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Some Microeconomics of Fiscal Deficit Reductions:
The Case of Tax Expenditures

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Abstract

This paper considers the merits of reducing or eliminating some specific tax expenditure measures currently in force in the United States with a view to reducing the federal fiscal deficit. The paper starts from the observation that savings decisions in the United States are distorted and that therefore government borrowing to finance current expenditures results in significant welfare losses. It is possible by reducing or eliminating individual tax expenditures to reduce the fiscal deficit while at the same time enhancing economic efficiency. However, tax expenditures are heterogeneous so changes to the range of tax expenditures should be selective.

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Summary

This paper considers the merits of reducing or eliminating some specific tax expenditures, which, in the process, could help reduce the U.S. federal budget deficit.

The paper begins by pointing out that a strong case can be made on efficiency grounds for financing even a temporary increase in expenditures by tax increases rather than by bond issues. This conclusion is based on the observation that savings decisions in the United States are already influenced by various taxes and other impediments, and that any further borrowing by the Government to finance current expenditures will therefore exacerbate these pre-existing influences, resulting in significant welfare losses.

Following a discussion of recent tax expenditure developments, in which it is noted that the Tax Reform Act of 1986 has reversed the tendency for tax expenditures to grow in importance, and in which a comparison with the practice in other Group of Seven countries is made, the paper evaluates the case for eliminating seven specific tax expenditures that are still in place. Two general conclusions emerge from this evaluation. The first is that tax expenditures are heterogeneous and should therefore be individually evaluated. The second is that it should be possible, by reducing or eliminating individual tax expenditures, to produce further significant reductions in the U.S. federal deficit while at the same time enhancing economic efficiency.

In particular, analysis indicates that the following are examples of the type of tax expenditures that could be either reduced or eliminated: the exclusion of employer contributions to medical insurance and health care; the deduction of mortgage interest on owner-occupied housing; the deductions for both property taxes and state and local income taxes; the carryover basis of capital gains at death; and the current exclusion of some social security benefits. An example of a tax expenditure that, it could be argued, should be retained is the exclusion of employer plan pension contributions and earnings because this exclusion may contribute to an increase in national savings.

I. Introduction

This paper is concerned with measures which could be adopted with a view to reducing the federal budget deficit of the United States. The primary focus will be on analyzing the efficiency implications of whatever measures are discussed. 1/ Given the potentially large (revenue) yield involved, particular attention will be paid to the possibility of limiting or eliminating tax expenditures. However, it will be argued that the type of consideration raised in the course of analyzing tax expenditures can usefully be applied to other expenditure and revenue categories. The main conclusion will be that there is a range of potential measures which could contribute significantly to the reduction of the budget deficit and which, at the same time, could possibly enhance overall economic efficiency. Specifically concerning tax expenditures, it is emphasized that they are heterogeneous and need, therefore, to be individually analyzed.

II. Underlying Economic Framework

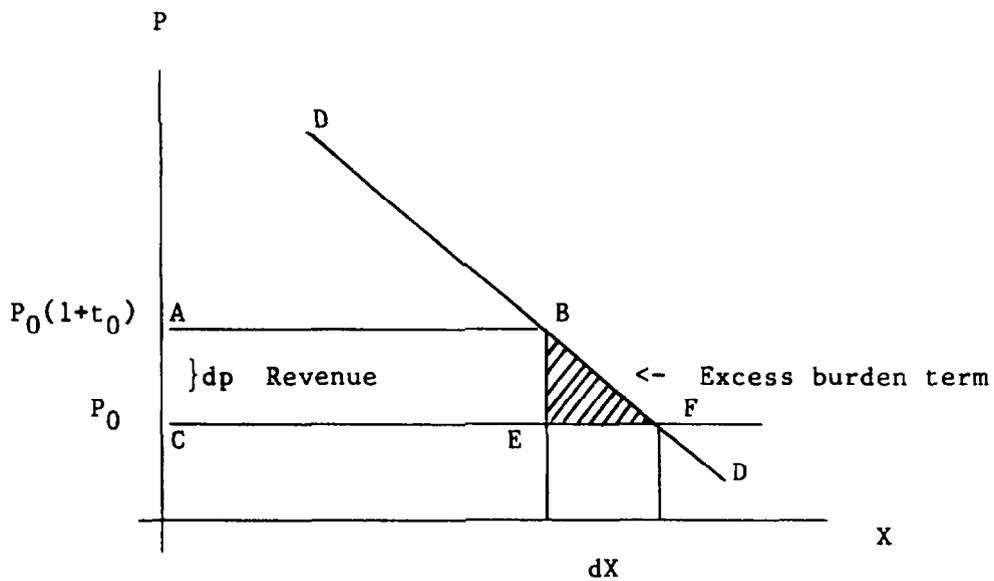
Before considering specific deficit-reduction measures, some background on the underlying economic framework should be provided. The conventional optimal excise tax framework of public finance, though narrowly focused, provides a useful starting point. That problem asks how a given level of government expenditures can be financed in the most efficient manner through excise taxes on a range of commodities. The problem is interesting since the excise taxes used to provide the needed revenues typically distort economic activity--in other words, they create "excess burden" in the sense that the revenue raised by a given tax will in general be less than the welfare loss associated with the use of the tax. 2/ This is represented in partial equilibrium terms in Figure 1 for the case of an excise tax on commodity X. The area ABCF equals the loss in consumer surplus associated with the imposition of the tax--the tax causes the (infinitely elastic) supply curve to shift

1/ Except when otherwise stated, efficiency is used here in the narrow sense of economic efficiency, i.e., minimizing excess burden subject to the constraints faced by the policy maker. Concerning equity considerations, while it is not the intent of this paper to say what an appropriate income distribution would look like, it will be pointed out how certain tax expenditures seem to affect income distribution in an arbitrary fashion. (The sense in which the effects can be viewed as arbitrary is discussed later.) For further elaboration of these concepts see, for example, Musgrave, R.A., and P.B. Musgrave, (1980).

2/ The outcome is therefore inefficient in the sense that a superior allocation of resources could be attained by financing government expenditures with nondistortionary lump-sum taxes. Such taxes are assumed not to exist. See Sandmo (1976).

from P_0 to $P_0(1+t_0)$. ^{1/} Area ABCE represents the amount of revenue raised. Area BEF, the difference between these two areas, therefore, represents the net loss to society, that is, the excess burden associated with the tax.

