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INCOME VERSUS CONSUMPTION TAX BASELINES FOR TAX EXPENDITURES

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This paper explores the implications of evaluating income tax preferences, or tax expenditures, under a consumption tax baseline. More specifically, it examines the conceptual differences between income and consumption tax baselines, and employs an X-tax prototype of a consumption tax to gauge the sensitivity of estimates to the two baselines. The tax expenditure estimates for capital income preferences are vastly different under the two regimes.

Keywords: tax expenditures, income tax, consumption tax

JEL Codes: H24, H25, H61

I. INTRODUCTION

Taxes are enacted in part to fund government programs. But at times, the tax system is used to encourage certain economic activities or convey benefits to certain groups of taxpayers. The features of the tax system that are intended to encourage certain activities or benefit select groups are often called tax preferences because they offer special, beneficial treatment to an activity or group. These preferences are frequently dubbed "tax expenditures," reflecting Stanley Surrey's idea that many tax preferences are similar to government spending programs cleared though the tax system (Surrey, 1970; Surrey and McDaniel, 1985).

The process of identifying tax expenditures and quantifying their magnitude became formalized in 1974 when Congress enacted the Congressional Budget and Impoundment Control Act of 1974, which mandated the annual publication of tax expenditure estimates for all taxes in the Budget of the United States Government, hereafter, U.S. Budget (U.S. Office of Management and Budget, various years). The Act defined tax expenditures as "revenue losses attributable to provisions of the Federal tax laws which

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allow a special exclusion, exemption, or deduction from gross income or which provide a special credit, a preferential rate of tax, or a deferral of tax liability."[1]

Despite Congressional action requiring an accounting of tax expenditures in the Budget, the tax expenditure concept remains murky. Most fundamentally, identifying special tax provisions that offer benefits to particular activities or groups requires an identification of the features of the baseline tax system. That is, a tax preference is a relative concept reflecting a lighter tax burden than would be obtained under some other set of tax rules. The identification and measurement of a tax expenditure is crucially dependent on how this set of tax rules is defined.

Indeed, the notion of a baseline tax system is absolutely critical to understanding what tax expenditures are and why they are controversial. Tax expenditures can only be understood as deviations from a hypothetical baseline tax system that serves as a point of comparison (Bradford, 1986). This is because tax expenditures are a *negative* concept defined by reference to what is *not* done, i.e., taxes that are not collected.[2] This negative, hypothetical aspect is the ultimate source of most of the controversy regarding tax expenditures. It requires specification of an appropriate baseline tax system, and there is widespread disagreement over which baseline tax system to use and how to measure it.

The importance of the chosen baseline and the controversy created by lack of agreement have been widely recognized since Surrey first began promoting the tax expenditure concept. In an article critical of the tax expenditure concept, Boris Bittker (1969, p. 247) writes,

> … a systematic compilation of revenue losses requires an agreed starting point, departures from which can be identified. What is needed is not an ad hoc list of tax provisions, but a generally acceptable model, or set of principles, enabling us to decide with reasonable assurance which income tax provisions are departures from the model, whose costs are to be reportable as "tax expenditures"…

Similar quotes can be found through the years in many articles written about tax expenditures (Goode, 1977; Bradford, 1986; Bradford, 1989; Bartlett, 2001), and the same point has consistently been made in the discussion of tax expenditures in the annual chapter on tax expenditures in the U.S. Budget.

Arguments about the proper tax baseline commonly concern either: (1) the most appropriate concept of net income, or, more recently, (2) the choice between an income tax or consumption tax baseline. The focus on net income often involves defining comprehensive income and what deviations from this ideal are unavoidable for some practical or political reason. The focus on income versus consumption taxation is fundamentally about whether provisions that reduce tax liability on capital income are viewed as tax

[1] Congressional Budget and Impoundment Control Act of 1974 (PL 93-344), sec. 3(3).

[2] Both Ladd (1995) and Aaron (1977) emphasize this characteristic of tax expenditures. Bradford (1986) makes essentially the same point when he states that tax expenditures can only be understood in light of the basic structure of taxation, to which they represent exceptions.

preferences or as part of the baseline tax system.[3] It should be noted that the current income tax is a hybrid tax that combines features of a proper income tax with those of a proper consumption tax, as well as with provisions that would be found in neither tax.

Ultimately, of course, whether a policy deviates from accepted income or consumption tax norms is not the crucial question. Rather, the issue is whether particular tax rules act to maximize economic welfare. A provision labeled as a tax expenditure nonetheless may represent sound economic policy (Bradford, 1986, 1989; Bartlett, 2001), and this can be true whether the baseline tax system is income or consumption. Nonetheless, we do not attempt to define the optimal tax system. Instead, we stay within the traditional parameters of the debate and proceed by viewing tax expenditures from two different perspectives: an income tax baseline and a consumption tax baseline. We also focus on the importance of how broad or narrow the tax base is to measuring tax expenditures under an income and consumption tax baseline. We note, however, that the difference between income and consumption taxes — the tax burden on capital income — is at the root of many of the observations on the inefficiency of an income tax.

The remainder of the paper is organized as follows. Section II explores the implications of identifying tax expenditures using a consumption tax as a baseline, with particular attention paid to the plan developed by Bradford (1986) and known as the X-tax which corresponds to a bifurcated value-added tax (VAT) with a deduction for wages that are taxed at the individual level . We next provide in Section III estimates of the size of selected tax expenditures measured against an X-tax baseline, which also highlights the sensitivity of estimates of tax expenditures to the assumed baseline. We conclude in Section IV.

