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**THE U.S. DEBATE ON CONSUMPTION-BASED TAXES:  
IMPLICATION FOR THE AMERICAS**

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**I. Introduction**

During the past year--roughly since the Republican Party gained a majority of the seats in both houses of the Congress--there has been a groundswell of interest in fundamental tax reform in the United States. For the most part the proposals being discussed are different in kind from reforms that have been enacted or widely discussed in the past, including the massive Tax Reform Act of 1986. Whereas prior tax reform debates have focussed on changing the income tax, the predominant theme of the current debate is replacement of the income tax with an altogether different type of tax, a tax based on consumption.<sup>1</sup>

If these reform efforts succeed--indeed, if they do not succeed, but are taken seriously, there will be important repercussions in other countries, including the rest of the Americas. If they succeed, other countries may be tempted to imitate the United States, as many did after the 1986 reforms, by changing their tax systems to resemble the new U.S. system. In any event, they may need to alter their systems to respond to changes in the U.S. system; these alterations might be even more fundamental than the adjustments triggered by the 1986 reforms.<sup>2</sup> Even if fundamental reform does not occur in the United States, the U.S. tax reform debate may precipitate debate elsewhere, and possibly reform.

  
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This paper describes some of the potential international repercussions of the U.S. debate, focussing on the potential effects in the American countries to the south of the United States. The next section describes briefly the salient features of the most important and most novel consumption-based tax reform plans. For the most part it pays little attention to proposals merely to reform the income tax, which would be far less fundamental.<sup>3</sup> Nor does it describe or analyze the value added tax and retail sales tax in detail. Not only are these generally familiar; most countries of Latin America already have VATs. Section III describes the motivations for the current wave of tax reform fever and discusses the extent to which expectations would be achieved under the various plans, again concentrating on those plans most likely to be novel and serious contenders. Section IV and V discuss international implications of the reforms and whether the United States would allow foreign tax credits for a consumption-based tax levied by another country. Section V Transition issues, one of the most complicated matters in this area--and one of the most important--are discussed briefly in Appendix C.

## **II. The Plans**

Plans for consumption-based tax reform generally fall into two broad categories: indirect or "impersonal" taxes such as a retail sales tax (RST) or value added tax (VAT) and direct or "personalized" consumption-based taxes (not currently levied by any

country on a broad basis).<sup>4</sup> Appendix A shows the relation between the various forms of consumption-based tax.

#### **A. Indirect/Impersonal Consumption Taxes**

Indirect taxes are levied on the supply of goods and services; they are not levied on individuals. Thus they cannot easily be "personalized" to take account of the characteristics of families, such as family size, income, source of income, or spending patterns.

##### **1. Sales Tax**

Congressman Bill Archer (R-Texas), chairman of the important House Ways and Means Committee, the tax-writing committee of the House of Representatives, has suggested (Archer, forthcoming) that he may propose a "sales tax" to replace the income tax, saying he would like to "pull the IRS out by its roots."<sup>5</sup> Although Archer has not indicated clearly what kind of tax he has in mind, it seems reasonable to infer that he is thinking of a retail sales tax. Since 45 of the states and the District of Columbia impose an RST, such a tax would be familiar to Americans. Although Archer has not indicated the tax rate that would be needed to replace the income tax, Senator Richard Lugar (R-Indiana) has proposed a 17 percent RST. Many observers believe that a tax rate of this level (some 17 to 25 percent, when combined with existing state sales tax rates) would be untenable for a single-stage retail sales tax.

##### **2. Value Added Tax**

Senator Sam Gibbons (D-Florida), a minority member of the Ways and Means Committee, introduced a legislative proposal for a subtraction-method VAT (commonly called a "business transfer tax" in the United States) in 1994, and Senators David Boren (D-Oklahoma) and John Danforth (R-Missouri) have done so for 1995.<sup>6</sup> The credit-invoice form VAT, the revenue workhorse of the world, is notably absent from the current debate, despite a 1994 proposal by Senator Ernest Hollings (D-South Carolina). It is included here for completeness and to provide a basis for comparison.

#### **B. Direct/Personalized Consumption-Based Taxes**

Direct taxes are levied on individuals. For this reason, they can be personalized. One can identify four such taxes, two "pure" forms and two "hybrid" forms.<sup>7</sup> (The next section explains why these are called consumption-based taxes.) For the most part the descriptions that follow leave the details of how the proposals would personalize taxation of individuals to the endnotes.

##### **1. The Flat Tax**

House Majority Leader Dick Armey (R-Texas) and Senator Arlen Specter (R-Pennsylvania) have both introduced proposals for a "flat tax."<sup>8</sup> The prototypical flat tax, made famous by Hall and Rabushka (1983, 1995), has four distinct and separable features: separate taxes on the labor income of individuals and the "income" of businesses; distinct treatment of income from business and capital, including measurement of the business tax base, to be discussed further below; almost no personal deductions, other than a tax-free

amount;<sup>9</sup> and a single tax rate of about 20 percent, to be applied to the taxable "income" of both individuals and businesses.<sup>10</sup> Labor income (including pensions) would be subject to withholding, as under the income tax. The remainder of this section focusses on the taxation of income from capital under the flat tax.

The key features of the business tax base are the following: immediate deduction (expensing) for all purchases, including depreciable assets and additions to inventories, as well as for labor costs; exclusion of interest income; and no deduction for interest expense. The same treatment applies to interest income and expense of individuals. In addition, dividends and capital gains are tax-exempt. Because of this treatment of the return to capital, this approach is sometimes called "yield-exemption treatment" (YET).<sup>11</sup>

In the Hall-Rabushka proposal, the flat tax would be levied on a territorial basis; thus there would be no tax on income earned abroad and no credit for tax paid to foreign governments. The tax would be levied on an origin basis (explained below); thus export sales would be taxable, and deductions would be allowed for business imports.

The flat tax can be seen as a special form of VAT in which business is allowed a deduction for compensation, which is then taxed in the hands of employees. This allows personalization of the flat tax in a way that is not possible under a standard VAT. (For this reason, U.S. Treasury Department (1984) referred to it as "a personal exemption VAT.") In theory, the same objective could

be achieved by combining a standard VAT with refundable credits for low-income individuals. Experience with fraudulent claims for refunds under the earned income tax credit makes this an unattractive option.