Figure 1



It can be shown that excess burden increases in the square of the tax rate. To see this, refer to the figure and note that excess burden or loss, L , can be measured as

$$L = -1/2 dP dX = -1/2 t dX = -1/2 t dX/dP \cdot P/X \cdot X/P dP$$

$$= +1/2 t^2 \eta X/P \text{ where } \eta \text{ is the elasticity of demand.}$$

Finally, excess burden estimates will generally be small (technically, second-order) relative to the revenue raised.

The partial equilibrium framework of Figure 1 suggests that the more inelastic the demand for the product, the less will be the excess burden. In a more general equilibrium framework, this result can lead

^{1/} A technical point, the demand curve DD is best viewed as a compensated demand curve.

to the well-known inverse-elasticity rule which states that relative tax rates on different commodities should vary in proportion to the inverse of the elasticities of demand for those commodities. 1/

The optimal excise tax framework can be generalized in a number of ways. First, the level of government expenditures can be made endogenous. Then, conceptually at least, the optimal level of those expenditures and the optimal tax rates can be determined simultaneously. The optimal level of expenditures will in general be influenced by the fact that they are being financed using distortionary taxes. 2/

More generally, when explicit account is taken of the heterogeneous nature of government services, it becomes obvious that some of those expenditures may themselves be the source of distortions. To elaborate, for the purposes of this analysis government expenditures can usefully be classified by whether they are expenditures on goods and services or on transfer payments. The former category of expenditures includes a range which varies from pure public goods to goods that could be provided by the private sector. To the extent that the Government is competing with the private sector, complex issues of the scope and relative efficiency of Government arise. This is an area where definitive qualitative results which could form a basis for guiding policy makers are particularly scarce. The latter group of expenditures, which are especially important since they include many examples of outlays (e.g., unemployment insurance) which tend to distort economic decisions, are more amenable to analysis. Transfer payments can be viewed as "negative" taxes which directly affect private budget constraints. The nature of these payments, therefore, emphasizes the need for the authorities to balance their desire to attain social (i.e. equity) goals against the efficiency cost of so doing.

A second way in which the basic framework can be generalized concerns the range of tax instruments assumed to be available to the authorities. The excise taxes discussed above are distinguished by being restricted to be proportional or linear. In contrast, the income tax, whose marginal rates can be tailored to income levels, is nonlinear

1/ For this rule to hold, cross-price elasticities of demand between taxed commodities must equal zero. In other words levying a tax on commodity X should not affect the demand for commodity Y. The more basic optimal tax rule is the Ramsey Rule which states that tax rates should be set so as to induce a proportional reduction in the demand of all distortable commodities. For further elaboration see Atkinson and Stiglitz (1980).

2/ For some of the implications of this approach when government expenditures take the form of pure public goods see Atkinson and Stern (1974).

and accordingly a more flexible instrument of public policy. 1/ In particular, since the value of an income tax lies in its capacity to vary tax liability with an individual's income, such a tax becomes a particularly important instrument for meeting the authorities' equity objectives.

With this background, the optimal tax problem can be restated in more general terms. The authorities have multiple interdependent objectives. To begin with, the authorities need to provide a range of goods and services where, presumably, these outputs either would not be provided, or, if provided, would not be provided in appropriate amounts by the private sector. 2/ In order to limit the scope of this paper, expenditures on these goods and services will be taken as given.

The remaining objectives of the authorities concern attaining politically determined equity goals while minimizing the excess burden generated in the process of satisfying the authorities' budget constraint. For these latter objectives, the authorities have at their disposal a number of instruments, specifically, taxes and expenditure (transfer) programs. Concerning the equity goal, the point is that these instruments act as screening devices of individual abilities to pay--for example, an income tax uses some measure of income for this purpose; excise taxes can also act as screens since the pattern of commodity consumption typically varies across ability-to-pay levels. A significant problem for policymakers is that these screens are imperfect (e.g., income is not a perfect gauge of underlying utility levels). Furthermore, and this raises the issue of excess burden, these instruments are subject to manipulation (and are therefore the source of distortions).

The analysis presented to this point can be used immediately to evaluate the relative merits of borrowing and taxation to finance government expenditures. Logically, this issue has to be addressed before considering how best to engineer a reduction in the federal fiscal deficit. Begin by distinguishing between temporary and permanent increases in government expenditures. In the case of temporary increases in government spending, it has been argued that such spending should be financed by borrowing with tax increases being set to finance the interest and amortization of principal on the increased

1/ In theory, excise taxes could be made nonlinear. However, the transactions costs of administering (and policing) such taxes would in general be prohibitive. This distinction recasts the long-standing debate on the appropriate mix of direct and indirect taxes into a debate on the appropriate mix of linear and nonlinear taxation. See Atkinson (1977).

2/ The framework being used here implicitly assumes that governmental provision of goods and services is a response to microeconomic market failure. Some would extend that provision to the supply of merit goods.

public debt. ^{1/} Referring back to the earlier discussion on excess burden, the essence of this argument is that, since excess burden depends on the square of the tax rate, it is preferable to have a large number of small tax increases over time, defraying interest payments associated with increased borrowing in the process, than to have a single large tax rate increase to cover the cost of the initial increase in spending at the outset. However, this argument assumes that the size of the capital stock is optimal. If, as may well be the case, the capital stock is less than optimal (e.g., because of taxes on capital income), then further to depress that stock by borrowing to cover current expenditures, entails a separate excess burden term. ^{2/} In essence, a distortion is being added on to a pre-existing distortion.

Further, the additional excess-burden term will now be a first-order term making it an order of magnitude greater than the excess burden terms discussed earlier. This can be seen, again in partial equilibrium terms, in Figure 2. The case being discussed here is equivalent to one where the tax rate on X is increased from an initial pre-existing value (t_0) to a new higher level (t_1). The increment in tax revenue (represented by area ABCE less area EFGH) depends in part on the elasticity of the demand curve DD. The increment in excess burden, represented by area BFGH, is now much larger relative to the change in revenue and is, technically, a first-order term. ^{3/}