II. TAX EXPENDITURES UNDER A CONSUMPTION TAX BASELINE

A broad-based consumption tax can be viewed as an income tax plus a deduction for net saving. This follows from the definition of comprehensive income as consumption plus the change in net worth.[4] Thus, it seems straightforward to conclude that current law's deviations from a consumption base include: (1) tax expenditures under a comprehensive income tax base associated with exemptions and deductions for certain types of income, plus (2) overpayments of tax, or negative tax expenditures, to the extent net saving is not deductible from the tax base.

In reality, however, the situation is a bit more complicated as a specific form of consumption tax needs to be chosen as a baseline tax system. Below we describe the general issues related to a consumption tax baseline, as well as our choice of an X-tax regime for a baseline, and various measurement issues relate to this regime. There are other consumption taxes that could have been selected such as a cash flow tax. But regardless, the common question in all forms of consumption taxation is what happens

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[3] Fiekowsky (1988) develops a framework for evaluating excise, employment, estate, and gift tax expenditures. Davie (1994) evaluates excise taxes.

[4] This also is referred to as Haig-Simons income or economic income (Goode, 1977; Bradford, 1986).

when the current income tax reference law is modified by removing normal returns to capital from the tax base.

A. Deviations from Comprehensive Income Tax

Before identifying and measuring tax expenditures relative to a consumption tax base, it is useful to provide context and insights by first discussing the issues that arise under a comprehensive income tax base when compared to the income concept currently employed in identifying tax expenditures (commonly referred to as the normal tax or reference rule). As emphasized earlier, classifying individual tax provisions relative to any baseline, such as an income tax or consumption tax baseline, is difficult because of the ambiguities involved in defining any baseline. It can also be difficult because of the interactions between tax provisions (or their absence), which, in some cases, can have a dramatic effect on their measurement. Indeed, and as illustrated in the examples below, there is uncertainty in the treatment of some provisions as tax expenditures under a comprehensive income tax and this will carry over to the consumption tax.

1. Housing Related Provisions

Consider the deductions for home mortgage interest and for property taxes on owner-occupied housing under current law. The presentation of tax expenditures in the U.S. Budget includes both of these provisions. A comprehensive income tax base would allow both deductions (essentially as business expenses, at least if, as discussed below, the property tax is not viewed as a benefit tax for local public services), but it would also include in the tax base imputed gross rental income. Current law does not include gross rental income, however, and on this basis the deductions for home mortgage interest and for property taxes on owner-occupied housing are properly tax expenditures under a comprehensive income tax base.[5] Indeed, the sum of the tax expenditure for these two deductions, plus the tax expenditure for the failure to include net rental income, sums to the total tax expenditure for the failure to tax implicit rent from owner-occupied housing relative to a comprehensive income tax base.[6]

Considered in isolation, the deduction for State and local (income and property) taxes other than on owner-occupied housing would not be a tax expenditure under a comprehensive income baseline. Such taxes represent a reduction in net worth. However, when considering property taxes on such durables as automobiles, it must be remembered

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[5] If there were no deductions for interest and property taxes, the tax expenditure base (i.e., the proper tax base minus the actual tax base) for owner-occupied housing would equal the homeowner's net rental income: gross rents minus costs, including depreciation, interest, property taxes, and other expenses. With the deduction for interest and property taxes, the tax expenditure base rises to gross rents minus depreciation and other expenses.

[6] The exemption of tax on a large share of capital gains earned on owner-occupied housing also represents a tax expenditure that benefits homeowners.

that current federal tax law fails to impute to income the services from these assets, making the deduction for property taxes inappropriate, as discussed above for housing.

It is also important to remember that an idealized comprehensive income tax would include in income the value of (many) services received from State and local governments. Without such an imputation, one could argue that State and local taxes should not be deductible because they represent a proxy for the value of the services received; in essence, they represent spending on consumption. The existing U.S. tax system does not impute to income the value of these services. On this basis, there is a fairly strong argument to be made that the deduction of these taxes does represent a tax expenditure relative to a comprehensive income baseline. A similar point could be made about the property tax paid on owner-occupied housing, and the argument in support of its deductibility under a comprehensive income baseline assumes that any associated services are included in the tax base. A difficulty with the view that State and local taxes represent user fees for consumption services is that, even if correct in aggregate, it may well be incorrect for each individual homeowner. It presumes that each taxpayer's consumption of State and local services relates directly to the amount of State and local taxes paid, a presumption difficult to sustain when taxes are levied across taxpayers on a basis other than benefits received.

2. *Social Security*

To the extent that Social Security is viewed as a pension, comprehensive income would include all contributions to Social Security retirement funds (payroll taxes) and tax accretions to value as they arise;[7] benefits would not be included. Alternatively, to the extent that Social Security is viewed as a transfer program, all contributions should be deductible from income and all benefits received should be included. In contrast to either of these treatments, current law excludes one-half of Social Security contributions (employer-paid payroll taxes) from the base of the income tax, makes no attempt to tax accretions, and subjects some of the benefits to taxation. The difference between current law's treatment of Social Security benefits and their treatment under a comprehensive income tax would qualify as a tax expenditure, but such a tax expenditure differs in concept from that included in the U.S. Budget.

