka proposal. Debates occur about which, if any, deductions, such as those for charity, ought to be allowed; and the appropriate rate structure, whether perfectly flat or somewhat progressive (but hopefully lower on a much broader base) which would be the ideal. A consensus was emerging, however, among professional economists and tax lawyers, that the consumption tax norm was more desirable than the income tax norm on both equity and especially efficiency considerations. After a complex transition, a consumed-income tax would be much easier to administer since most of the items that cause enormous administrative complexity revolve around capital income, such as keeping separate depreciation schedules,

adjusting for inflation, capital gains, etc.

To repeat, there is some evidence that there is a "supply-side" response to these incentives, although neither as large nor as rapid as extreme supply-siders predicted. Capital gains revenues actually went up subsequent to the reduction in capital gains taxes in 1978. While other factors are part of the explanation, it appears as if this increased the incentive to realize capital gains. Capital gains are taxed only at realization (not as accrued) and are entirely forgiven at death. The new law runs the risk of a reduction in realizations, including a greater proclivity to hold the asset until death, when no taxation will occur.

By 1984-5, \$30 to \$40 billion a year was flowing into IRAs, and I believe the best estimate is that about half of it was new net saving. It also appears that the investment tax credit and accelerated depreciation were a major reason for the investment boomlet in 1983-5.

Why then do we appear to be shooting ourselves in the foot with these anti-saving and capital formation of our new tax law? Apparently, in the search for a political compromise which would allow for lowering the top marginal rates without the accusation of a giveaway to the rich and in the mistaken belief that corporations were not paying their fair share (based in part, inappropriately, on the decline in corporate tax revenues as a share of total taxes, rather then the share of taxes on corporate source income) it became easy to shift large amounts of the tax burden to the corporate tax. In short, we financed a very substantial additional personal tax cut (above and beyond the three-year 25% tax cut enacted in 1981-3, followed by tax bracket indexing) by a very substantial corporate tax increase. Worse yet, within the

corporate tax, we raised taxes on <u>new</u> capital and lowered taxes (by lowering the corporate rate) on <u>old</u> capital. I believe this was a major mistake. Some of the items are quite sensible, e.g., the attempt to equalize tax rates across different types of investment so that the allocation of our capital stock will be more efficient. But the gains to the economy from doing so will be modest and will take some time to accrue. 6

Since no one is absolutely sure who ultimately pays the corporate income tax, it was easy for politicians to say almost all Americans were going to get a tax cut. But \$120 billion of additional corporate tax collections was conveniently ignored, not attributed back to the people who would ultimately pay it: the shareholders, workers, and customers of the corporations. It really is remarkable that so little attention was paid to how ludicrous it is to claim to that almost every American was going to get a tax cut if the tax bill is going to be revenue neutral! In short, a large part of the population will have a tax increase, although it will come in a roundabout way via lower dividends, paying higher prices, or having slower wage growth, and perhaps even some short-run disruption in employment.

The impact of tax reform on the short-term macroeconomic performance of the economy can be partly mitigated by Federal Reserve policy setting an activity or GNP target, which it appears to be doing. While it is not fully offsetting the deleterious short-run consequences on investment of the tax reform and the tax uncertainty that preceded it, it is clear that the full impact on GNP can be offset. The composition of GNP, unfortunately, may shift still further toward consumption and away from saving and investment. If so, this will gradually cumulate into a major national concern with worse long-term

economic performance. But our political process does not deal with insidious creeping problems, and tends to respond only to obvious crises.

Whither Tax Reform?

There will be additional rounds of tax reform for several reasons. First, there will be many technical corrections made in the current tax reform in the next year or so. Second, it will become apparent that some specific features are either unworkable, inequitable, or inefficient, as various anomalies of the new tax rules unfold. Third, the potential deleterious consequences on investment and saving eventually will have to be dealt with. Perhaps this will be done in the short-run, but perhaps it will take a crisis such as that which might be precipitated in the 1990s when the retirement part of Social Security runs a surplus, which may be used to bail out Medicare's deficit, and therefore, focus attention on the baby-boomers' retirement. If this is the case, there will be increased clamor for private saving incentives in the tax laws for the baby-boomers as it becomes more obvious that Social Security's future is quite uncertain. Or it may come much sooner as it becomes more difficult to import foreign capital to finance our domestic investment.