## 2. The Consumed Income Tax

The other "pure" version of a consumption-based direct tax is the consumed income tax (CIT). Under it, payments to labor and business purchases would be deductible, as under the flat tax. Interest income would be taxable, and interest expense would be deductible, as under the income tax. But, in marked contrast to the income tax, both individuals and businesses would include the proceeds of borrowing and the receipt of debt repayments in their tax base and deduct lending and repayment of debt. There is no active proposal for such a tax;<sup>12</sup> it is described here primarily to provide a benchmark for descriptions of other proposals.

## 3. The McLure-Zodrow Hybrid

Based on work done in Bolivia during 1995, McLure and Zodrow (forthcoming, a) have proposed a hybrid system that combines yield exemption (flat tax) treatment of individuals with consumed income tax treatment of business. In addition to a tax-free amount, it can accommodate either a single tax rate or graduated rates on the income of individuals. (The same is equally true of the flat tax and the CIT.) It would be levied on an origin basis.

## 4. The USA Tax

The fourth possible variant of consumption-based direct taxation would be a hybrid that combines CIT treatment of

individuals with YET treatment of business. No such proposal exists, but the Unlimited Savings Account (USA) Tax (S. 722) proposed by Senators Sam Nunn (D-Georgia) and Pete Domenici (R-New Mexico) resembles such a hybrid. It combines an 11 percent subtraction-method VAT on businesses with treatment of individuals that resembles the CIT. Individuals would be allowed an unlimited deduction for savings, and reductions in net savings would be included in the tax base. Proceeds of borrowing are not included in the tax base; they only reduce deductible savings (but not to below zero). Consumption from assets existing at the time the tax is imposed would not be subject to tax, and the tax exempt status of interest on state and local bonds would be preserved. (See also the discussion of the complexity of the USA tax below.)

The USA tax would allow two standard deductions: a "personal living allowance" and personal and dependent deductions for the taxpayer, spouse, and dependents. Itemized deductions would be allowed for home mortgage interest and charitable contributions, but not for other itemized deductions found in current law, and for certain educational expenses.<sup>13</sup> Contrary to current practice, these deductions would be allowed in addition to the standard deductions, not in lieu of them.

After the first year, individual tax rates would be 8 percent, 19 percent, and 40 percent, the last reached by a couple filing a joint return at an income of 24,000.<sup>14</sup> As under current law, the individual portion of the USA tax is levied on worldwide income, and it would allow foreign tax credits (for income taxes paid to

foreign governments) and an earned income tax credit (a refundable credit available for low income taxpayers who have earned income). In addition, there would be a new credit for the employee portion of payroll taxes collected to finance social security (currently 7.65 percent of the first \$60,000 of annual compensation); the individual credit would be refundable, to the extent it exceeds liability under the USA tax. Thus, net of the credit for payroll taxes, aggregate tax rates would be 0.35, 11.35, and 32.35 percent, over the income range covered by the credit.<sup>15</sup>

Because the business portion of the USA tax would be a territorial subtraction-method VAT, there would be no foreign tax credit. Instead, there would be border tax adjustments (taxation of imports and rebate of tax on exports, explained further below). Credit would be allowed for the employer share of payroll taxes (also 7.65 percent). Losses would be carried forward (without interest), instead of resulting in refunds, as when credits exceed gross tax liability under a credit-method VAT; this treatment would apply to exporters, which are commonly zero-rated under conventional VATs.

### **III. Motivations and Analysis**

In general economists have commonly favored consumption-based taxes because they do not distort the choice between saving and consumption in favor of current consumption and against saving, as the income tax does. Spokesmen for business do so for a similar reason; they see consumption-based taxes as more favorable to

capital formation.<sup>16</sup> Others emphasize the simplicity advantages of consumption-based taxes. Some recent advocates of consumption-based taxation presumably expect to pay less tax than under the income tax. Some possible motivations that have been prominent in the past are notably absent from the current debate.

#### **A. Economic Benefits**

##### **1. Effects on Saving**

The RST, the VAT, and the consumed income tax are obviously taxes on consumption; they apply only to sales to households (an ideal RST)<sup>17</sup>, they allow a credit for tax paid on capital goods (the VAT), or they allow a deduction for saving (the CIT). In each case the return to investment is unaffected by taxation; the marginal effective tax rate (METR) on income from capital is zero. (The METR is the percent reduction in the before-tax rate-of-return created by taxation; it can exceed 100 percent, or it can be negative.) The flat tax (and thus the two hybrids) are equal in present value to a tax on consumption, since they also are characterized by a METR of zero.

A standard theorem in the economics of public finance states that the METR on income from capital is zero under a consumption-based tax. There are a number of ways to demonstrate this proposition. One of the simplest is to consider an equity-financed one-year investment of \$100 that yields 10 percent in the absence of tax. Expensing reduces taxable income by \$100 (assuming that the taxpayer has other income against which to offset the deduction

for the investment). If the marginal tax rate of the taxpayer is 30 percent, the investment costs the taxpayer only \$70; the government advances the other \$30, via reduced tax receipts. At the end of the year the investment returns \$110, consisting of principal of \$100 and the return of \$10. The government takes 30 percent, or \$33, leaving the taxpayer with \$77. The net private return to the investment, 10 percent (\$7 as a percent of \$70), is the same as in the absence of tax. Thus the METR is zero. By comparison, the METR under an ideal income tax equals the statutory tax rate.<sup>18</sup> Appendix B provides further numerical examples of the economic effects of the YET, the CIT, and a tax on economic income.

Because the METR is zero under a tax on consumption, such a tax is neutral with regard to whether to consume now or to save and consume later. By comparison, an income tax penalizes saving, by reducing the return to saving. Stated differently, a consumption-based tax, with its METR of zero, is more conducive to saving and investment than is an income tax.<sup>19</sup> As a result, it is expected that economic growth would be more rapid under a consumption-based tax than under the income tax. Jorgenson (forthcoming) estimates that movement to a consumption-based tax in 1986 (instead of reform of the income tax) would have produced twice the opportunities for new economic growth as the 1986 Act, which he places at one trillion dollars. Kotlikoff (forthcoming) estimates an 8 percent increase in the level of output if a consumption tax were substituted for the income tax (6 percent if payments are made to

the elderly to compensate them for lump-sum losses created by the shift).<sup>20</sup>

## 2. Uniformity of Consumption-Based Taxation

The primary objective of the tax reform exercise that culminated in the Tax Reform Act of 1986 was to tax all real economic income uniformly and consistently.<sup>21</sup> While there is no doubt that substantial progress was achieved on that score, it is also clear that total success is impossible. As Boskin (1995) notes, "...measuring income is a severe, probably insurmountable problem." Certainly it is complicated (see below).