The tax expenditures in the U.S. Budget reflect exemptions for lower-income beneficiaries from the tax on 85 percent of Social Security benefits.[8] Historically, payroll taxes paid by the employee represented no more than 15 percent of the expected value of the retirement benefits received by a lower-earning Social Security beneficiary. The 85 percent inclusion rate is intended to tax upon distribution the portion of retirement benefits arising from the payroll tax contributions made by employers and the implicit

[7] As a practical matter, this may be impossible to do. Valuing claims subject to future contingencies is very difficult, as discussed in Bradford (1986).

[8] These include the tax expenditures for benefits paid to workers, for benefits paid to survivors and dependents, and for benefits paid to dependents.

return (i.e., inside build-up) on the employee and employer contributions. Thus, the tax expenditure conceived and measured in the current budget is not intended to capture the deviation from a comprehensive income baseline, which would additionally account for the deferral of tax on the employer's contributions and on the rate of return. Rather, it is intended to approximate the taxation of private pensions with employee contributions made from after-tax income.[9]

3. Medical Expenditures

Medical expenditures, and, in particular, the premiums paid on employer-based health insurance, seem to be an element of comprehensive income.[10] But one may argue that medical expenditures do not represent discretionary spending, and hence are not really consumption. Instead, these expenditures are a reduction of net worth and should be excluded from the tax base. Certainly a strong case can be made that some medical expenditures are a cost of earning income (a reduction in net worth) that might properly be deductible, although the same argument would apply to food, clothing, and shelter. In addition, some differences in medical expenditures among individuals may reflect differences in health status, so that those who spend more may be considered relatively worse off than those who spend less. In contrast, others argue that there is no way to distinguish medical care from other consumption items. Those who view medical spending as consumption point out that there is choice in many health care decisions, e.g., whether to go to the best doctor, whether to have voluntary surgical procedures, and whether to exercise and eat nutritiously to improve and maintain one's health and minimize medical expenditures. This element of choice makes it more difficult to argue that medical spending is more "necessary" than other consumption spending.

4. Charitable Giving

Under existing law, charitable contributions are deductible, and this deduction is considered a tax expenditure in the current budget.[11] The treatment of charitable donations, however, is ambiguous under a comprehensive income tax (Goode, 1977; Bradford, 1986). If charitable contributions are a consumption item for the donor, then they are properly included in taxable income and a deduction for contributions would be a tax

[9] Private pensions allow the employee to defer tax on all inside build-up. They also allow the employee to defer tax on contributions made by the employer, but not on contributions made directly by the employee. Applying these tax rules to Social Security build-up and the employer's contributions would allow the employee to exclude from taxable income benefits paid out of own contributions.

[10] In addition, it might be appropriate to allow a deduction for premiums and tax benefits paid, rather than taxing premiums and exempting benefits paid, as discussed below.

[11] This item also includes gifts of appreciated property, at least part of which represents a tax expenditure relative to an ideal income tax, even if one assumes that charitable donations are not consumption. Furthermore, some gifts may be viewed as business expenses akin to advertising aimed at generating goodwill and should be deductible (Carroll and Joulfaian, 2005).

expenditure. In contrast, charitable contributions could represent a transfer of purchasing power from the donor to the recipient. As such, they would represent a reduction in the donor's net worth, properly deductible, implying that the charitable deduction is not a tax expenditure. At the same time, however, the value of the charitable benefits received is income to the recipient. Under current law, such income is not taxed, qualifying it for a tax expenditure, although this exclusion is not included on the official list of tax expenditures. So, the donor's deduction might proxy for the failure to tax the recipient, even if the donor's deduction were not seen as a tax expenditure if considered in isolation. If the donation were seen as consumption for the donor and as income for the recipient, then allowing the donor a deduction and failing to impute income to the recipient both would be tax expenditures.

B. General Issues Related to a Consumption Tax Baseline

The above lack of clarity under the income tax carries over to the consumption tax; neither comprehensive income nor consumption baselines are fully specified objective concepts. But even when a particular activity is clearly an item of consumption there may be more than one way to treat it under a consumption tax. For example, a consumption tax might ignore borrowing and lending by excluding from the borrower's tax base the proceeds from loans, denying the borrower a deduction for payments of interest and principal, and excluding interest and principal payments received from the lender's tax base. On the other hand, a consumption tax might include borrowing and lending in the tax base by requiring the borrower to add the proceeds from loans to the tax base, allowing the lender to deduct loans from the tax base, allowing the borrower to deduct payments of principal and interest, and requiring the lender to include receipt of principal and interest payments. In present value terms, the two approaches are equivalent for both the borrower and the lender; in particular both allow the tax base to measure consumption and both impose a zero effective tax rate on interest income.[12] But which approach is taken obviously has different implications (at least on an annual cash flow basis) for the treatment of many important items of income and expense, such as the home mortgage interest deduction.