Another problem arises because of our large budget deficits. This adds an increased concern for the instability of the structural tax reforms. If we cannot reduce the budget deficits exclusively via programmatic spending reductions, there will be growing pressure to raise tax revenues as a last resort. If tax rates are raised, a large fraction of the potential benefits of the new tax law will be lost,

including those which will decrease the incentives to debt finance, thereby offsetting some of the decreased saving incentives.

We have had five major tax bills in less than a decade. Tax instability is becoming as much of a problem as monetary instability. In the U.S. recently, the only things one can count on are death and tax reform. It would be better to move toward a tax system whose major features can remain in place, and can be counted upon to remain in place, for many years, rather than just a year or two. The present tax reform may be a step in that direction, since the lower marginal tax rates mean that the value of remaining deductions is decreased. Thus, the political opposition to broadening the tax base on consumption typeitems in the personal tax may gradually erode; additional revenue raised by a broader base can be used to restore some of the saving and investment incentives (more properly understood as the removal of the disincentives to save and invest inherent in the double taxation in our income tax).

At the very least, if we are going to raise additional revenue, the marginal revenue ought to come from a tax or features of our current tax system which are neutral with respect to the consumption/saving choice. This may lead toward the consumed income tax I prefer or toward adoption of a very broad based consumption type value-added tax sometime in the future. If so, it would be desirable to accompany a broad based value-added tax with additional structural restraints on the spending side to prevent the tax from financing unnecessary government spending. It will also be necessary to prevent the erosion of the tax base in a value-added tax, if that is the last resort for revenue, rather than riddling it with a substantial number of exemptions for specific items. If we are concerned with the effect of such taxes on the poor, that issue

should be dealt with via a refundable credit, not by exempting items such as food for everyone, rich and poor alike. That is a recipe for sharp reductions in the ability to raise revenue or much higher tax rates in such a tax, rather than a targetted assistance program for low income taxpayers.

There are many laudable features in the current reform in addition to the lower marginal tax rates and the slightly broader personal tax base, as well as the attempt to equalize tax rates across types of investment (only partially achieved). These include the elimination of 6 million poor people from the tax rolls, some simplification for other low and middle income taxpayers who will no longer have to itemize their deductions, and perhaps most importantly, if it occurs, turning the growing tide of unrest brought about by the feeling that the tax system was blatantly unfair, and confidence in its ability to collect taxes via voluntary compliance falling apart. When one thinks about it, an alternative minimum tax is a blatant admission that we cannot design a proper basic tax. That is a public embarrassment. We should first design a proper tax system, and if it leads to a perception of unfairness which is ill-founded, such as some corporation paying no tax one year because it is carrying forward losses from previous years, we ought to have the courage to explain why this is the case. But our tax system badly needs some restoration of confidence. It will certainly be the case that many persons and corporations who pay little or no taxes under the previous tax laws in a given year will do so under the new tax law. There will be fewer complaints that the typical individual paid more in taxes than a set of corporations which managed to pay none. Beside the fact that this misses the point that personal taxes were

probably paid on dividends paid by the corporation or that it may be paying no taxes because of carrying forward substantial losses, we probably could benefit from a decrease in the public stridency with which our tax system was continually denounced.

Perhaps the Internal Revenue Service was overly concerned that tax cheating and evasion were becoming so pervasive that we would have a difficult time collecting the revenue, but some of that concern was valid. I believe that in attempting to ameliorate these problems we have gone way too far in the alternative minimum tax, the full taxation of nominal capital gains at ordinary rates, and a variety of other features. These will cost the economy much more benefit than we obtain, but hopefully some balance can be restored in the not-too-distant future.

One also must be concerned that while an item such as a capital gains tax differential may be very effective in generating funds for risk-taking in the economy, it was also part of the archetypical structure of abusive tax shelters, that is, the tax shelters were set up to depreciate an asset more rapidly than its value really declined, and then sold it, paying only capital gains taxes on the difference. Often, these tax advantages were leveraged with various multiples. As these became blatantly advertised in the media, it is clear that some action had to be taken. Confidence in the tax system was eroding on the one hand, and our scarce investment resources were being misallocated on the other. In the long-run the economy will benefit from a more efficient allocation of our capital stock based on fundamental economic returns, rather than tax considerations. But we need to avoid major damage to the economy in the course of doing so, and this will require restoring saving and investment incentives in the near future.