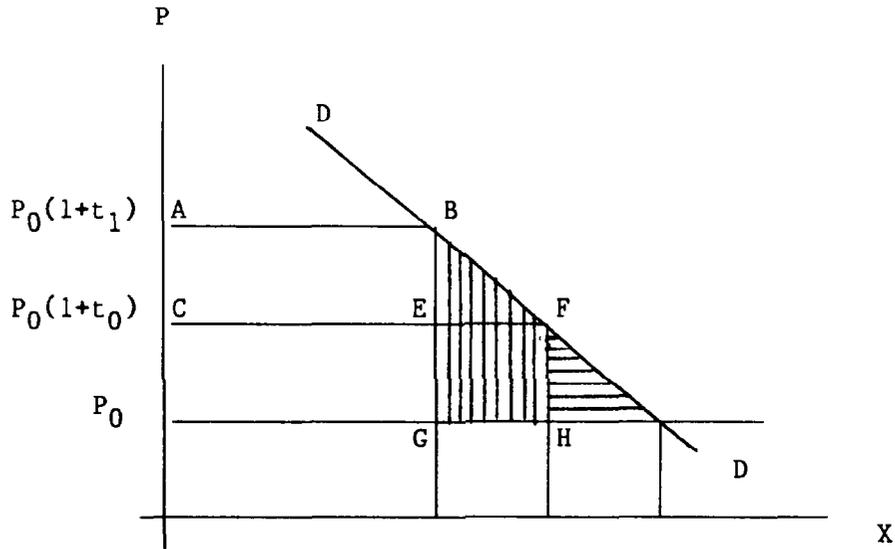
When these effects are incorporated into the analysis, an efficiency case can be made for relying instead on tax finance to pay for temporary increases in government spending. The fact that the taxes raised to finance a marginal increase in expenditure are also likely to generate first-order excess burden effects does not alter the broad thrust of this analysis because the excess burden effects associated with increased taxation will be approximately the same under both tax and bond finance. In the former case, the first-order excess burden effects are experienced at the outset; in the latter, they are postponed, but the revenue raised must cover both the cost of the expenditure plus interest costs. The case that taxes rather than borrowing be used can be made a fortiori for permanent increases in spending.

^{1/} This argument is associated with the work of Barro (see Barro (1979)). The discussion here on this topic draws heavily from Feldstein (1985).

^{2/} Note, it is being implicitly assumed here that Ricardian equivalence does not hold. See Ebrill and Evans (1988) for further discussion on this point. On the important presumption that savings decisions are distorted and that the level of savings are therefore suboptimal, see Bovenberg (1989).

^{3/} For an empirical application highlighting the importance of pre-existing distortions for excess-burden calculations, see Ballard, Shoven, and Whalley (1985).

Figure 2



The analysis underlying these results is linear in the sense that if it is preferable to finance an increment to government expenditures through taxes, then it is preferable to finance all government expenditures in that manner. If the burden of financing a dollar of expenditure varies with the amount of taxation or borrowing, a mixed solution of tax and bond finance becomes possible. More important, however, is to recognize that the pace with which tax finance is substituted for bond finance may need to be influenced by short-run macroeconomic considerations. ^{1/}

The case of the choice between tax or bond finance highlights a feature typical of a policymaker's environment, namely, that tax/expenditure reform must take place in a world with multiple pre-existing distortions. This may be contrasted with the optimal tax literature much of which tends to be concerned with designing tax systems *de novo*. In such a world, as has already been argued in the context of the tax-bond finance choice, increases in taxes are likely to generate first-order excess burden effects. However, the fact that the policy maker operates in a second-best world also offers the possibility that revenue can be raised without markedly increasing, indeed, possibly reducing,

^{1/} If that is done then all three of the functions Musgrave ascribes to government, to wit, allocation, distribution, and stabilization, would have entered the analysis, even if in a modern guise. See Musgrave (1959).

welfare costs. 1/ Further, as has just been pointed out, the immediate welfare costs associated with any measure to reduce the deficit must be seen in light of the gains associated with the fact that future interest payments on debt will be reduced.

A further respect in which a realistic policy environment for deficit reduction will tend to differ, quantitatively if not qualitatively, from the optimal tax framework concerns the equity implications of policy changes. The optimal tax literature typically assumes that individuals vary along only a single dimension such as earnings ability. The reality is more complex with individual circumstances being influenced by health, size of family, etc. Given these multiple dimensions, it becomes correspondingly more difficult to capture the diversity of individual experience by a single measure such as the income tax, however adjusted.

This equity problem is compounded by the fact that the complex ways in which individuals can react in a multidimensional environment to the tax system make the determination of the precise impact of tax changes difficult. In other words, there can be a major difference between the nominal (or legal) incidence of a tax and the effective incidence of that tax after all the general equilibrium effects have been allowed to work through. 2/

These incidence effects bear on what has come to be referred to as the vertical equity of a tax system, that is on the distributional impact of taxes across individual abilities to pay. Given the existence

1/ A recent paper by Hatta illustrates the potential implications of second-best considerations for tax reform. He demonstrates that, for a wide class of situations, moving from an arbitrary tax structure to a uniform tax structure can be welfare enhancing. See Hatta (1986).

2/ As a general rule, the harder it is for someone to substitute other activities for the taxed activity, the greater the proportion of the incidence of the tax he will bear. From an analytical point of view, therefore, how the underlying general-equilibrium framework is modeled is crucial to determining the effective incidence of a tax. For example, the two-sector two-factor Harberger model has become an important tool of incidence analysis. However, while it does allow for sectoral effects and may therefore be particularly well-suited to the analysis of commodity (excise) taxes and partial factor taxes, that model also assumes that aggregate capital and labor are both in fixed supply to the economy. This implies that both factors are treated symmetrically, which rules out incidence effects associated with tax-induced changes in capital accumulation, effects which are presumably important to the complete analysis of general taxes. In contrast, neo-classical growth models provide an alternative longer-term analytical framework which recognizes that labor is the primary factor with capital accumulation being determined by savings decisions. For further elaboration of these issues, see McLure (1975) and Feldstein (1974A, 1974B).

of capital assets, there is also an important channel through which changes in an existing tax system can affect horizontal equity, that is tax changes can affect different individuals at the same initial welfare level in a different manner. 1/ In particular, elements of the existing tax system may be capitalized to some degree in asset values. To see the implications of capitalization for tax policy consider the example of the interest deduction on home mortgages where the value of the deduction may be reflected in housing prices. The value of the deduction was therefore reaped by those owning houses when it was introduced. The deduction's abolition would, then, result in capital losses for current homeowners. Accordingly, to that extent homeownership rather than ability to pay would determine the distributional impact of that tax change, horizontal equity would in some sense be violated. 2/

There are, therefore, a number of features in the policymaker's environment which, even if they do not qualitatively change it, nonetheless considerably complicate the optimal tax framework. The conclusion to this point would appear to be that, while deficit reduction can be argued to be desirable on economic efficiency grounds, the choice of an appropriate route to effect that reduction will be difficult to determine. In the next section, the case for reducing tax expenditures is considered.