Some exclusions of income are equivalent in many respects to consumption tax treatment that immediately deducts the cost of an investment while taxing the future cash flow. For example, exempting the yield (income) on an investment is equivalent to consumption tax treatment as far as the normal rate of return on new investment is concerned. This is because expensing generates a tax reduction that offsets in present value terms the tax paid on the investment's future normal returns. Expensing gives the normal income from a marginal investment a zero effective tax rate. However, a yield exemption approach differs from a consumption tax as far as the distribution of income and government revenue are concerned. Pure profits in excess of the normal rate

[12] This abstracts from the issue of financial services paid for via interest rate spreads.

of return would be taxed under a consumption tax because they are an element of cash flow, but would not be taxed under a yield exemption tax system. In addition, capital income is difficult to measure accurately and some of what is labeled capital income might represent returns to labor. Such returns should be taxed by a consumption tax but would not be taxed under a yield exemption approach.

In addition, examining provisions one at a time can be misleading. The hybrid character of the existing tax system leads to many provisions that might make good sense in the context of a consumption tax, but that generate inefficiencies because of the problem of the "uneven playing field" when evaluated within the context of the existing tax rules. It is not clear how these should be classified. For example, many saving incentives are targeted to specific tax-favored sources of capital income. The inability to save on a similar tax-favored basis irrespective of the ultimate purpose to which the saving is applied potentially distorts economic choices in ways that would not occur under a broad-based consumption tax.

Furthermore, provisions can interact even when an appropriate treatment is determined. For example, suppose that it is determined that financial flows are out of the tax base under a consumption tax. Then the deduction for home mortgage interest would seem to be a tax expenditure. However, this conclusion is cast into doubt because current law generally taxes interest income. When combined with the homeowners' deduction, this results in a zero tax rate on the interest flow, consistent with consumption tax treatment.

Such considerations among others suggest that, as with an income tax, the task of quantifying deviations under the current tax from "the" base of a consumption tax is difficult if not impossible because deviations cannot be uniquely determined, making it very difficult to do a consistent accounting of the differences between the current tax base and a consumption tax base.

C. The X-Tax as a Baseline Consumption Tax System

A primary objective of this paper is to determine and measure the major income tax items in the official tax expenditure budget that would be tax expenditures under a specific type of consumption tax. While there are a number of consumption taxes to choose from, we opt for an X-tax that raises the same revenue as the existing income tax. An X-tax facilitates comparison to the current methodology used for tax expenditures because its structure is similar to the current income tax. An X-tax is also similar to a VAT-type consumption tax under which businesses are taxed on their receipts less purchases,[13] but an X-tax consists of both a business level tax and a household level tax.

Indeed, the key difference between an X-tax and a VAT is the point at which the tax on labor compensation is collected. A VAT does not allow firms to deduct labor

[13] Of course, it is the deduction of the cost of investment goods, i.e., expensing, that makes the VAT a tax on consumption.

compensation, so the tax on compensation is collected from the business. In contrast, an X-tax allows businesses to deduct compensation paid to workers and then subjects compensation to an individual level tax, which can, and typically does, include progressive tax rates. Compared to a VAT, this bifurcation of the tax base into separate business and individual level taxes allows for a more progressive distribution of the tax burden across income levels. For our purposes, this feature of an X-tax facilitates the comparison of a consumption tax baseline to the current tax system.

The X-tax used here was designed to replace federal individual and corporate income taxes in 2010. Ultimately, we compare a broad-based consumption tax to the current income tax, but there are important differences between a broad-based tax, whether consumption or income-based and the current income tax. It has been estimated that tax preferences generally reduce the size of the tax base relative to either a consumption or income tax by 40–50 percent (Economic Report of the President, 2003). To distinguish between differences in the tax base related to the income-consumption tax baseline and more general base broadening, we separately estimate tax expenditures under a broad-based X-tax and a narrow-based X-tax, with all the current law preferences in place.

The business tax base under the X-tax approximates a subtraction method VAT, except that compensation paid to employees is deductible and instead taxed under a separate individual tax. The top individual and business tax rates are set to 35 percent. Rather than an exemption or standard deduction, individuals would be subject to a progressive tax rate schedule that includes an effective zero-bracket amount. The X-tax base also excludes financial flows from the tax base including interested payments and expenses. A more detailed description of the X-tax base is provided below.

Individuals

- Base – Wages, pension distributions, employer-based health insurance premiums, and unemployment compensation among other fringe benefits.
- Rates – A progressive tax rate schedule with four tax rate brackets – a zero tax bracket that mimics a large exemption, a 15 percent rate bracket, a 25 percent rate bracket, and a 35 percent rate bracket – as described in Table 2 which is contrasted, though not comparable to, the current income tax rate schedule projected at 2010 levels. There would be no AMT.

Businesses

- Base – Gross receipts less purchases from other businesses (including purchases of all tangible property), wages, contributions to pension accounts, and employer-based health insurance.
- Rates – A single business tax rate of 35 percent. All businesses – C corporations, as well as flow-through businesses, such as S corporations, partnerships and sole/farm proprietorships, would be subject to the business level tax.

Treatment of Particular Sectors

- Housing – Housing is treated using a tax pre-payment approach. Sales of new housing, renovations and rentals by landlords would be taxed. Because the homeowner is allowed no deduction for the purchase price of the house, the full value of the house would be taxed when purchased, which in present value terms is equivalent to taxing the annual flow of housing services that the house is expected to produce. The consumption tax on the service flow over the life of the asset is thus pre-paid at the time the house is purchased, whence the term tax pre-payment approach. There would be no deduction for mortgage interest.
- Financial Services – The value of financial intermediation services would be taxed in some way.[14]
- International Trade – While the baseline X-tax envisions border adjustments (i.e., exports are deductible, imports are taxed), the revenue from such border adjustments is not incorporated into the structuring of the proposal to attain revenue neutrality.[15]
- Government and other non-profit organizations – The wages and fringe benefits of all employees are subject to the individual tax. Business activities of government entities and other tax-exempt organizations are not subject to tax.
- No transition relief would be provided.