Finally, one item which appears to have survived the meat axe has been the R&D tax credit. Neutrality ought to be our standard in tax policy. We ought not \cdot to be subsidizing one investment at the expense of another, such as equipment at the expense of structures, or industry X at the expense of industry Y, as has been the case under previous tax laws. A substantial amount of statistical research, by economists, as well as basic common sense, suggests that the returns from research and development to society may dramatically exceed the return appropriable by the individual entrepreneur or firm. In fact, estimates suggests that the value returned to society may be many times whatever personal or corporate fortune is obtained. While the R&D tax credit is continued only for another three years, rather than made permanent, and eligibility tightened to insure that it is targetted to activities likely to generate much greater social returns than private ones this, is likely to be one of the few activities for which a strict neutrality standard would not be in society's best interests.

Conclusion

The new tax rules under which we will soon operate contain many desirable but many undesirable features. Taken as a whole, I think the new tax law, plus the option to improve it, is probably preferable to our old tax law. The new tax law and the considerable uncertainty surrounding the specific features which would ultimately be adopted already have caused some damage to the U.S. economy, and there may be some deleterious consequences to investment and saving in the future. These will be partly offset by some other desirable features in the tax laws, such as lower marginal tax rates. The final evaluation of the

1986 tax reforms will heavily reflect subsequent changes in the tax law, the handling of the deficit in a way that does not create tremendous pressure to raise rates substantially, and the ability to stabilize tax rules for a span of years. Each of these items is quite uncertain, but I am cautiously optimistic that common sense and good economics will eventually win out and that we will move toward a more stable tax system, keeping most of the benefits of substantially lower marginal tax rates, while broadening the tax base on personal consumption items and restoring some of the saving and investment incentives which were removed in this round of reform. This will not occur all at once, but unfold gradually over a span of years as the vicissitudes of our economy's performance and our political capabilities dictate.

Footnote

- 1. See M. Feldstein and J. Jun, "The Effect of Tax Rules on Nonresidential Fixed Investment: Some Preliminary Evidence," in M. Feldstein, ed., Tax Policy and Capital Formation, University of Chicago Press, forthcoming for the National Bureau of Economic Research.

 Numerous other studies of the impact of investment incentives on investment come to similar conclusion, including some of my own, although a skeptical note is voiced in B. Bosworth, "Corporate Taxes and the Investment Recovery," Brooking Papers on Economic Activity, 1986.
- 2. See S. Venti and D. Wise, "IRAs and Saving," in M. Feldstein, ed.,

 Op. cit. See also my discussion in M. Boskin, "A Closer Look at

 Investment Incentives," <u>Tax Notes</u>, 1985, and "Tax Policy and Economic

 Growth," <u>Journal of Economic Perspectives</u>, forthcoming 1987.
- 3. See L. Summers, "Investment and the Discounting of Depreciation Allowances," in M. Feldstein, ed., Op. Cit.
- 4. See, for example, A. Auerbach, "Corporate Taxation in the United States," Brookings Papers on Economic Activity, 1983, and J. Gravelle, "Capital Income Taxation and Efficiency in Allocation of Investment,"

 National Tax Journal, 1983. They document the wide variation in effective marginal tax rates, but each conclude that the efficiency loss to the economy of these uneven inter-asset and inter-industry distortions is quite modest.
- 5. See L. Lindsey, "Taxpayer Behavior and the Distribution of the 1982 Tax Cut," NBER Working Paper #2049, November 1985.

- 6. The modest efficiency gains of the equalization of effective marginal tax rates across assets and industries is documented in studies such as that by Auerbach and by Gravelle mentioned above and discussed in more detail in Boskin, <u>Tax Notes</u>, <u>Op</u>. <u>cit</u>.
- 7. See C. Ballard and J. Shoven, "The Value-Added Tax: The Efficiency Cost of Achieving Progressivity by Using Exemptions," in M. Boskin, ed., Modern Developments in Public Finance, Basil Blackwell, Ltd., forthcoming 1987.

References

Auerbach, A., "Corporate Taxation in the United States," <u>Brookings</u>
<u>Papers on Economic Activity</u>, 1983.

Boskin, M., "A Closer Look at Investment Incentives," $\underline{\text{Tax}}$ Notes, 1985.

______, "Tax Policy and Economic Growth," <u>Journal of Economic</u> Perspectives, forthcoming 1987.

Bosworth, B., "Corporate Taxes and the Investment Recovery," Brookings Papers on Economic Activity, 1986.