III. Tax Expenditures

1. Background

The Congressional Budget Act of 1974 (PL 93-344) requires that a list of tax expenditures, with estimates of their costs, be included in the budget each year. Tax expenditures are defined as revenue losses attributable to provisions which allow exclusions, exemptions, or deductions from gross income or which provide special credits, preferential tax rates, or liability deferrals. In other words, tax expenditure estimates are intended to gauge the degree to which the bases for the personal and corporate tax systems depart from some concept of what those bases would be under an ideal system.

1/ While the concept of horizontal as opposed to vertical equity has broad intuitive appeal, the distinction can be quite controversial in a general equilibrium context. In fact, in addition to whether it can be appropriately defined, there is the issue as to whether horizontal equity is a fundamental principal to be pursued. See Musgrave (1976), Feldstein (1976B), and Stiglitz (1981).

2/ The topic of interest deductibility will be addressed more fully later.

The precise specification of those ideal bases spawned a long debate. ^{1/} The details of this debate are beyond the scope of this paper. It is only necessary to note that it started from the presumption that ideal bases existed where, in the case of the personal income tax, the consensus settled on the Haig-Simons definition of income, that is, on a measure equal to the sum of the increase in economic wealth between two points of time plus consumption during that period. However, the economic analysis of the previous section emphasized that an optimal tax system needs to accommodate excess burden considerations, the heterogeneity of individual circumstances, as well as the other policy objectives of the Government. These multiple needs are unlikely to be particularly well served by anchoring the tax system to a single unidimensional "ideal" base. In particular, since a comprehensive tax based on the Haig-Simons measure of income is not a lump-sum tax, it causes distortions raising efficiency concerns. ^{2/} ^{3/}

An example of how the debate over the definition of the bases for the tax expenditure budget has been to a degree divorced from the findings of the mainstream public finance literature concerns the manner in which it implicitly assumes that income rather than consumption should be the appropriate base for taxation. From the perspective of optimal tax theory this choice is at least an open question.

None of this is to deny that the tax expenditure budget serves a useful purpose--the budget does highlight the fiscal implications of the existing range of deductions, exemptions, and deferrals. However, the semantics of the debate over tax expenditures is such that all tax expenditures tend to be viewed uniformly in pejorative terms--for example, their existence is often referred to as constituting "erosion of the tax base". It would be preferable instead if the revenue losses itemized in the tax expenditure budget are individually evaluated.

^{1/} The reader is referred for example to Surrey, S.S. (1973), Surrey, and McDaniel (1985), Goode (1977), Bittker (1967), Musgrave (1968), and Andrews (1972).

^{2/} Further elaboration on this can be found in Feldstein (1976A). In this connection, it may be worth mentioning Musgrave's defense of a Haig-Simons approach (1968 op. cit.). He argues that, if the alternative is an arbitrary tax system, a likely outcome given positive social choice considerations, then a broad-based comprehensive income tax is likely to be superior on efficiency grounds.

^{3/} In this connection, it is worth noting that since 1982 the Office of Management and Budget (OMB) has been presenting a parallel measure of the tax expenditure budget which focuses on deviations in the tax system that could be compared with the subsidy and transfer programs on the outlay side of the budget. Although Surrey and McDaniel (1985 op. cit. p. 194) take exception to this change, it does have the merit of focusing on potential distortions to economic activity.

It is the purpose of this paper to use the analysis of the previous section individually to evaluate a selection of the items in the tax expenditure budget. The rationale underlying each selected tax expenditure will be discussed--the outcome for aggregate economic efficiency may involve a balancing of the excess-burden effects due to changing the specific tax expenditure and the excess-burden effects associated with reducing the deficit. Finally, where appropriate, the equity implications of eliminating tax expenditures will also be pointed out. The discussion of equity considerations will be quite limited in the sense that the discussion will take it as given that the tax system is based on an ability-to-pay approach and comments will therefore be restricted to indicating how a specific tax expenditure may be capricious in light of that approach.

2. Recent developments

During the decade 1975-85, there was a marked tendency, both absolutely and relative to GNP, for the importance of tax expenditures to grow. 1/ However, the Tax Reform Act of 1986 (TRA) halted, and to an important extent, partially reversed that trend. A number of tax expenditures were either modified or repealed outright. The most important of these legislative changes are presented in Table 1. In addition, the implicit revenue losses associated with the remaining tax expenditures have been reduced as a result of other changes associated with that tax reform--particularly the reductions in tax rates, the increases in standard deductions and personal exemptions for individuals, and the broadening of the minimum tax for both individuals and corporations. 2/

The tabulation below presents an alternative view of the extent to which the tax base was altered by the Tax Reform Act. The proportion of income which must now be reported for tax purposes has increased sharply (from 68 percent to 74 percent). Against this, in large part due to the large increase in personal exemptions, taxable income has declined relative to adjusted gross income. On balance, however, the tax base has increased relative to personal income. In fact, Henderson points out that this increase represents a recovery of half the "erosion" since the late 1960s. 3/

1/ Surrey and McDaniel (1985).

2/ The reader is referred to The Effects of Tax Reform on Tax Expenditures, Congressional Budget Office, March 1988, for a more detailed discussion of the impact of the Tax Reform Act on the tax expenditure budget.

3/ Henderson (1988).

Table 1. Impact of Tax Reform on Projected Revenue Losses From the Largest Tax Expenditures

(In billions of dollars)

Tax Expenditure	Status After TRA	Projected Revenue Losses for Fiscal Year 1991	
		Before TRA	After TRA
Net exclusion from income of pension contributions and earnings	Modified	71.7 <u>1/</u>	53.6 <u>1/</u>
Capital gains deduction	Repealed	56.1	--
Investment tax credit	Repealed	38.6	1.6 <u>2/</u>
Deductibility of mortgage interest on owner-occupied homes	Modified	43.6	35.8 <u>1/</u>
Deductibility of state and local income and sales taxes	Sales tax repealed	36.1	18.4
Accelerated depreciation: equipment	Modified	23.9	16.5
Exemption of income on private purpose tax-exempt bonds	Modified	19.6	10.2
Exclusion of IRA contributions and interest earnings	Modified	19.2	9.0
Accelerated depreciation: nonresidential structures	Modified	12.9	6.9
Nonmortgage consumer interest deductions	Phased out	14.7	0.9 <u>3/</u>
Progressive corporate tax rates	Modified	10.2	5.5
Deduction for two-earner married couples	Repealed	9.4	--

Source: Congressional Budget Office, The Effects of Tax Reform on Tax Expenditures, March 1988.

Notes: TRA = Tax Reform Act of 1986

CBO selected the year 1991 for comparison of projected tax expenditures because virtually all of the provisions of TRA will then be fully in effect.