If an income tax is to be fair and economically neutral, the measure of income for tax purposes must track economic income fairly closely. Otherwise, there will be inequities and distortions of economic decisions. In order to measure income accurately it is necessary to deal satisfactorily with issues of timing: when to recognize income and when to allow deductions. Depreciation is perhaps the most obvious example of a timing issue; if depreciation allowances are too generous (not generous enough), income is understated (overstated). Other examples of thorny timing issues include capitalization of the costs of inventory, original issue discount, and multi-year production. While some of these issues are conceptually and technically simple, if difficult in practice (original issue discount), others are impossible in practice (knowing the rate of economic depreciation and the rate at which income is created in multi-year projects). Thus METRs inevitably

vary across assets, methods of finance, and patterns of ownership, and thus across industries.

Because consumption-based taxes allow for expensing of business purchases (or its equivalent, as under the credit-method VAT), timing issues cannot arise. The METR under a consumption-based tax is identically zero (unless intentional deviations are legislated.) The treatment of interest under the YET (neither taxable nor deductible) implies that timing issues such as original issue discount do not arise in that sphere. Similarly, if less obviously, under the CIT the inclusion of the proceeds of borrowing is exactly offset by deductions for payments of principal and interest.

Inflation further complicates the task of measuring income accurately. First, in the absence of inflation adjustment of the value of assets, tax is levied on capital gains that are not real (and real losses are understated); similarly, deductions for cost of goods sold from inventories and depreciation allowance do not allow recovery of costs. Second, nominal interest income is taxed and nominal interest expense is deductible, without recognition of the inflation-induced reduction in the real value of indebtedness, producing inequities and/or economic distortions. Failure to deal adequately with inflation creates inequities and distortions. But inflation adjustment creates added complexity, even under a relatively "clean" method of the type used in Chile and Colombia. Being based on cash flow, consumption-based taxation avoids these problems.

## **B. Simplicity**

Some consumption-based direct taxes are inherently simpler than income-based taxes. This is explained in the second part of this subsection. First, it will be useful to dispose of other tangential issues of simplicity related to the flat tax.

### **1. Simplicity of the Flat Tax**

Advocates of the flat tax claim that it is so simple that tax returns would fit on a postcard. The simplicity of the flat tax has begun to capture the imagination of some of the American public, as well as lawmakers. People are tired of (and angry about) the complexity of the present income tax.<sup>22</sup>

The flat tax for individuals derives its claim to simplicity from the interaction of three of the features described above. First, only labor income would be reported on individual tax returns; dividends and interest income would be exempt, interest expense would not be deductible, and business "income" would be reported on a separate form. Second, there would be no personal deductions, except as needed to provide a tax-free amount. Third, all taxable income would be taxed at the same rate, which would apply to both businesses and individuals.

Without gainsaying the simplicity advantages of the flat tax, it should be noted that most of these advantages could be achieved in an income tax; most taxpayers do not now have business income, personal deductions could be eliminated, or at least severely limited, and there could be a single rate. In short, for individual taxpayers with no business income and no income from

interest or dividends, it would be easy to fit tax returns on a postcard; indeed, while Form 1040EZ is not printed on a postcard, it probably could be, especially if fewer deductions were available to those who use it. Conversely, there is no reason--aside from the name--that the flat tax could not allow personal deductions and graduated rates. (Indeed, in the debate preceding enactment of the 1986 reforms, there was discussion of a "modified flat tax.")

The flat tax exhibits aspects of simplicity that income taxation does not share. These involve the taxation of income from business and capital: the exemption of interest and dividends, the disallowance of deductions for interest expense, and the measurement of business income. It is useful to distinguish the simplicity benefits of the "yield exemption" approach of the flat tax from the aspects of simplicity discussed above.

## 2. Inherent Simplicity of Consumption-based Taxes

Because of difficulties of dealing adequately with the problems of timing described above, an income tax is inherently complicated; it is especially complicated in a world of rapid inflation. In 1988 I wrote the following in an article whose subtitle asked whether the 1986 Act was tax reform's finest hour or the death throes of the income tax (McLure, 1988, p. 303): "we may have definitively shown that attempting to implement a conceptually correct income tax (even one without inflation adjustment) is impracticable."

As indicated above, some forms of consumption-based direct taxation are inherently simpler than an income tax, especially in

an inflationary environment.<sup>23</sup> Because tax liability is based on cash flow, timing issues cannot arise and there is no need for inflation adjustment.

### 3. Relative Simplicity of YET and CIT<sup>24</sup>

The YET version of consumption-based direct taxation is considerably simpler than the CIT version, especially for individuals. Individuals are not required to report interest, dividends, and capital gains--and the tax administration is not required to ensure that they do. By comparison, under the CIT, individuals must keep records of saving and dissaving, as well as these; the CIT would thus be even more complicated than the income tax for individuals--and more difficult to administer. It would be difficult to prevent taxpayers from borrowing abroad and taking a deduction under the CIT for amounts apparently saved.

Despite the simplicity advantages of YET treatment of individuals, application of YET to businesses would create or accentuate several problems. First, (because of its treatment of interest) it would exempt the margin--and thus the profits--of financial intermediaries.<sup>25</sup> This may not be politically acceptable, but measures to deal with the problem may be complicated and would undermine the objective of consumption-based taxation.

Second, losses reported for tax purposes under the YET would be much greater than under the CIT, which includes the proceeds of borrowing in the tax base. It would be necessary to carry losses forward with interest, in order to preserve their value.<sup>26</sup>

Otherwise new businesses would be at a disadvantage and there would be incentives for mergers and acquisitions motivated by tax saving. Finally, under the YET there would be opportunities for abusive transactions between businesses and persons not subject to tax, including foreigners and non-profit organizations. (For example, a taxable firm might sell at below-market prices, in exchange for an above market interest rate on installment debt.)

#### 4. The Simplicity of the Hybrid Consumption-Based Direct Tax

Given the complexity of the CIT for individual taxpayers, the disadvantages of applying YET treatment to business, and the fact that businesses could generally handle the complexities of the CIT, McLure and Zodrow (forthcoming, a, b) propose a hybrid in which YET treatment is applied to individuals, but CIT treatment is applied to businesses. Some problems remain, but these are thought to be less than those under either of the pure forms of consumption-based direct tax--and a fortiori less than those under the other hybrid (YET for business and CIT for individuals) or the USA tax.