Feldstein, M. and J. Jun, "The Effect of Tax Rules on Nonresidential Fixed Investment: Some Preliminary Evidence," in M. Feldstein, ed., <u>Tax Policy and Capital Formation</u>, University of Chicago Press for the National Bureau of Economic Research, 1987.

Lindsey, L., "Taxpayer Behavior and the Distribution of the 1982 Tax Cut," NBER Working Paper #2049, November 1985.

Summers, L., "Investment and the Discounting of Depreciation Allowances," in M. Feldstein, ed., <u>Tax Policy and Capital Formation</u>, University of Chicago Press for the National Bureau of Economic Research, 1987.

Venti, S. and D. Wise, "IRAs and Saving," in M. Feldstein, ed., <u>Tax</u> <u>Policy and Capital Formation</u>, University of Chicago Press for the National Bureau of Economic Research, 1987.

Table 1 COMPARISON OF CURRENT LAW AND MAJOR REFORM PLANS

	Current Law	Reagan Plan	Ways & Means	Senate Finance	House & Senate Conference
Individual tax rates	14 rates from 11% to 50%	3 rates: 15, 15, 35%	4 rates: 15, 25, 35, 38%	2 rates: 15, 27%	2 rates: 15, 28%
Personal exemptions	\$1,080	\$2,000	\$1,500 for itemizers \$2,000 for non-itemizers	Increased to \$2,000, phasing out as income increases	\$2,000 (over three years) phasing out in higher incomes
Mortgage Interest	Fully deductible for all mortgages	Principal residents deductible	Principal and second residence deductible	Deductible	Deductible; restricts non- housing use
Other Interest	\$10,000 plus amount equal to investment income	\$5,000 plus amount equal to investment income	\$20,000 plus amount equal to investment income, cap on tax shelters	Disallows consumer installment interest deduction	Disallows consumer interest deduction; investment interest deductible up to amount of investment income
Employer-provided health insurance	Not taxed	Taxed up to first \$10/month for single; \$25 for family	Not taxed	Not taxed	Not taxed
Retirement plans	IRAs deductible universally, up to \$2,000+ \$250 for nonworking spouse; 401(k) up to \$30,000/yr	IRAs deductible; spousal IRA up to \$2000/yr 401(k) \$8000/yr limit with IRA offset	IRAs deductible, but contributions offset against other deferred income, e.g., 400(k) \$7000/yr with IRA offset	IRAs non-deductible for person with pension, other types of deferred, compensation limited e.g., 401(k) to \$7000/yr	IRAs deductible for low & middle income workers, phased out for higher incomes; 401(k) \$7000/yr limit
Charitable contributions	Fully deductible	Deductible, but only on itemized returns	Fully deductible for itemizers, partly for non-itemizers	Deductible	Deductible for itemizers only
State and local taxes	Fully deductible	No deduction	Fully deductible	Sales taxes not deductible	Sales taxes not deductible
Capital gains	60% excluded for 20% top rate	50% excluded for 17.5% top rate but fewer items covered	42% excluded for 22% top rate in 1987	Taxed in full as ordinary income	Taxed in full as ordinary income
Corporate tax rates	46% top, graduated rates up to \$100,000	33% top rate, graduated rates up to \$75,000	36% top, graduated rates up to \$75,000	33%	34%
Depreciation	Accelerated	Somewhat accelerated, but less generous	Slower depreciation; partly indexed for inflation	Faster for equipment, slower for structures; not indexed	Slower for both equipment & structures; not indexed
Investment tax credit (ITC)	Generally 10%	Eliminated	Eliminated	Eliminated	
R&D tax credit	25%, broad definition, due to expire				Extended 3 years at 20%, tightened eligibility
Alternative minimum tax	Modest	Strong	Very Strong	Very Strong	Very Strong
			• • • •		

CENTER FOR ECONOMIC POLICY RESEARCH

100 Encina Commons Stanford University Stanford, California 94305

CEPR Publication Series (March 1987)