The estimates under both prior law (before TRA) and current law (after TRA) are based on the same economic assumptions. These are from CBO's January 1988 forecast, which included projected changes in investment activity brought about by TRA.

1/ Estimates take into account the effects of the Omnibus Budget Reconciliation Act of 1987. Relative to TRA, the Reconciliation Act reduced tax expenditures by small amounts.

2/ Revenue losses after TRA result from unused credits carried forward from previous years.

3/ Revenue losses in fiscal year 1991 result from deductions taken during calendar year 1990.

Comparison of the Personal Income Tax Base
Using 1983 Law and 1988 Law, Using 1983 Tax Returns 1/

(Percent)

	<u>1983 Law</u>	<u>1988 Law</u>
Adjusted gross income relative to personal income	68.4	74.4
Taxable income less zero bracket amount relative to adjusted gross income	66.9	64.8
Taxable income less zero bracket amount relative to personal income	45.8	48.2
Tax base relative to personal income	44.2	46.7

Nevertheless, the tax expenditure budget remains large, suggesting that further changes may be desirable with a view to reinforcing efforts to reduce the federal fiscal deficit. The tabulation below presents a number of tax expenditures which might be viewed as potential candidates for reform. The next section analyzes these deductions in turn.

Before proceeding to that section, a few observations on the international practice concerning these types of tax expenditure would appear to be appropriate. Table 2 focuses on the treatment of a range of tax expenditures in the G-7 countries. That table indicates that in many cases the tax treatment is quite uniform. For example, with the exception of France, all of the G-7 countries 2/ offer some tax break to pension contributions. Other similarities include the fact that social security contributions and charitable contributions are generally (though not always) deductible; that local income taxes are generally not deductible, with the United States being a notable exception in this case; and that employer contributions for medical insurance premiums are normally excluded from taxable income.

1/ Source: Henderson (1988), page 36.

2/ Note that the selected items are classified as tax expenditures even though that term may not be in common usage in all countries. Note further that care should be taken in interpreting international comparisons such as those presented in Table 2, given the heterogeneity of national tax systems.

Table 2. International Comparison of Selected Tax Expenditures

	Canada	France	Germany	Italy	Japan	United Kingdom	United States
Pension contributions	Deductible <u>1/</u>	Not deductible <u>2/</u>	Deductible <u>1/</u>	Deductible <u>1/</u>	Deductible <u>1/3/</u>	Deductible <u>1/</u>	Partially Deductible <u>1/</u>
Owner-occupied housing Mortgage interest	Not deductible	Tax credit	Deductible against property income only	Deductible <u>1/</u>	Tax credit	Deductible <u>1/</u>	Deductible <u>1/</u>
Capital gains	Tax exempt	Tax exempt	All long-term capital gains tax exempt <u>4/</u>	Special tax on property appreciation	Subject to tax after statutory deduction	Tax exempt	Roll-over provisions available
Social security contributions	Deductible	Deductible	Deductible <u>1/</u>	Deductible	Deductible	Not deductible	Employer contributions excluded
Local income taxes	Not deductible	Not applicable	Church tax deductible	Not deductible	Not deductible	Not applicable <u>5/</u>	Deductible
Charitable contributions	Deductible <u>1/</u>	Deductible <u>1/</u>	Deductible <u>1/</u>	Not deductible	Designated contributions deductible	Deductible <u>6/</u>	Deductible <u>1/</u>
Employer contributions for medical insurance premiums	Excluded from taxable income	Excluded from taxable income	Excluded from taxable income	Excluded from taxable income	Excluded from taxable income	Excluded from taxable income	Excluded from taxable income

Sources: OECD, 1978, Personal Income Tax Systems Under Changing Economic Conditions, Paris; Henderson, *op. cit.*

1/ Subject to ceiling.

2/ Except in limited circumstances.

3/ If savings are held in National Savings Plan; otherwise limited.

4/ In case of buildings, holding period is two years.

5/ Rates (real estate taxes) are not deductible.

6/ Only if paid under a building covenant or employee contribution plan.

Revenue Losses From Selected Tax Expenditures, FY 1990 1/

(Billions of dollars)

Exclusion of employer contributions for medical insurance premiums and health care	29.6
Net exclusion of employer plan pension contributions and earnings	49.3
Deductibility of mortgage interest on owner-occupied housing	35.1
Deductibility of property tax on owner-occupied housing	11.8
Deductibility of nonbusiness state and local taxes other than on owner-occupied housing	18.7
Carryover basis of capital gains at death	13.5
Exclusion of social security benefits	18.2

In contrast, the tax treatment of owner-occupied housing is quite varied across the G-7 countries. Canada and effectively Germany prohibit the deductibility of mortgage interest; France and Japan permit a tax credit; the remaining G-7 countries place a ceiling on the amount of mortgage interest that can be deducted. 2/ In the case of capital gains on owner-occupied housing, the treatment ranges from those gains being totally tax exempt to their being subject to a special tax.

3. Further areas for reform

- a. Exclusion of employer contributions to medical insurance and health care

The current practice in the United States is that an employer's contributions to an employee's health care costs are excluded from individual taxable income, although the contributions are a deductible expense for the employer. The case for modifying or limiting this deduction can be made primarily on efficiency grounds. 3/

1/ Source: Office of Management and Budget (1989).

2/ In the case of the United States, the ceiling is effectively the interest on a loan of \$1 million; in the United Kingdom it is interest payments up to £30,000.

3/ A comprehensive survey of the issues involved in this area can be found in Pauly (1986).

To elaborate, a risk-averse individual facing the possibility of an exogenously given random loss would choose to be fully insured if actuarially fair insurance were available. However, when, as is the case with medical insurance, the extent of insurance coverage affects the magnitude of the loss, the problem is more complex. Specifically, there is a moral hazard problem--while the nature of the illness is exogenous, the quality and the quantity of the medical care an individual purchases is not.

As a result, even before the introduction of a tax subsidy, there is a distortion. The special tax treatment of health insurance is in effect, therefore, a subsidy of a subsidy. In the language of the first section there is a first-order excess burden effect which may well be large relative to the tax subsidy itself. 1/ The precise magnitude of the distortion is subject to debate. In this connection, the fact that the medical market is noncompetitive complicates matters. 2/ Related to this is the possibility of an offsetting distortion associated in the public goods nature of biomedical research. 3/ However, Pauly's conclusion, that the decrease in insurance coverage caused by a lower tax subsidy would likely be desirable, appears to reflect the academic consensus. 4/

Since it is in the form of a deduction rather than a credit, everything else being equal this tax expenditure will be more valuable to higher income workers. This suggests that if there is an equity basis for the favorable tax treatment of these expenditures it should take the form of a tax credit rather than a tax deduction. More generally it suggests that the current tax break cannot easily be justified on the grounds that there are externalities associated with improved health coverage--the better-off groups in society tend already to be larger consumers of health services.