#### 5. Complexity of the USA Tax

Instead of following standard CIT treatment of individuals (taxation of interest income and the proceeds of borrowing and deduction of interest expense and the principal of lending), the USA Tax provides a deduction for net saving by individuals. While the term "net saving" may sound like the excess of saving over borrowing, the concept is much more complicated than that in the USA Tax. The complexity derives from the desire to prevent the taxation of consumption financed by drawing down assets owned at

the time the USA tax is implemented and to maintain the advantage currently enjoyed by tax exempt bonds issued by state and local governments (plus, apparently, the desire to avoid the politically sensitive issue of including the proceeds of borrowing in the tax base). "The idea here is that savings should not be deductible if out of nontaxable funds, but that later consumption attributable to such funds should be tax-free." (Warren, 1995, p. 1105)

Because of its complexity and other flaws, the USA Tax will probably will not be enacted.<sup>27</sup> Thus there seems to be little reason to inflict an exposition of its arcane rules on the audience for this paper. Yet a few examples (taken from Warren, 1995) will indicate the nature of the problem. First, the transition provisions intended to prevent the taxation of amounts already taxed under the income tax actually benefit only dissavers--not savers. Second, the intended exemption of interest from state and local securities also benefits only dissavers. These features are hardly consistent with the purported purpose of the USA Tax, to eliminate the income tax bias against saving. And, of course, they will lead to manipulation, which implies more complexity. Ginsburg (1995) notes, for example, "everyone decently wealthy will be a net saver in some (perhaps odd-numbered) years and a net dissaver in other years." (See also Kaplow, 1995.) Anti-abuse rules are included to prevent these and other "games," but "anti-abuse rules of this sort suggest, not that the problems are thereby solved, but rather that there are basic flaws in the Unlimited Savings Allowance." (Ginsburg, 1995). Warren concludes (and Ginsburg

concur), "It would be much simpler to implement the standard cash flow taxation of personal consumption."<sup>28</sup>

### **C. Distributional Considerations**

One of the Achilles' heels of consumption-based taxation has traditionally been its distributional effects; since the percentage of income consumed falls, as income increases, taxes on consumption tend to be regressive.<sup>29</sup> (That is, the percentage of income paid in taxes falls, as income rises.) In the case of indirect taxes on consumption, regressivity can be avoided by introducing exemptions for necessities and higher rates on "luxuries," but only at the cost of substantial complexities of administration and compliance, economic distortions, horizontal inequities, and higher rates. After all, in aggregate, the non-poor consume more of such goods than do the poor. It is especially difficult to use this approach to achieve progressivity in the upper income levels.

Direct consumption-based taxes can, in principle, use tax thresholds and graduated rates to avoid regressivity. This is the purpose of the structure of flat tax; unlike a standard VAT, it allows a personal exemption. Indeed, with the proper structure of graduated tax rates, it may be possible to levy a consumption-based direct tax that is no less progressive than the income tax.

The current debate seems to be turning this distributional concern on its head. Many current advocates of the flat tax are high-income individuals who probably expect to pay substantially less tax than under the current income tax. (Whereas highly

graduated rates would be required under a consumption-based tax to achieve the current level of progressivity, application of flat rates would guarantee regressivity.) The U.S. Treasury Department has estimated that, in a revenue-neutral tax reform, the bottom 80 percent of households would be required to pay more taxes to pay for the tax reduction enjoyed by the more affluent. It estimates that under a 22.9 percent flat tax of the type proposed by Armev, the bottom 4 quintiles would pay from 8.3 to 12.2 percent more taxes than under current law, while the top quintile would pay 5.6 percent less. The 5 percent of households with the highest incomes would pay 19.2 percent less tax and the top 1 percent 33.2 percent less.<sup>30</sup> Once the public becomes aware of this, support for the flat tax may diminish. Whether support can be salvaged by substituting graduated rates remains to be seen.

By comparison, the 46.6 percent top effective tax rate under the USA Tax, reached at an income level of \$41,600 by a family of four, implies more progressivity at a lower level of income than under current law. This casts doubt on its political feasibility.

These distribution tables implicitly assume that the flat tax has always been in existence, instead of the income tax. Thus they neglect transition effects. In the absence of transition rules to prevent it, a consumption tax would represent a lump-sum tax on "old capital"--capital existing at the time of enactment. This is most easily seen in the case of wealth that is fixed in nominal terms and an RST that is reflected in higher prices; the fixed nominal wealth would finance lower consumption with higher prices.

More generally, the flat tax is commonly characterized as a tax on labor income, above-normal profits, and quasi-rents, which are the return to old capital.

The lump-sum tax on old capital is one of the reasons for the great efficiency benefits of consumption-based taxation; taxing old capital avoids the burden of higher tax rates needed under a consumption-based tax that provides transition relief.<sup>31</sup> Thus the replacement of the income tax with a consumption-based tax with no transition relief is often seen to represent redistribution from the older generation, who will pay most of the lump-sum tax on old capital, to the younger generation, who will benefit from the greater economic efficiency under the consumption-based tax.

Gentry and Hubbard (1995) have attempted to assess the accuracy of this last characterization, by examining the bases of taxation more carefully and determining who owns old capital. They remind us a) that much of the return to capital would be taxed under the cash-flow tax; only the "normal" return would effectively be exempt and b) that much of the income from capital escapes tax under current law.<sup>32</sup> Households headed by those 55 or older own just over half the net wealth of households, but this is not the end of the story. For example, they would be hurt disproportionately because of their relatively large ownership of financial assets.

Gentry and Hubbard also find a distributional picture somewhat at odds with that described above. First, losses to owners of existing assets would be concentrated in households with high

income and high net wealth. Second, assets with high (above-normal) returns are also concentrated in households with high income and high net wealth, as are assets favored by preferential treatment under the current tax system. Both these considerations suggest that the flat tax would be more progressive than suggested by estimates that neglect transition effects.

#### **D. Currently Inapplicable Motivations**

A value added tax (or other form of sales tax) has sometimes been advocated as a means of reducing the budget deficit of the federal government. (See McLure, 1987.) As such, it would provide a source of additional revenue, as well as perhaps replacing some revenue from the income tax.

This reasoning seems to almost totally absent from the current tax reform debate. Hufbauer (1995), p. 10, notes, "[f]ew if any TBA [tax on business activity] advocates suggest that a tax on business activity should be added to the existing tax structure." The Republican majority is intent on achieving budget balance by reducing spending, not by raising taxes. Moreover, they probably fear that the VAT, once enacted, would become a "money machine," financing future growth of the federal government. Adding a VAT to the fiscal arsenal of the federal government, without eliminating the income tax would add substantially to administrative and compliance costs.