- 1. Paul A. David, "Microelectronics and the Macroeconomic Outlook," Two Papers for the OECD Working Party on Information, Computer and Communications Policy," April 1982.
- 2. Timothy F. Bresnahan, "The Impact of Proposed Emissions Rollbacks on the Automobile Industry," April 1982.
- 3. Ronald I. McKinnon, "A Program for International Monetary Stability," January 1983.
- 4. Timothy F. Bresnahan, "Automobile Price Indexes by Continent of Origin," November 1982.
- 5. Ronald I. McKinnon, "Why U.S. Monetary Policy Should Be Internationalized," April 1983.
- 6. Robert M. Coen and Bert G. Hickman, "Tax Policy, Federal Deficits and U.S. Growth in the 1980's," April 1983.
- 7. Ronald I. McKinnon, "Dollar Overvaluation Against the Yen and Mark in 1983: How to Coordinate Central Bank Policies," May 1983.
- 8. Lawrence J. Lau, "The Measurement of Productivity: A Lecture in Memory of Professor Ta-Chung Liu," July 1983.
- 9. Bert G. Hickman, "Growth, Inflation and Unemployment in the United States," August 1983.
- 10. Michael J. Boskin, Kenneth Cone and Sule Ozler, "The Federal Budget and Deposit Insurance," November 1983.
- 11. Michael J. Boskin and Bradford L. Barham, "Measurement and Conceptual Issues in Federal Budget Treatment of Loans and Loan Guarantees," revised December 1984.
- 12. Claudio R. Frischtak, "Choice of Technology and Economic Growth: A Reassessment," December 1983.
- 13. M. Elisabeth Pate-Cornell, "Probabilistic Assessment of Warning Systems: Signals and Response," January 1984.
- 14. Bruce D. Spencer, "Avoiding Bias in Estimates of the Effect of Data Error on Allocations of Public Funds," April 1984.
- 15. Carson E. Agnew and Richard G. Gould, "Frequency Coordination and Spectrum Economics," Revised March 1984.

- 16. Timothy F. Bresnahan and Peter C. Reiss, "Dealer and Manufacturer Margins," CEPR Technical Report, February 1984.
- 17. B. Douglas Bernheim, "Dissaving After Retirement: Testing the Pure Life Cycle Hypothesis," CEPR Technical Report, revised March 1984.
- 18. Bruce D. Spencer, "Sensitivity of Benefit-Cost Analysis of Data Quality," CEPR Technical Report, May 1984.
- 19. I.P.L. P'ng, "Liability, Litigation, and Incentives to Take Care," CEPR Technical Report, revised May 1984.
- 20. M. Elisabeth Pate-Cornell and Timothy S. O'Grady, "Reduction of Fire Risks in Oil Refineries: Costs and Benefits of Camera Monitoring," CEPR Technical Report, January 1984.
- 21. Ben S. Bernanke and James L. Powell, "The Cyclical Behavior of Industrial Labor Markets: A Comparison of the Pre-War and Post-War Eras," revised May 1984.
- 22. Yoram Weiss, "The Effect of Labor Unions on Investment in Training: A Dynamic Model," CEPR Technical Report, December 1983.
- 23. Paul A. David, "The Reaper and the Robot (The Diffusion of Microelectronics-Based Process Innovations in Historical Perspective)," revised May 1984. (Same as TIP Working Paper No. 1)
- 24. Paul A. David and Trond E. Olsen, "Anticipated Automation: A Rational Expectations Model of Technological Diffusion," revised April 1984. (Same as TIP Working Paper No. 2)
- 25. Josep M. Vegara-Carrio, "Software Technological Change: An Economic Approach," May 1983. (Same as TIP Working Paper No. 3).
- 26. Michael J. Boskin, Marc S. Robinson, Terrance O'Reilly and Praveen Kumar, "New Estimates of the Value of Federal Mineral Rights and Land," revised August 1984.
- 27. B. Douglas Bernheim, "Life Cycle Annuity Valuation," August 1984.
- 28. Arthur T. Denzau, William H. Riker and Kenneth A. Shepsle, "Strategic Behavior in the Theory of Legislatures," CEPR Technical Report, revised August 1984.
- 29. John E. Chubb, "The Political Economy of Federalism," June 1984.
- 30. Mathew D. McCubbins and Thomas Schwartz, "The Politics of Derustication: Court-Ordered Redistricting and Its Policy Effects," July 1984.
- 31. Melvin J. Hinich, "Policy Formation in a Representative Democracy," CEPR Technical Report, revised June 1984.
- 32. John Mendeloff, "OSHA and Regulatory Theory," June 1984.