D. Classifying Major Tax Expenditures Relative to an X-Tax Baseline

Table 1 shows the largest tax expenditures reported in the **U.S. Budget** classified according to whether they would be considered tax expenditures under the X-tax baseline. The classification is not particularly precise because of the uncertainty in how much weight to attach to exact mechanical rules of the X-tax, as opposed to the intent of a consumption tax, or how much weight to attach to interactions among tax provisions.

1. Provisions Likely to be Considered Tax Expenditures under the X-tax Baseline

Of the select items listed in the top panel of Table 1, the deductibility of property taxes on owner-occupied housing probably would be a tax expenditure relative to the X-Tax baseline. But as discussed earlier, there are some ambiguities. Setting aside the issue of how benefits received from State and local governments are taxed, properly measuring the net service flow from housing would require some kind of deduction

[14] It is difficult to measure the value of financial services (Poddar and English, 1997).

[15] The size of the potential revenue collected may have important effects on the design of the underlying features of the consumption tax such as the rate structure and corresponding distribution and burden. Grubert and Newlon (1997) provide an excellent discussion of taxing consumption in a global setting. Potential revenues are not considered given the uncertainty in estimating trade flows; such exclusion will not affect the qualitative results.

Table 1

Tax Expenditure Estimates Under Various Baselines in $Billions[1]
($Billions at 2010 levels)

	Current Law Baseline (1)	X-tax with Current Law Base (2)	X-tax with Broad Base (3)	Revenue Neutral X-tax with Broad Base (4)
Possibly Tax Expenditure Under X-Tax Base				
Home mortgage interest deduction	115	112	97	112
State and local income tax deduction	38	36	80	91
Property tax deduction	17	15	51	51
Charitable contributions deduction	63	55	57	61
Exclusion of social security benefits	21	22	16	12
Exclusion of employer-based health insurance premiums	169	169	181	149
Child tax credit	46	45	49	50
Earned income tax credit	49	49	49	50
Not Tax Expenditure Under X-Tax Base				
Capital gains exclusion on home sales	38	0	0	0
Net Exclusion of contributions and earnings: 401(k) plans	68	0	0	0
Net Exclusion of contributions and earnings: Employer plans	42	0	0	0
Net Exclusion of contributions and earnings: Keogh plans	16	0	0	0
Net Exclusion of contributions and earnings: IRAs	13	0	0	0
Exclusion of interest for state and local bonds	27	0	0	0
Exclusion of interest on life insurance savings	28	0	0	0
Manufacturing deduction	26	0	0	0
Deferral of income from controlled foreign corporations	15	0	0	0
Surtax Under X-Tax Base				
Lower tax rate for capital gains	60[2]	–121	–113	–107
Accelerated depreciation of machinery and equipment	6		–29	
Accelerated depreciation of rental housing	9		–19	

(1) The estimates reported here may not be consistent with those reported in the official budget estimates due to minor methodological differences.
(2) This estimate excludes the benefit of lower rates for corporate equity.

for property taxes.[16] Property taxes represent a reduction in net worth, not an item of consumption. But current law does not tax the service flow from housing, making the deduction of property taxes unwarranted.

There is also the issue of the taxation of government services received by the homeowner and paid for by the property tax on housing. These should be taxed under a comprehensive consumption tax, and although the X-Tax makes no explicit imputation for them, it turns out that the pre-payment approach would seem to tax such services automatically. This is because, like property taxes, services, such as education, provided to homeowners would seem to be reflected in housing prices (U.S Department of the Treasury, 1977). In contrast, current law fails to impute the value of such services but does allow a deduction for the tax that pays for the services, giving an additional argument to support the view that the deduction of property taxes is a tax expenditure.

The deduction for State and local income taxes is also likely to represent a tax expenditure under an X-Tax baseline. These taxes can be thought of as payments for services received, and the services are not imputed to income. Again, as mentioned above in the income tax discussion, however, there might not be a very close connection between taxes and benefits, casting some doubt on this rationale.

The tax expenditures for Social Security measure a tax benefit relative to a baseline that is somewhere between a comprehensive income tax and a consumption tax. The properly measured tax expenditure relative to a consumption tax baseline would include only those Social Security benefits that are accorded treatment more favorable than that implied by a consumption tax, which would correspond to including 50 percent of Social Security benefits in the recipient's tax base (the employer's share of contributions), because consumption tax treatment would allow the exclusion of about one half of the benefits. Thus, the existing tax expenditure is correct conceptually, but is not measured properly relative to a comprehensive consumption tax baseline. Indeed, part of what is measured should be counted as a negative tax expenditure relative to a consumption tax baseline because it represents an over-taxation of benefits received.

The tax treatment of Social Security benefits for the disabled is also difficult to classify. As discussed above, these benefits generally ought to be taxed because they represent purchasing power. However, the associated Social Security taxes ought to be fully deductible, but they are not. Hence the proper treatment is unclear. Moreover, if the insurance model is applied, the taxation of Social Security benefits might be a negative tax expenditure.