The VAT has also been proposed as a means of financing reform of health care in the United States. This idea also seems t

dead for now (or at least dormant), a casualty of the battle over health care reform.

#### **IV. International Issues**

Until recently U.S. debate on tax reform has been conducted as though the United States were a "closed" economy--especially one closed to international trade and capital flows.<sup>33</sup> This description is still largely accurate of popular debate. But enactment of a consumption tax would have important international consequences, including ramifications for our trading partners. This section describes some of these.

##### **A. Prices, Border Tax Adjustments, and Effects on Trade**

In order to examine the effects on prices, exchange rates, and international trade of substituting a consumption-based tax for the income tax, it is useful to consider separately a) eliminating a uniform income tax and introducing a uniform consumption-based tax b) introducing border tax adjustments, and then c) taking account of non-neutralities in the income tax.

###### **1. Price Effects of Uniform Taxes**

Considered separately, a tax increase reduces real after-tax incomes and a tax reduction increases them. But a reduction (an increase) in factor incomes can be achieved by an increase (reduction) in prices, with nominal incomes remaining constant or by a reduction (an increase) in nominal incomes, with prices remaining constant (or by other equivalent changes). The question,

then, is what is the most likely response to substitution of a consumption-based tax for the income tax, ignoring for the moment the influence of international trade.

Indirect taxes. It is commonly assumed that a retail sales tax or VAT would be reflected in higher prices, instead of lower nominal returns to factors (essentially wages). It is hard to imagine the monetary authorities not accommodating such an increase in prices; given the downward rigidity of wages, especially in unionized sectors, the alternative would presumably be substantial unemployment.<sup>34</sup> The predominance of international experience supports these theoretical conclusions.<sup>35</sup>

Income tax. By comparison, elimination of the income tax probably would not have much effect on either before-tax factor incomes or product prices. Thus substitution of one of the indirect taxes for the income tax would probably result in an increase in product prices, little change in before-tax factor returns, and an increase in nominal after-tax returns.

Flat tax/M-Z hybrid. Adjustment to the flat tax would presumably resemble those to an income tax--no affect on the price level and no affect on before-tax income. Thus substituting it for an income would have no effect on the price level and either before or after--tax factor incomes. Similar results seem likely for the McLure-Zodrow hybrid.

USA tax. The results under the business portion of the USA tax are more difficult to predict. (The individual portion would probably have effects similar to those assumed for the flat tax and

the McLure-Zodrow hybrid.) The basic business tax is a 10 percent subtraction-method value added tax; thus it should have effects similar to those of the RST and the standard VAT. Whether the credit for the payroll tax would offset part of this effect is unclear. The analysis that follows (as summarized in Tables 1 and 3) assumes that it would not.

These results are summarized in Table 1.

**Table 1**  
Probable Effects of Tax Reform  
on Factor Incomes and Product Prices

	Nominal Wages	After-tax Wages	Product Prices	Real Wages
Eliminate income tax	0	+	0	+
Introduce another tax:				
VAT or RST/USA tax	0	0	+	-
Flat tax/M-Z hybrid	0	-	0	-
Net effect				
VAT or RST/USA tax	0	+	+	0
Flat tax hybrid	0	0	0	0

## 2. Border Tax Adjustments of Uniform Taxes

Under the General Agreement on Tariffs and Trade (GATT), indirect taxes can be levied on either an origin or destination basis; that is, products entering international trade can bear either the tax of the country of origin or the tax of the country of destination.<sup>36</sup> A retail sales tax is inherently a destination-based tax, except to the extent sales to tourists and to businesses producing for export are taxed; tax is collected on retail sales of imports, but not on exports. In order for a VAT to be levied on a

destination basis, a) tax must be levied on imports, with no credit for tax paid to the country of origin (no deduction for imports, in the case of a subtraction-based system) and b) tax must not be collected on exports and any tax collected at prior stages must be rebated (deduction must be allowed for costs incurred in earlier stages, under a subtraction-based tax). The collection of taxes on imports and rebate of taxes on export needed to convert a destination-principle tax to an origin-principle tax are commonly called border-tax adjustments (BTAs). Border tax adjustments are not allowed for direct taxes such as income taxes and payroll taxes.

In theory, the choice of origin and destination principles is a matter of indifference in the long run under certain conditions.<sup>37</sup> A shift from one principle to the other would be offset by movements in exchange rates or domestic price levels. (The trade effects of the destination principle are equivalent to those of the origin principle, plus devaluation.) Of course, such adjustments take time, during which, all else equal, the destination principle would be more favorable to trade than the origin principle. Virtually all countries that impose a VAT employ the destination basis. Since the United States would do the same and the RST is inherently a destination-based tax, there is no need to discuss them in detail.

The authors of the flat tax and the McLure-Zodrow hybrid propose that it be levied on an origin basis. By comparison, the

proposal for the USA Tax includes border tax adjustments. These proposals are problematic, but in different ways.

Flat tax/M-Z hybrid. Under any origin-based tax--including the flat tax and the McLure Zodrow hybrid--there would be tremendous pressure on transfer pricing; firms would want to attribute as much value added as possible to foreign countries, in order to avoid paying tax on it in the United States.

To avoid this problem, consideration might be given to imposing these taxes on a destination basis. But direct taxes are not eligible for BTAs under the GATT. Thus it is unclear whether this option is available. Hufbauer (1995, pp. 68-70), argues that, under present interpretation of the GATT, BTAs are unlikely to be allowed for the flat tax, but speculates that the GATT might be amended to allow BTAs, as an accommodation to the United States.

USA Tax. Because of the credit for payroll tax it is unclear whether the USA tax would be eligible for BTAs; it can be argued that the USA tax is an attempt to gain BTAs for the payroll taxes--for which BTAs are not allowed.<sup>38</sup> Hufbauer (1995), p. 2, states, "We conclude that, under current GATT rules, the USA tax can be adjusted at the border. But it is not an open-and-shut case. In particular, a technical question can be raised as to whether the USA Tax is a product tax, and a more substantial question can be raised concerning the USA Tax treatment of the Social Security tax."