- 33. Timothy F. Bresnahan and Dennis A. Yao, "The Nonpecuniary Costs of Automobile Emissions Standards," CEPR Technical Report, June 1984.
- 34. Norman Frohlich, Joe Oppenheimer and Cheryl Eavey, "Tests of Rawls' Distributive Justice: An Experimental First Cut," June 1984.
- 35. John Ferejohn and Roger Noll, "Promises, Promises: Campaign Contributions and the Reputation for Services," CEPR Technical Report, August 1984.
- 36. Linda Cohen and Roger Noll, "The Electoral Connection to Intertemporal Policy Evaluation by a Legislator," CEPR Technical Report, September 1984.
- 37. Thomas E. MaCurdy and John Pencavel, "Testing Between Competing Models of Wage and Employment Determination in Unionized Markets," CEPR Technical Report, September 1984.
- 38. Ben S. Bernanke, "Employment, Hours, and Earning in the Depression: An Analysis of Eight Manufacturing Industries," CEPR Technical Report, revised October 1984.
- 39. Masahiko Aoki, "The Japanese Firm in Transition," CEPR Technical Report, January 1985.
- 40. Bruce D. Spencer and Lincoln E. Moses, "Needed Data Quality for An Ambiguous Decision Problem," CEPR Technical Report, January 1985.
- 41. Michael J. Boskin and Marc S. Robinson, "Energy Taxes and Optimal Tax Theory," revised December 1984.
- 42. Alan S. Manne, "On the Formulation and Solution of Economic Equilibrium Models," CEPR Technical Report, November 1984.
- W. Brian Arthur, "Competing Technologies and Lock-In by Historical Small Events: The Dynamics of Allocation Under Increasing Returns," November 1983, revised January 1985. (Same as TIP Working Paper No. 4)
- 44. Paul A. David, "Clio and the Economics of Qwerty," December 1984. (Same as TIP Working Paper No. 5)
- 45. A. Mitchell Polinsky, "Fixed Price Versus Spot Price Contracts: A Study in Risk Allocation," February 1985.
- 46. Paul A. David, "New Technology Diffusion, Public Policy, and Industrial Competitiveness," revised April 1985. (Same as TIP Working Paper No. 7)
- 47. Michael J. Boskin and Lawrence J. Kotlikoff, "Public Debt and U.S. Saving: A New Test of the Neutrality Hypothesis," May 1985.
- 48. Partha Dasgupta and Paul A. David, "Information Disclosure and the Economics of Science and Technology," April 1985. (Same as TIP Working Paper No. 8)

- 49. Paul A. David and Paul L. Stoneman, "Adoption Subsidies vs Information Provision as Instruments of Technology Policy," April 1985. (Same as TIP Working Paper No. 6)
- 50. Robert M. Coen and Bert G. Hickman, "Social Security and Macroeconomic Activity in 1985-2010: A Forecast with the Hickman-Coen Annual Growth Model," June 1985. (Revised December 1985)
- Partha Dasgupta and Eric Maskin, "The Economics of R & D Portfolios," April 1985. (Same as TIP Working Paper No. 10)
- 52. Michael J. Boskin, "Theoretical and Empirical Issues in the Measurement, Evaluation, and Interpretation of Post-War U.S. Saving," July 1985.
- Masahiko Aoki, "Learning By Doing Vs. The Bounded-Rational Control: An Approach to U.S.-Japan Comparison of Industrial Organization," July 1985.
- James L. Sweeney and Michael J. Boskin, "Analyzing Impacts of Potential Tax Policy Changes on U.S. Oil Security," July 1985.
- 55. Ronald I. McKinnon, "The Dollar Exchange Rate as a Leading Indicator for American Monetary Policy," August 1985.
- 56. Ronald I. McKinnon, Protectionism and the Misaligned Dollar: The Case for Monetary Coordination," October 1985.
- 57. Tom Lyon, "Trinational Energy Policy Workshop Notes," CEPR Technical Report, November 1985.
- 58. Michael J. Boskin, Lawrence J. Kotlikoff and Michael Knetter, "Changes in the Age Distribution of Income in the United States 1968-1984," October 1985.
- 59. Michael J. Boskin, "Retirement Income Support from the Private Sector," November 1985.
- 60. John B. Shoven and Toshiaki Tachibanaki, "The Taxation of Income from Capital in Japan," September 1985.
- 61. Charles L. Ballard and John B. Shoven, "The Value-Added Tax: The Efficiency Cost of Achieving Progressivity by Using Exemptions," October 1985.
- 62. Michael J. Boskin, Marc S. Robinson and John M. Roberts, "New Estimates of Federal Government Tangible Capital and Net Investment," November 1985.
- 63. Michael J. Boskin, Lawrence J. Kotlikoff and John B. Shoven "Personal Security Accounts: A Proposal for Fundamental Social Security Reform," September 1985.
- 64. Bert G. Hickman, "Real Wages, Aggregate Demand, and Unemployment," CEPR Technical Report, July 1986.