There is a strong case for viewing the child credit and the earned income tax credit as social welfare programs (transfers). As such, they would be tax expenditures relative to a consumption baseline. Nonetheless, these credits could alternatively be viewed as relieving tax on "nondiscretionary" consumption, and so not properly considered a tax expenditure.

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[16] As discussed in U.S. Department of the Treasury (1977), under a pre-payment approach to taxing housing, the property tax already implicitly is deducted to the extent that it reduces the price of the house. No additional deduction would be needed to measure (and tax) the net service flow from housing that is received by the homeowner.

There is general disagreement over the extent to which medical care and charitable giving represent consumption items. There is also the question of how to tax medical insurance premiums. Under current law, employees may exclude from their income insurance premiums paid for by their employers. The self-employed also may exclude (via a deduction) medical insurance premiums from their taxable income. From some perspectives, these premiums should be included in the X-tax base because they represent consumption. Yet an alternative perspective would support excluding the premium from the tax base as long as the value of any medical services paid for by the insurance policy were included, as would be the case under an X-tax. But even from this alternative perspective, the official tax expenditure might continue to be a tax expenditure under an X-tax baseline because current law excludes the value of medical services paid with insurance benefits from the employee's taxable income.

Typically, the X-tax is conceived of as a tax on real, not financial, flows. That is, the X-tax would exclude from its base any financial transactions, including interest paid. Consequently, from this perspective, the deduction for home mortgage interest would be a candidate for a tax expenditure under the X-tax. In addition, there is nothing about the tax prepayment approach to dealing with the implicit rental value of owner-occupied housing that would justify a deduction for home mortgage interest.

Nonetheless, the case for making the deduction of home mortgage interest a tax expenditure relative to the X-tax baseline is far from certain. It may not be correct to view the deduction for home mortgage interest in isolation from the other provisions of the present tax code. Under current law, interest income, including that earned through mortgage lending, generally is taxed, while it should not be under the X-tax. A homeowner's mortgage interest deduction could be viewed as counterbalancing the lender's inclusion, eliminating from the tax base debt's share of the rental income earned on an investment in owner-occupied housing, as would be appropriate under a consumption tax.

2. Items that are not Tax Expenditures under the X-tax Baseline

Most of the items in the grouping that are not tax expenditures under the X-tax baseline relate to tax provisions that eliminate or reduce the tax on various types of capital income. In many cases, provisions that reduce taxes on capital income would not be considered tax expenditures under the X-tax baseline because the X-tax is intended to eliminate the tax on normal returns to capital income. This classification reflects the elimination or reduction of tax on capital income rather than the mechanics by which the tax is eliminated or reduced. Thus, for example, excluding retirement savings earnings would not be a tax expenditure because the X-tax would not include those earnings in its base – it does not seek to tax normal returns to capital income.

In our classification we do not distinguish between types of retirement saving vehicles, although one might do so if greater emphasis were placed on the mechanics of the policy. Thus, for example, if one paid a great deal of attention to mechanics, contributions out of labor earnings to a Roth (backloaded) IRA would not be a tax expenditure under the X tax baseline because such contributions would be made on an after-tax basis. In contrast, contributions to a traditional (front loaded) IRA that allowed a deduction against

wages would be a tax expenditure. By the same token, the tax on distributions from a traditional IRA would be a negative tax expenditure, to the extent that the distribution came out of contributions rather than earnings. In contrast to a classification system that places a great emphasis on mechanics, we place emphasis on the net effect. Thus, since the net effect of all the retirement savings provisions is to reduce or eliminate the tax on capital income, we classify all of them as not being tax expenditures.[17]

Under the X-tax there would be no attempt to tax capital gains on home sales, so the exclusion of such gains under current law would not be a tax expenditure. Expensing of business investment is the norm under the X-tax, so current provisions that allow research and experimentation (R&E) spending to be expensed would not be considered a tax expenditure when judged against the X-tax baseline. The production deduction also moves towards a zero rate of tax on capital income, and so would not be a tax expenditure under the X-tax.[18]

In addition, current law's failure to tax the annual net rent from owner-occupied housing would not be a tax expenditure measured against the X-tax baseline. One way to think of this is that a consumption tax would impose no tax on capital income, including the implicit return to owner-occupied housing. Current law clearly conforms to this treatment. Furthermore, current law applies the pre-payment approach to owner-occupied housing, as does the X-tax. That is, under current law, a homeowner pays tax on the funds used to buy the house but is excused from tax on the house's service flow. This treatment is inconsistent with an income tax baseline but in harmony with a pre-payment consumption tax.

The items in the last grouping could be viewed as negative tax expenditures under the X-tax baseline. For example, when judged against expensing, accelerated depreciation is a tax penalty, not a tax subsidy. The exception from the passive loss rules probably would not be a tax expenditure because proper measurement of income, and hence of consumption, requires full deduction of losses.

III. TAX EXPENDITURE ESTIMATES UNDER THE INCOME TAX AND THE X-TAX BASELINES

As discussed above, estimating the gap between tax expenditures under the current reference law baseline and a comprehensive consumption tax, as represented by a revenue neutral X-tax regime, involves several conceptual changes to the tax system:

[17] Obviously, how one implements any tax base may affect measured estimates of tax expenditures.