Table 2 shows, for various taxes assumed to replace the income tax, depending on how these issues are resolved, (in the first

three columns) the tendencies for movements of domestic prices (from Table 1), import prices, and export prices induced by various combinations of taxes and BTAs, ignoring the restraining influence of international trade. Based on these, one can infer pressures on the U.S. exchange rate, shown in the last column.<sup>39</sup>

**Table 2**  
 Probable Effects of Tax Reform and Border Tax  
 Adjustments on Prices and Exchange Rates

	Effect on Domestic Prices	Effect on Import Prices	Effect on Export Prices	Effect on Exchange Rate
<u>Income tax replaced by:</u>				
RST or VAT	+	+	0	0
USA tax				
Destination-based	+	+	0	0
Origin-based	+	0	+	-
Flat Tax/M-Z hybrid				
Origin-based	0	0	0	0
Destination-based	0	+	-	+

A destination-based tax that raises domestic prices, such as the RST or VAT, also raises import prices and leaves export prices unaffected. Similarly, an origin-based tax that does not raise domestic prices, such as the flat tax or the M-Z hybrid, leaves import and export prices unchanged. In either of these cases there would be little immediate impact on international trade and little effect on the exchange rate. By comparison, if the flat tax or the McLure-Zodrow hybrid were imposed on a destination basis, import prices would rise, relative to domestic prices, and export prices

would fall. This would provide a short-run stimulus to exports and an impediment to imports and lead to an appreciation in the dollar. Conversely, if the USA Tax were levied without BTAs, the price of domestic goods and exports would rise, but the price of imports would not change. The resulting difficulties in competing in both domestic and foreign markets would lead to depreciation of the dollar.

### 3. Other Considerations

The discussion to this point assumes that a neutral income tax would be replaced by a neutral tax on consumption. In fact, this is not the case. At the very least, the existing income tax is not neutral; it applies more heavily to capital-intensive goods than to labor-intensive ones.<sup>1</sup> Whether the tax replacing it would replicate these differentials, be more neutral, or impose yet another set of differentials remains to be seen. Shifts in burdens between the tradeable and non-tradeable sectors would alter the neutrality results described above.

If substitution of a cash-flow tax for the income tax were to increase saving more (less) than investment, it would cause a temporary improvement (deterioration) in the trade balance.<sup>2</sup> Of course, this would eventually be reversed.

The transitional impact of a consumption-based tax would depend crucially on whether it was levied on an origin or destination basis. If levied on a destination basis, such a tax would burden U.S. owners of capital located both in the United States and abroad, but not foreign investors in the United States.

On the other hand an origin-basis tax would burden both resident and foreign investors in the United States, but not U.S. residents investing abroad.

#### **B. Location of Economic Activity**

Outbound U.S. investment. Both the flat tax and the USA tax are levied on a territorial basis; that is, they do not apply to income earned abroad by U.S. corporations. By comparison, under current law, U.S. tax is paid on worldwide income, with credit being allowed for income tax paid to the country where income originates, up to the level of U.S. tax that would be due on such foreign-source income. This has led some observers to believe that these taxes would create an incentive for investment to shift from the United States to other countries that levy lower taxes--the "runaway plant" problem. Hufbauer (1995, p. 68) characterizes this as "a near fatal objection.

This view reflects a fundamental misunderstanding of the nature of consumption-based taxes.<sup>3</sup> As noted earlier, a consumption-based tax exempts the normal return to capital, but not the above-normal return. Thus, a foreign country would not be attractive than the United States to an investor in a project yielding only a normal rate of return, as long as its tax rate was positive. Whether it would be attractive for an investment yielding an above normal return depends on the relation between the tax rates of the two countries and the fraction of total returns represented by normal returns.<sup>4</sup> The higher the fraction of above-

normal returns, the more attractive a low-tax foreign country would be. In any event, the United States would become more relatively attractive than investment in high-tax countries.

This reasoning must be modified if foreign-source income is not distributed currently and/or the U.S. parent is in an excess credit position. If repatriation of foreign earnings is deferred, taxation currently resembles exemption. (Hartman, 1985) Similarly, for multinational corporations with excess foreign tax credits, foreign-source income is effectively exempt, since it can be offset by excess credits. U.S. adoption of a consumption-based tax would eliminate these considerations and make investment in the United States more attractive. The fact that U.S. domestic production currently coexists with these tax inducements to investment in low-tax countries suggests that the risk of plants running away is not as great as sometimes claimed.

Inbound investment. Foreigners considering investing in the United States would face the mirror image of this problem. Two cases deserve consideration. First, investments yielding only a normal return made by residents of countries taxing only domestic-source income would be taxed at a lower effective rate in the United States than in the home country; the results for investments yielding above-normal returns would depend on tax rates and the profitability of the investment. Given the predominance of territorial taxation in Latin America, this is the most relevant case for the audience of this paper. U.S. adoption of an

territorial consumption-based tax would reduce the intellectual case for shifting to residence-based taxation.

The second case involves countries taxing the worldwide income of their multinational corporations, but offering credits for taxes paid to foreign countries, such as the United Kingdom and Canada. These countries should not notice any effect on locational considerations faced by their multinational firms that repatriate profits currently and do not have excess credits, if they were to allow credit for the consumption-based tax levied by the United States. (See also the discussion that follows of whether such taxes should be creditable.) Lower foreign tax credits would offset lower tax paid to the United States. (Foreign tax credits would presumably be lower, because the United States would tax only abnormal profits.) But firms that do not repatriate profits currently or that have excess foreign tax credits would find the United States a more attractive place to invest, particularly in industries yielding only a normal return.

Income on passive investments made in the United States by foreigners poses a somewhat different issue, since it is largely tax-free now.<sup>5</sup> If interest deductions were eliminated, as under the flat tax, interest rates paid in the United States would presumably fall. This would eliminate the current preference for passive investment in the United States, making investment at home relatively more attractive.

### **C. Other Issues**

#### 1. Effects on Saving, Investment, and Interest Rates

Replacement of a consumption-based tax would increase the return to equity-financed investment. This would encourage increased equity investment, especially in the corporate sector, where double taxation of equity income now occurs because of the classical system (separate taxation of dividends and corporate income).

It has commonly been thought that substitution of a consumption-based tax for the income tax would also lead to a reduction in interest rates, with no net effect on the after-tax cost of debt financing or the return to saving, since interest would no longer be taxable or deductible. This reasoning ignores the integration of world capital markets and the benefits of expensing. Since interest rates are unlikely to fall by enough to offset the loss of the interest deduction, the interest rate paid on debt capital would rise. But this effect on the cost of capital to business would be offset by the benefits of expensing.