- 65. A. Mitchell Polinsky, "Detrebling Versus Decoupling Antitrust Damages: Lessons from the Theory of Enforcement," January 1986.
- 66. A. Mitchell Polinsky and Daniel L. Rubinfeld, "The Welfare Implications of Costly Litigation in the Theory of Liability," CEPR Technical Report, January 1986.
- 67. Paul A. David and Trond E. Olsen, "Equilibrium Dynamics of Diffusion When Incremental Technological Innovations Are Unforeseen," CEPR Technical Report, February 1986. (Same as TIP Working Paper No. 9)
- 68. Masahiko Aoki, "The Japanese Bureaucracy in Economic Administration: A Rational Regulator or Pluralist Agent?," March 1986.
- 69. Michael Boskin, Lawrence J. Kotlikoff, Douglas J. Puffert and John B. Shoven, "Social Security: A Financial Appraisal Across and Within Generations," March 1986.
- 70. Robert M. Coen and Bert G. Hickman, "Macroeconomic and Budgetary Impacts of Social Security Policies, 1985-2010: A Simulation Study," March 1986.
- 71. Paul Klemperer and Margaret Meyer, "Price Competition vs. Quality Competition: The Role of Uncertainty," CEPR Technical Report, May 1986. (Same as TIP Working Paper No. 11)
- 72. Paul Klemperer, "Markets with Consumer Switching Costs," CEPR Technical Report, May 1986. (Same as TIP Working Paper No. 12)
- 73. Paul Klemperer, "Intertemporal Pricing with Consumer Switching Costs," CEPR Technical Report, May 1986. (Same as TIP Working Paper No. 13)
- 74. Ronald I. McKinnon, "Financial Liberalization in Retrospect: Interest Rate Policies in LDCS," July 1986.
- 75. James L. Sweeney with David Fenichel, "Price Asymmetries in the Demand for Energy," CEPR Technical Report, June 1986.
- 76. Samuel S. Chiu and Qing Lin, "An Incentive-Compatible Resource Allocation Problem Allowing Collusion," CEPR Technial Report, June 1986.
- 77. Samuel S. Chiu and Qing Lin, "A Family of Incentive Compatible and Non-Subsidizing Optimal Resource Allocation Problems," CEPR Technical Report, June 1986.
- 78. Bert G. Hickman, "The U.S. Economy and the International Transmission Mechanism: A Structural Comparison of Twelve Multicountry Models," July 1986.
- 79. Paul A. David, "Some New Standards for the Economics of Standardization in the Information Age," October 1986. (Same as TIP Working Paper No.14)

- 80. George W. Evans, "The Conduct of Monetary Policy and the Natural Rate of Unemployment," October 1986.
- 81. George W. Evans, "Output and Unemployment Dynamics in the United States: 1950-1985," December 1986.
- 82. B. Douglas Bernheim, "Does The Estate Tax Raise Revenue?," December 1986.
- 83. B. Douglas Bernheim, "Life Insurance, Annuities, and Bequests," December 1986.
- 84. W. Brain Arthur, "Industry Location Patterns and the Importance of History", June 1986.
- 85. A. Mitchell Polinsky and Daniel L. Rubinfeld, "A Note On Optimal Public Enforcement With Settlements and Litigation Costs," December 1986.
- 86. A. Mitchell Polinsky, "Optimal Liability When The Injurer's Information About The Victim's Loss Is Imperfect," December 1986.
- 87. Michael J. Boskin, "Perspectives on the Tax Reform Act of 1986," March 1987.
- 88. Perry C. Beider, B. Douglas Bernheim, Victor R. Fuchs and John B. Shoven, "Comparable Worth in a General Equilibrium Model of the U.S. Economy," January 1987.
- 89. John B. Shoven, "The Tax Consequences of Share Repurchases and other Non-Dividend Cash Payments to Equity Owners," October 1986.
- 90. B. Douglas Bernheim and John B. Shoven, "Taxation and the Cost of Capital: An International Comparison," August 1986.
- Michael J. Boskin and Douglas J. Puffert, "The Financial Impact of Social Security by Cohort," February 1987.