[18] Both expensing and a lower corporate tax rate remove the tax on the expected normal return. Under the X tax, or other similar consumption taxes, the normal return would not be subject to tax and, thus, neither of these provisions would be viewed as tax expenditures. How these two examples tax super normal returns, however, does differ. With expensing, above normal returns would continue to be taxed. A lower (or zero) corporate tax rate would reduce (eliminate) the tax on all returns, not just the expected normal return. Nevertheless, this difference in the tax treatment of super normal returns has little to do with defining tax expenditures under an X tax.

(1) changing the tax base to reflect the differences between an X-tax and an income tax, (2) broadening the tax base by removing the various special tax provisions, and (3) adjusting the tax rate schedule to bring the new hypothetical broad-based X-tax into budget balance.

A. Estimation Issues

For the income tax, we follow the same convention employed in estimating tax expenditures in the U.S. budget. Each provision of interest is repealed holding all the remaining provisions in the tax code constant. Next, the baseline tax is modified so as to transition from the current income tax to the X-tax. First, the baseline tax for businesses is modified, and then the individual level tax, to be consistent with the tax regime described above. The gap between the tax liability under current law and that from the modified base with current law tax rates is then used to design a tax rate schedule to arrive at a tax neutral X-tax (within $10 billion). The resulting tax rate schedule is reported in Table 2. This is similar to the rate schedule reported in the Report of the Tax Reform Panel (President's Advisory Panel on Federal Tax Reform, 2005), but admittedly somewhat arbitrary as there is an unlimited number of rate schedules that might be chosen. Tax expenditures are introduced one provision at a time.[19]

In gauging the magnitude of tax expenditures under the various baselines, we are fortunate in that we are able to exploit Treasury's models and databases employed in the analyses of proposals advanced by the 2005 President's Tax Reform Panel. More to the point, the panel proposed and analyzed The Growth and Investment Tax Plan, a tax with a structure that shares many features of both the current income tax and the X-tax (President's Advisory Panel on Federal Tax Reform, 2005).

For individuals, at the core of these models is a sample of income tax returns for tax year 2004 that have been linked to various administrative records (e.g., Form W2s, Form 1099s, and Social Security Administration records), and enriched with imputations from various data sources (e.g., the Consumer Expenditure Survey (CEX)). The underlying data are aged so as to be representative of the projected population in 2010. These future projections are consistent with the Administration's economic assumptions made in late 2007.[20] In addition to projecting income, deductions, and expenses reported and imputed to tax returns, the various tax parameters are adjusted for inflation to reflect the indexing features of the tax code. For example, the tax rate schedules reported in panel B of Table 2 reflect inflation rates, actual and forecast, through 2010.

Corporate tax returns are also manipulated in a similar fashion where information reported by corporations is aged to reflect profit forecasts. This is augmented with a

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[19] This is unlike the approach under the current income tax where a provision is repealed one at a time. Under an alternative approach, all preferences would be retained as we transition to the X-tax. But this would result in much higher tax rates to make up for the narrow base.

[20] There are 202,344 tax returns in the sample. See Cilke (1994) for a description of an earlier variant of the simulation model and the extrapolation methodology.

Table 2

A. Exemption and Tax Rate Schedule under a Revenue Neutral X-tax

	Taxable Consumption or "Income"	
Tax Rate (%)	Unmarried Individuals	Married Couples
0	0 to $20,000	0 to $40,000
15	$20,000 to $45,000	$40,000 to $90,000
25	$45,000 to $150,000	$90,000 to $300,000
35	$150,000 and over	$300,000 and over

B. Exemption and Tax Rate Schedule under Current Income Tax

	Taxable Income	
Tax Rate (%)	Unmarried Individuals	Married Couples
10	0 to $8,425	0 to $16,850
15	$8,425to $34,200	$16,850 to $68,400
25	$34,200 to $82,850	$68,400 to $138,100
28	$82,850 to $172,850	$138,100 to $210,450
33	$172,850 to $375,800	$210,450 to $375,800
35	$375,800 and over	$375,800 and over

Notes: The personal exemption is $3,650; standard deductions are $5,750 for single taxpayers and $11,500 for married taxpayers filing jointly. All amounts are projected at 2010 levels.

depreciation model that takes investment forecasts and generates streams of depreciation allowances and feeds them back to the corporate model.

There are a number of conceptual issues that arise in comparing estimates under different baselines. For instance, there are a number of rules under the current income tax that impose limits on the amount of deductions and exemptions available to taxpayers. But these rules may not apply under an X-tax, thereby expanding the size of economic activity receiving preferential treatment. As an example, consider the deduction for state and local taxes that is available only to those who itemize. Under the X-tax, with the standard deduction abolished, those who were not able to itemize before will now be able to deduct taxes paid to local jurisdictions when the deduction is allowed. The same also applies to charitable contributions and mortgage interest expenses, among others.

B. Tax Expenditure Estimates under Different Baselines

Columns (2) through (4) of Table 1 present estimates of the major tax expenditures under several alternative baselines to facilitate comparison across regimes as the cur-

rent income tax system is moved from its current narrow base to an X-tax with a broad base, while raising the same revenue. The tax expenditure estimates under the current reference law methodology are presented in column (1) to facilitate comparisons.

In column (2) of Table 1, the baseline tax system is transformed to an X-tax by removing the return to saving and investment, as well as interest flows, from the tax base. In column (3), the baseline tax system is broadened by eliminating all the various special tax preferences, including personal exemptions and the standard deduction. In column (4), the rate schedule in the baseline tax system (including repeal of AMT without a patch) is adjusted to raise the same revenue as the current income tax for 2010.