If current preferential treatment for non-corporate investment were eliminated (the deduction of interest on home mortgage interest) or neutralized by making it generally available (the exemption of interest on state and local securities), there would be a substantial increase in the supply of funds to the corporate sector. This would also counteract the tendency for interest rates on corporate debt to rise. By comparison, since much of current saving is currently tax preferred the tendency for saving to increase would be reduced.

## 2. Shifting of Income

Because interest expense would not be deductible or taxable in the United States under the flat tax, there would be an incentive to shift borrowing to other countries, where interest would be deductible, and to shift interest income to the United States. (See the discussion of potential abuses of the YET above.) To the extent these shifts were offset by shifts in other income or expenses, there would be no net affect on revenues of foreign countries. But it is to be expected that this would not be the case--that transactions would be structured in such a way as to place offsetting income in tax haven countries and offsetting deductions in countries where they could be utilized. This could create substantial loss of tax revenue for foreign countries. The shift of debt and interest expense to other countries could be counteracted by provisions such as thin capitalization rules.

## 3. Foreign Tax Treaties

The United States has imposed the income tax since 1913. During that time it has built up an imposing network of treaties with other countries intended to prevent (or at least mitigate) the double taxation of income; even where treaties do not exist, U.S. taxpayers are allowed credits for taxes paid to foreign countries where they earn income. Much of the current debate on U.S. tax reform ignores these two facts and the stumbling blocks they represent to successful implementation of such a tax reform.

## **V. One Final Issue: The Foreign Tax Credit Issue**

At various times in recent years several Latin American countries have flirted with the idea of introducing a consumption-based direct tax. Although Mexico may have been the first, Colombia and Bolivia are the best documented. (On Colombia, see McLure et al., 1990; on Bolivia, see McLure and Zodrow, forthcoming, b.) While perhaps gaining in interest, especially among economists, such taxes are probably generally still seen as exotic deviations from the international norm, and thus suspect. A serious U.S. debate on the pros and cons of consumption-based direct taxation could focus attention on the issue throughout Latin America and the Caribbean and lend respectability to the idea.

Any country considering adoption of a consumption-based tax would be forced to wrestle with the issues raised above, notably distributional effects, transition, and the treatment of gifts and bequests. Moreover, it would face a particularly vexing version of the international issues raised above. Bolivia's recent experience is instructive.<sup>6</sup>

The United States allows foreign tax credits only for income taxes and taxes on excess profits. While the economic case for creditability of a consumption-based direct tax is compelling, actually gaining creditability under existing regulations is far from easy or certain. Since the yield exemption approach does not allow a deduction for interest expense, it does not look like an income tax. Nor does the consumed income tax, since it includes the proceeds of borrowing in the tax base. The fact that expensing offsets the effects of the disallowance of interest deductions (and

that the expenditure of borrowed funds would offset the inclusion of borrowing in the tax base) is not dispositive for the U.S. Internal Revenue Service (IRS), which "looks at the form, not the substance" of the tax. Thus the IRS was unwilling to say that it would grant foreign tax credits for the hybrid tax proposed for Bolivia.

There are reasons that the issue of creditability may be more symbolic than real. First, not all countries tax the worldwide income of their taxpayers; some tax only income from domestic sources. For taxpayers from such countries the creditability issue is moot. Second, not all countries have rules that are as strict--or as strictly interpreted--as the United States. Third, creditability is an issue only when foreign-source income is repatriated; taxation of income that is not repatriated resembles more closely source-based taxation. Finally, many U.S. corporations have excess foreign tax credits. Where this is true, creditability is a secondary issue; there will be no credits in any event. Having said all this, a country must none-the-less be chary about enacting a tax that will not be credited. If nothing else, eligibility for the foreign tax credit is a kind of "good housekeeping" seal of approval.

#### ENDNOTES

1. Note, however, that consumption taxes were considered, before being rejected in favor of a reformed income tax in U.S. Treasury Department (1984).

2. On these adjustments, see Tanzi (1987), (1988) and Whalley (1990).

3. For example, Representative Dick Gephardt (D-Missouri) would retain the basic structure of the income tax, but eliminate all personal deductions, except that for mortgage interest. The standard deduction would be \$8,350 for married couples and the personal exemption would be \$2,750. Although mysteriously (and misleadingly) called the "10% Tax," the Gephardt plan would tax individual income at rates ranging from 10 percent to 34 percent. Contributions to pensions would no longer be tax deductible (but taxation of the build-up in pension values would still be deferred until withdrawn) and the tax rate on capital gains would no longer be subject to a ceiling (currently 28 percent). The thrust of these changes is diametrically opposed to that of consumption-based proposals. They have virtually no chance of passing a Congress controlled by the Republicans.

4. The traditional distinction between indirect and direct taxes is not really satisfactory; in some cases it becomes blurred. The distinction between personal and impersonal taxes is explained below.

5. Archer has not indicated who would collect the tax in a world without the IRS. The proposal to have a federal sales tax administered as an add-on to state sales taxes is ludicrous. Some states do not even have sales taxes, and tax bases differ from state to state.

6. Under a subtraction-method VAT, tax is the product of the tax rate (usually stated on a tax-inclusive basis) and the difference between sales and purchases. By comparison, under a credit-method tax, liability is the product of the (tax-exclusive) tax rate and sales, minus credit for tax on purchases. In simple cases the two methods (and an RST) give the same result. More generally they do not; see McLure (1987), especially chapter 6. The states of Michigan and New Hampshire levy yet a different type of VAT; under the addition method (which is similar to the subtraction method) components of value added (wages, profits, etc.) are summed to derive the tax base.

7. There is actually a third pure form of consumption-based direct tax, one based on net cash flow from the business sector; see Institute for Fiscal Studies (1978). Since policymakers have shown no interest in it, it is not discussed further.

8. The Arme y bill (S. 4585) and the Specter bill (S. 488) differ slightly. For example, the Specter bill, but not the Arme y bill, would allow deductions for charitable contributions and interest on home mortgages. For further details, see U. S. Congress (1995).

9. The Arme y bill would allow a basic standard deduction of \$24,700 for a couple filing a joint return and an additional standard deduction of \$5,000 per dependent; the comparable figures for the Specter bill are \$16,500 and \$4,500. By comparison, the standard deduction under present law is \$6,500, and there is a personal exemption of \$2,500 (1995 level, to be indexed for inflation) for the taxpayer, spouse, and each dependent. In each case, the standard deduction depends on the filing status of the taxpayer (i.e., joint return, single, etc.).