On balance, therefore, in light of the need to reduce the federal deficit, there are grounds for limiting or eliminating the exclusion of employer contributions to medical insurance and health care. It may be worth noting in this connection that this was also the conclusion of the 1977 Treasury "Blueprints" Tax Reform document. Further, the Treasury tax reform plan of 1984 (Treasury 1) recommended limits on the exclusion. A final point: while international experience (Table 2) would suggest that this deduction is a popular one, it must be remembered that

1/ Feldstein (1973) and Friedman (1977).

2/ Noncompetitive features include, for example, restrictions on the supply of doctors.

3/ Harris (1979). Note that to the extent that there is a distortion associated with the public goods nature of biomedical research, a superior policy exists which would involve intervening directly to remove that distortion.

4/ This conclusion is independent of the implications of such a change for the federal deficit.

the other G-7 countries typically exert greater control over the supply of health services than does the United States. In principal, this greater control could circumvent some of the inefficiencies cited earlier and could, in particular, reduce the incentive to acquire private health insurance.

b. Exclusion of employer plan pension contributions and earnings

This tax expenditure raises the more general question of how pension contributions in general are treated for tax purposes. Under current practice, certain employer contributions to pension plans, as well as amounts set aside by the self-employed and individual contributions to individual retirement accounts (IRAs) are excluded for tax purposes in the year of contribution. The most significant recent change concerns the treatment of IRAs. Following the Tax Reform Act of 1986, the full deduction for IRAs is available only for those whose joint return adjusted gross income falls below \$40,000 (\$25,000 for a single taxpayer). For incomes between \$40,000 and \$50,000 for a joint return (\$25,000 and \$35,000 for a single return) the allowable IRA deduction is phased out. Investment income earned by pension funds and other qualifying retirement plans is not taxable.

The principal economic issue underlying the appropriate tax treatment of pensions concerns whether consumption or income should be the base for taxation. The idea of taxing consumption rather than income has a long history, in that it can be traced back to J.S. Mill. Its more recent proponents include Feldstein and Bradford.^{1/} The efficiency argument supporting this view is that it would remove intertemporal distortions associated with the income tax. While this argument is clear in a world where a tax system is being designed *de novo*, the matter becomes more complex when it is recognized that a form of income taxation is already in place. This is an example of the practical difficulties that can arise when tax reform rather than tax design is at issue.

Even in these circumstances, however, an argument can be made in favor of a shift to consumption taxation. In a recent paper, Fullerton, Shoven, and Whalley consider the welfare consequences of changing the current U.S. income tax system to a progressive consumption tax.^{2/} They use a general-equilibrium model which incorporates other tax distortions and which allows for a labor-leisure choice, thereby making both income and consumption taxes distortionary. Computing a sequence of single-period equilibria, they find, for a given revenue path, that the discounted present value of the stream of net gains associated with the tax shift amounts to approximately \$650 billion in 1973 dollars, a significant saving.

^{1/} See Feldstein (1984) and Bradford (1980).

^{2/} Fullerton, Shoven, and Whalley (1983).

With this background, consider the merits of removing the tax expenditure associated with the exclusion of employer plan pension contributions and earnings. In the years leading up to the Tax Reform Act of 1986, the trend had been toward exempting an increasing proportion of saving from the personal income tax. An example of this was the introduction of the favorable tax treatment accorded IRAs. In effect, the tax system was tending toward a consumption-based tax regime. As the results just reported indicate, this trend would appear to have been appropriate. As already mentioned, however, the Tax Reform Act of 1986 reversed this trend. It would appear that to compound this reversal by eliminating the employer pension contribution tax expenditure would be an inadvisable step. While it is true that the elimination would raise revenue, thereby reducing both the required level of bond finance and the associated distortion to capital accumulation, it would do so in a manner which itself increases the effective tax rate on savings.

c. Deduction of mortgage interest on owner-occupied housing

Following implementation of the tax reform act, interest on debt secured by a principal or second residence was deductible to the extent the debt did not exceed the purchase price of the property and improvements, plus debt for medical and educational expenses. The Omnibus Budget Reconciliation Act of 1987 subsequently limited the deduction of interest on debt to acquire or improve a principal or second residence, or both, to interest on a loan of \$1 million: the deduction of interest on other debt secured by a principal or second residence is limited to interest on a loan of \$100,000.

It has been suggested that this tax break can be justified on the grounds that higher rates of owner occupation generate positive externalities to society. However, this rationale has not figured prominently in the economics literature on the topic. Instead, focusing on its distortionary implications, the consensus seems rather to have been that this is a deduction which should never have been introduced in the first place. There have been many recommendations to limit this deduction. ^{1/} The recommendations have been based primarily on efficiency considerations, with concern over the equity effects (and political realities) restraining the comprehensiveness of the recommendations.

In evaluating the nature of the distortion, the starting point is to recognize that it is not so much the deductibility of interest that causes the distortion as the fact that the imputed rent on owner-occupied housing is not taxed--that is, a deduction is being allowed for an expense where the return to the associated investment is tax free. What should be the optimal rate of tax on imputed rent? In a recent paper, Pines, Sadka, and Sheshinski develop an optimal tax framework in which the crucial allocation decision is between residential

^{1/} For example, Treasury 1 suggested restricting the deduction on nonprimary residences.

and productive capital. 1/ While the precise outcome depends on the specification of the Social Welfare Function, for the cases they consider the imputed rent should be taxed though not necessarily as heavily as interest income. Note that this outcome holds in a revenue-neutral environment. Presumably, there would be additional welfare gains if the revenue raised by taxing imputed rent were assigned to reducing the deficit.

Other papers emphasize different aspects associated with the housing distortion. For example, White and White argue that there is a serious problem associated with the transfer of resources to subsidized owner-occupiers from unsubsidized renters. 2/ However, irrespective of the framework employed, the consensus is that current tax treatment constitutes a serious distortion. 3/ In addition, the revenue loss implied by the distortion exacerbates the deficit.

Taxing imputed rent might appear to be politically infeasible. 4/ The alternative would appear to be to eliminate the interest deduction on mortgages. Concern is often expressed that this would be inequitable to the degree that the value of the deduction is capitalized in house prices--existing owners would then experience capital losses. However, to the extent that the elasticities of supply of housing are positive, capitalization will be less than complete. Further, the capitalization effects can be mitigated by announcing a phased elimination of the credit. There are also intermediate steps. The deduction for second houses could be eliminated; the size of the deduction could be capped; home equity loans could be abolished. 5/

A final comment on this section: underlying this specific problem of the treatment of mortgages is a more general problem arising from the fact that the United States can be included among those countries in which borrowing has been substantially subsidized by the tax system.