This step-by-step process allows us to show how the tax expenditure estimates are affected under each baseline tax system. As can be seen by comparing current reference law (column 1) and a narrow-based X-tax (column 2), those provisions that relieve the tax on the return to savings and investment, such as IRAs and 401(k)-type accounts, are no longer tax expenditures. To the extent the current tax treatment taxes the return to savings and investment more heavily than an X-tax, the provisions become surtaxes. For example, the lower tax rate on capital gains is estimated as a $60 billion tax expenditure under reference law, but a surtax of $121 billion under the narrow-based X-tax because capital gains would no longer be taxed under an X-tax. Similarly, accelerated depreciation, while an investment incentive relative to current law, does not go as far as expensing of investment under an X-tax and also becomes a surtax under the X-tax baseline.

The special tax provisions that are unrelated to saving and investment generally remain tax expenditures, and change little in value. The change in a taxpayer's taxable income, as capital income is removed from the tax base, lowers the taxpayer's tax liabilities as his income moves down the tax rate schedule. This has the effect of slightly reducing the value of most of these tax expenditures. Most noticeably, the reduction in income also has the effect of reducing the estimate for charitable giving, as the limitations on its deductibility (the general deduction cannot exceed 50 percent of AGI) become more binding.[21]

The effects of broadening the tax base by eliminating the various special tax provisions unrelated to an X-tax are shown in Column (3). These provisions include the personal exemption, the standard deduction, as well as the existing tax preferences. The effect on the tax base from elimination of the special tax provisions is at times dramatic. For example, the tax expenditure for the state and local income tax deduction rises from $38 billion under the narrow-based X-tax to $80 billion under the broad-based X-tax. Because of the repeal of the standard deduction, personal exemptions, and preferences under the current income tax, the reach of the AMT (without a patch) is greatly curtailed. This likely explains the very large changes in those special tax provisions

[21] A revenue neutral variant of the regime in column (2) with an alternate individual tax rate schedule may lead to much different estimates, depending on how tax rates are raised to make up for the revenue shortfall from excluding capital income.

that are also AMT preferences, such as the state and local income tax deduction and property tax deduction.

Indeed, the estimates reported in Column (1) for the State and local income tax deduction would have increased to $80 billion if the AMT were repealed under current law. Similarly, the estimate for State and local property taxes increases to $43 billion.[22] In contrast, in the absence of the AMT, the estimates for the deductions of mortgage interest and charitable contributions decline to $94 and $53 billion, respectively. Complicating matters in the absence of the standard deduction, non-itemizers would be able to deduct State and local taxes, mortgage interest, and charitable gifts.

In the final step, in Column (4), we adjust the tax rate schedule (and repeal the AMT) so that the narrow-based X-tax raises the same revenue as the current income tax. Tax rates need to be increased in order to make up the shortfall in revenue. These somewhat higher tax rates, particularly for singles facing tax rates of 28 and 33 percent under current law, increase the value of most of the tax expenditures. Similarly, the lower tax rates for low income taxpayers reduce the estimates for the remaining provisions. This last step illustrates yet another aspect of how arbitrary tax expenditure estimates can be — they also depend on the tax rate schedule and the level of overall taxes. As taxable incomes rise or fall, taxpayers move through the tax rate schedule, which affects the value of tax expenditures.

IV. CONCLUDING COMMENTS

This paper explores the identification and measurement of tax expenditures under the current income tax and a prototype consumption tax. Both baselines share common ambiguities, and it is the treatment of capital income that separates the two. However, while this paper focuses on the how tax expenditures under the income tax would be viewed from the prism of a consumption tax, there are a number of differences between the two baselines that are not included in the official tax expenditure list. Additional possible tax expenditures may include the exclusion under the current individual income tax of benefits paid by insurance policies, in-kind benefits from government programs such as Medicaid and public housing, and benefits received from charities. Under some theories of a comprehensive consumption tax, the value of leisure and of household production of goods and services would be included as a tax expenditure. The personal exemption and standard deduction (and the X-tax analogs) also might be considered tax expenditures, although they can be alternatively viewed as elements of the basic tax rate schedule.

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[22] A word of caution is in order. Estimates reported in column (3) introduce one preference at a time, in contrast to the conventional practice of repealing a provision at a time reflected in columns (1) and (2). Because of the repeal of the standard deduction, personal exemptions, and the AMT, interaction effects are likely to be much smaller for the estimates reported in column (4). Nevertheless, the stacking order of provisions may complicate direct comparisons of tax expenditure estimates.

Importantly, current law also deviates from a consumption tax norm in ways that increase, rather than decrease, tax liability; that is, current law has a number of large negative tax expenditures relative to a consumption tax baseline. One large item on this list is the inclusion of capital income in the current individual income tax base. The corporate income tax, or more generally a measure of the double tax on corporate profits, also would be a negative tax expenditure. The passive loss rules and net operating loss (NOL) carry-forward provisions also might generate negative tax expenditures, because the change in net worth requires a deduction for losses (consumption = income – the change in net worth). Because human capital is a productive asset, its costs (e.g., certain education and training expenses, including perhaps costs of college and professional school) should be expensed, but they are not under current law.

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