1/ Pines, Sadka, and Sheshinski (1985).

2/ White and White (1977), also Aaron (1970).

3/ The impact of the distortion is compounded by the effects of inflation--increases in inflation disproportionately increase the value of the interest deduction as nominal interest rates increase. It is further exacerbated by the effective absence of capital gains taxation on sales of owner-occupied housing. In addition, the Tax Reform Act, by eliminating many special preferences on other forms of investment, may have increased the relative importance of the distortion on owner-occupied housing.

4/ It is not, however, impracticable. In a survey of 22 OECD countries other than the United States, 8 countries tax the imputed rent from owner-occupied housing. See Henderson (1988).

5/ A CBO report (entitled Reducing the Deficit: Spending and Revenue Options, March 1988) estimates that a cap at \$12,000 per return (single) would yield \$10 billion over the five years to 1993; limiting the value of deductions to 15 percent would yield a corresponding \$56 billion; phasing out deductions for second homes would only yield \$2.3 billion.

This tax treatment may stimulate consumption in general. Further, given the differential tax treatment of interest income and interest deductibility across countries, there is the potential for a serious misallocation of saving in a world with high capital mobility. 1/

d. Deduction of property tax on owner-occupied housing

Current practice permits the deduction of property taxes against income tax liabilities. It is difficult to rationalize this deduction in terms of providing a social good. Therefore, the question becomes whether there are any efficiency or equity considerations to justify this feature of the tax code.

The incidence effects of the property tax have been the subject of controversy. The "old view" held that the tax was by and large regressive. That component of the tax levied on land was felt to be borne by landowners given the presumed inelasticity of land supply. That component of the tax levied on structures, because those structures are renewed periodically and therefore the tax would not be capitalized in their prices, was argued to be borne by families in proportion to their purchases of goods and services produced by the taxed structures. This latter component was the presumed source of regressivity.

The "new view" adopted a more general equilibrium approach. 2/ Incidence of the tax on land was still viewed as being borne by landowners subject to the caveat that in economic terms its supply is not completely inelastic--for example, consider the impact of zoning changes. The view of the incidence of the tax on structures or improvements was however dramatically altered. Conceptually, this component was decomposed into three parts. First, consider the property tax as if it were levied uniformly on all capital goods. Then, for fixed capital supply in the aggregate, the tax would be borne by owners of capitals, and would be progressive. Second, recognize the inter- and intrajurisdictional variations in the property tax rates. With capital and labor mobile between communities, the deviations of tax rates about the average would tend to be reflected in excise effects (i.e., price changes) in the prices of factors and goods specific to the community. For example, land rents and/or the prices of nontraded goods would be altered to absorb the deviations. Third, to the extent that it is a tax on capital as a whole, capital accumulation could be affected and some of the burden would be passed on to other factors, such as labor. 3/

1/ See Tanzi (1988).

2/ See Mieszkowski (1972), Aaron (1974), and Aaron (1975).

3/ An alternative general equilibrium approach would model the property tax as a tax on some portions of capital rather than as a general tax with effective rates varying around a national mean. Given plausible assumptions about elasticities of substitutions, this Harberger-type alternative would yield essentially the same result that the tax is on average borne by capital.

Empirical work has tended not to validate the existence of excise effects. 1/ However, the Mieszkowski framework can be altered to accommodate the fact that in the case of property taxation consumers may recognize the links between their tax payments and goods received. In particular, property tax revenue provides local public goods, notably, education. This extension brings the theory of local public goods provision into the analysis. 2/ While the outcome will depend on the complex interaction of numerous factors, a frequently expressed view is that consumers will move to high-taxed districts if they value the commensurately higher level of local public goods provided. The result remains that the property tax is largely a tax on capital.

To the extent that these locational effects are important, and that therefore the property tax does not greatly alter individual behavior, the excess burden losses may not be very large. It could be argued, therefore, that the property tax deduction leads to a net increase in excess burden--the excess burden increase associated with the implied increase in debt finance could be argued to exceed the reduction in excess burden associated with the implied reduction in effective property tax rates. (This ignores other distortions such as that the tax expenditure might encourage excessive provision of local public goods.) When this result is combined with the presumed progressivity of the property tax (and, therefore, progressivity of the deduction), it would appear that a strong case could be made for abolishing this deduction. This was also the position of Treasury "Blueprints" and Treasury 1.

e. Deduction for state and local income taxes

Current practice permits the deduction of all state and local income taxes against federal income tax liabilities. In this case, the efficiency argument in favor of removing this tax expenditure seems clear. Abstract initially from the possibility that state and local authorities may increase their expenditures and revenues because of the existence of the tax deduction. The deduction, then, in effect represents a reduction in the level of an aggregate income tax defined to be equal to the sum of the federal, state, and local income taxes. 3/ This implies a reduction in excess burden. However, given the alternative of reducing the federal fiscal deficit, and applying Feldstein's earlier argument on bond versus tax finance, it would in general be more efficient not to have the deduction with the fiscal deficit being correspondingly lower. The force of this argument may be reinforced by the fact that, when the reaction function of state and local governments is

1/ See, for example, Wheaton (1984).

2/ For example, Tiebout (1956) and Oates (1972). A paper which approaches the incidence of the property tax along these lines is Wilson (1984).

3/ In actuality, many state income taxes "piggy-back" onto the federal income tax in that they use the same broad range of deductions (excluding, of course, the state/local income tax deduction).

taken into account, there could be an additional distortion associated with the tax deduction subsidizing their expenditures. 1/ It may be worth noting in this connection that Treasury 1 recommended the abolition of this deduction.

If there is a concern about removing this distortion, it may center on the interjurisdictional implications of such a move. The consensus in the literature is that the price elasticity of demand for state and local spending lies between -0.50 and -0.25. 2/ This is a potentially significant effect which will be more important in states and localities with large government sectors. However, in the absence of interjurisdictional spillovers, it may well be desirable that the cost of providing state and local services be borne by the residents and businesses operating within those jurisdictions--the current deduction involves a transfer of resources to jurisdictions with relatively large government sectors and/or high income individuals (with high marginal tax rates). Finally, as already noted above, the United States is unusual in allowing the state and local income tax deductions.

f. Carryover basis of capital gains at death

The specific feature of the tax code that is of interest here concerns the treatment of capital gains at death. Current practice is that when an individual, who has inherited shares, subsequently sells those shares, that individual pays capital gains tax on any gains which have occurred since the date of inheritance rather than since the date of original purchase. As a result, by dying, it is possible for an individual permanently to avoid some portion of capital gains taxation.

The appropriate tax treatment of this matter depends on the resolution of a couple of separate issues. The first of these concerns the tax treatment of capital gains, a controversial area of tax policy. Much of the academic debate has focused on the fact that capital gains taxation has historically been levied on nominal rather than real, and on realized rather than accrued, capital gains. The Tax Reform Act maintained this practice by agreeing to tax capital gains at an effective maximum nominal rate of 33 percent without inflation indexation. The absence of inflation indexation is hard to justify other than as an

1/ An important qualification to this argument arises from the fact that, given the exigencies of political decision-making processes, there is no guarantee that the level of state and local expenditures would be optimal in the absence of the tax deduction. Specifically, to the extent that one can "explain" state and local behavior by means of decisive-voter models such as the median voter model, it becomes difficult to make statements about aggregate welfare. For a review of the median voter model, see Inman (1987).

2/ Courant and Rubinfeld (1987); Bergstrom, Rubinfeld, and Shapiro (1982).

ad hoc method of offsetting the advantage of deferral of tax payments until a capital gain is realized.

The carryover basis of capital gains at death would appear to compound the arbitrary treatment of nominal capital gains. Further, since all assets are not treated in the same way, excess burden effects are likely. In particular, as individuals age there is an incentive to hold on to shares by first running down bond holdings to finance retirement consumption. ^{1/} Efficiency considerations would therefore appear to support the elimination of this tax expenditure.

This conclusion is reinforced by a consideration of the second issue, namely, how should interpersonal transfers be treated? For example, what should be the relative weights attached to estate taxation and inheritance taxation? While a detailed consideration of these issues would be beyond the scope of this paper, it is worth noting that exclusive reliance on the estate tax approach would appear to be undesirable since that would not take into account the family relationship between testator and heirs.

Moreover, and more relevant from the perspective of the issue at hand, estate taxation does not take into account the wealth of the recipient. Returning to the discussion of the first section, if taxes are levied with a taxpayer's underlying ability to pay in mind, then a case can be made for integrating inheritance (and other transfer) taxes into the income tax structure. In that connection, in the absence of such a comprehensive approach, an argument can be made for eliminating the current carryover basis of capital gains at death. ^{2/}

In conclusion, there appears to be a strong case for eliminating the tax expenditure associated with the carryover basis of capital gains at death. This case is strengthened when it is again recognized that the additional revenues can be applied to deficit reduction so that any tendency the increased taxation of capital income might have to reduce aggregate private savings would be more than balanced by the direct revenue impact on reduced government borrowing.

g. Exclusion of social security benefits

Under current law, adjusted gross income (the base for income taxation) includes the lesser of one half of Social Security and Tier 1 (Railroad Retirement) benefits, or one half the excess of the taxpayer's combined income (adjusted gross income plus nontaxable interest income plus one half of Social Security and Tier 1 benefits) over a threshold

^{1/} For further discussion of some of the effects associated with the tax treatment of capital gains see Feldstein and Yitzhaki (1978).

^{2/} This discussion takes place against what is generally viewed as a lenient tax treatment of interpersonal transfers. See, for example, McLure and Zodrow (1987), and Cooper (1979).

amount. The threshold amount is \$25,000 for single returns and \$32,000 for joint returns. These thresholds are not indexed for inflation.

Again, it appears that a reasonable case can be made for at least modifying this tax expenditure. As has been pointed out elsewhere, savings decisions in the United States are distorted, implying that national savings are at a suboptimal level. 1/ Since the social security system operates from a long-run steady-state perspective more on a pay-as-you-go than on a funded basis, 2/ there will be a tendency for the system to contribute toward the reduction of national saving. The tax break compounds this effect in that, by increasing the value of social security annuity income, it reduces the incentive for other forms of saving.

This reasoning views the tax treatment of social security income in isolation from the tax treatment of other forms of saving. Extending the analysis in that direction does cloud the issue. For example, full taxation of social security income is not equivalent to the full taxation of private pension annuity income since, in the case of the former, one half of the contributions (the employee's contributions) are not tax exempt whereas in the case of the latter all of the contributions may be deductible. Therefore, full taxation of social security income might be viewed as taxing that form of saving relatively heavily. However, this concern is mitigated by the fact that the social security system is not a pure pension system. In particular, it is still the case, even if to a decreasing extent, that the current generation of social security recipients stand to receive a very generous "return" on the taxes they paid. This outcome is due to the transitional path associated with the institution of the system. 3/

In light of all these considerations, this tax expenditure remains on balance a good candidate for modification.

IV. Conclusion

The focus of this paper is to suggest ways for reducing the federal fiscal deficit in the United States. Particular attention has been paid to analyzing the potential contribution of tax expenditures. At this stage, a few general observations should be made.

1/ See both Appendices VII and IX in SM/88/162, Supplements 1 and 2, respectively.

2/ The 1988 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance (OASDI) Trust Funds has concluded that OASDI is in close actuarial balance over the next 75 years.

3/ Boskin, Kotlikoff, Puffert, and Shoven (1981).

First, it should be clear that tax expenditures are heterogeneous. They differ from each other both in terms of the goals they are intended to encourage and in terms of their equity and efficiency implications.

Second, the principles that were applied to analyze tax expenditures can be applied more generally. In particular, the tax expenditure approach above implicitly takes the salient features of the tax system as given and, working within that framework, considers whether applying the revenue gained by eliminating a given tax expenditure toward deficit reduction is desirable.

Third, the study does not represent an analysis of all tax expenditures. For example, there are various tax expenditures affecting corporate tax revenues. Further, there is a multitude of minor tax expenditures.

Fourth, the analysis has discussed tax expenditures in isolation. There could be some additional impact if they were to be implemented jointly. The net effect of this is hard to analyze. However, it may be worth noting that as the deductions are eliminated, an increasing number of individual income tax payers will elect to take the standard deduction, limiting the potential revenue effects of further tax expenditure changes.

Fifth, returning to the main theme, the paper does demonstrate that it is possible to raise significant amounts of revenue while adhering to underlying principles concerning the objectives of government expenditure policy and concerning the equity and efficiency of the tax system. Specifically, if all the tax expenditures discussed above, other than that for employer plan pension contributions and earnings, are eliminated, as indicated in the earlier tabulation, the revenue yield in FY 1990 would be significant.

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