10. For more complete descriptions, see Hall and Rabushka (1995) or Zodrow and McLure (1991). McLure et al. (1990), a report to the government of Colombia (published in Spanish as McLure et al., 1988), included such a tax, but with graduated rates. "Income" is placed in parentheses to indicate that it refers to a tax base that is analogous to income, but different.

11. Both the flat tax and the consumed income tax are sometimes lumped together as "cash-flow taxes." Reflecting the fact that cash flow treatment is provided for real assets, but financial flows are ignored, the U.K.'s prestigious Meade Commission (Institute for Fiscal Studies, 1978) called the resulting tax base the R (real) base. By comparison, it called the CIT described below an R+F (real plus financial) base, since debt transactions and interest flows are considered in calculating taxable cash flows. I have adopted the YET/CIT terminology to avoid potential confusion.

12. But see U.S. Treasury Department (1977) and Aaron and Galper (1984).

13. The personal living allowance would be \$7,400 for a couple filing a joint return; personal and dependent deductions would be \$2,550 for the taxpayer, spouse, and dependents, comparable to the \$2,500 in current law. Deduction would be allowed for educational expenses of up to \$2,000 per year per student, for up to 4 students, for a total of up to \$8,000.

14. By comparison, the current tax rates on individual income are 15, 28, 31, 36, and 39.6 percent; couples filing joint returns reach the last two rates at income levels of \$143,600 and \$256,500, respectively.

15. Note, however, that for a high-income individual who does not save the aggregate marginal effective tax rate would be 46.6

percent (40 percent individual tax plus 11 percent business tax on after-tax income [which is 60 percent of before-tax income]).

16. Many see reducing the federal budget deficit (which is a form of dissaving) as a more promising way to increase aggregate saving. Hufbauer (1995), pp. 3-13, and U.S. Congress (1995), pp. 61-68 reviews evidence and literature on U.S. saving behavior.

17. In practice the RSTs levied by the states commonly apply to a substantial amount of investment goods; this problem could be greatly reduced if a concerted effort were made.

18. In this case the investment is written off in the second year, via depreciation. Thus the private investment of the taxpayer is the full \$100, before-tax income is \$10 (\$110 gross receipts minus \$100 depreciation), tax is \$3 (30 percent of \$10), and net income is \$7. Since taxation reduces the return from 10 percent to 7 percent (\$7 as a percent of \$100), the METR is 30 percent.

19. Strictly speaking, consumption-based taxation may not encourage greater saving, even though, unlike the income tax, it is neutral with regard to the choice between current and future consumption. For a simple explanation of this point, which is ignored in what follows, see McLure (1980). If those saving for retirement are "target savers" who want to be able to accumulate a "nest egg" of a given size in order to be able to finance a target level of consumption during retirement, an increase in the rate of return may actually lead to a reduction in saving. On the other hand, the lump-sum taxation of existing wealth represented by a consumption-based tax with no transition relief (discussed below) would spur such individuals to increase saving.

20. For alternative estimates of these effects, see Auerbach (1995).

21. U.S. Treasury Department (1984) does not state this objective in these words. I developed this formulation during the period following that report. See also McLure and Zodrow (1987).

22. Blumenthal and Slemrod (1992) have estimated that individual taxpayers devote an average of 27.4 hours to tax matters annually; they estimate the aggregate cost in time and money to be between 5 and 7 percent of total revenue collected from individual income taxes. Slemrod and Blumenthal (1993) combines these figures with estimates of costs of the corporate income tax, concluding that total costs of compliance and administration may be as much as \$75 billion annually, or 10 percent of total revenue from federal and state income taxes.

23. For further explanation, see McLure (1988) or Zodrow and McLure (1991).

24. This section draws on McLure and Zodrow (forthcoming, a).

25. U.S. Congress (1995), p. 37 notes that, as drafted, the flat tax appear to apply tax to interest income of financial intermediaries, while allowing no deduction for interest expense. As noted there, this is probably unintended. It seems more likely that the intent is to exempt the financial sector. For further discussion of the taxation of financial services, see U. S. Congress (1995), pp. 107-115 and references cited there.

26. The interest rate used would be rate on 3-month Treasury bills; see U.S. Congress (1995), p. 33.

27. Ginsburg (1995) writes, "The legislation seems unlikely of enactment, surely unlikely of enactment in the form introduced...."

28. The alternative mentioned in the last sentence is what we have called the CIT. Regarding the transition provisions, Ginsburg concludes:

In any event, a cash flow consumption tax which (1) includes borrowed amounts in the tax base and (2) does not hold the recovery of pre-enactment basis hostage to taxpayers' post-enactment conduct, may not solve all the problems and eliminate all the opportunities real life and the tax bar can produce--the rich will persevere--but it will perform measurably better the task to which the Nunn-Domenici proposals are addressed.

29. Another potential problem is the interaction of a federal tax on consumption and state RSTs. It is not discussed here, because it is a problem primarily for the VAT (and perhaps the RST). See, however, McLure (1987), chapter 9.

30. See Samuels, 1995. Note that these estimates are based on annual flows of income and consumption. Estimates in which taxation is related to lifetime income are much less regressive. See Fullerton and Rogers (1993).

31. Kotlikoff (forthcoming) finds an increase in long-run output of 8 percent from replacing the income tax with a RST if there is no transition relief, but 6 percent if relief is provided.

32. Gentry and Hubbard (1995) suggest dividing the *ex post* return to capital into 4 components: the opportunity cost of capital (the return to waiting), the risk premium, economic profit, and the difference between *expectations* and realizations ("luck"). Gordon and Slemrod (1988) found that in 1983 substituting cash-flow taxation for income taxation of financial assets would have increased tax revenues slightly. Of course, 1983 was just before

the Tax Reform Act of 1986 (which was motivated in part precisely by such findings) reduced the problem markedly.

33. See McLure (1990) and (1992).

34. For a similar view, see Hall (1995). By comparison, Auerbach (1995) suggests that it is inappropriate to prejudge this issue.

35. See Tait (1988), pp. 191-213.

36. Implicit in this description is the assumption that products will be treated consistently by the importing and exporting countries. If not, they will be subject to double taxation (origin taxation in the exporting country and destination taxation in the importing country) or no taxation (destination taxation in the exporting country and origin taxation in importing country). This is not the issue here. The intent is merely to indicate what the two systems mean. See also U.S. Congress (1995), pp. 68-71. Hufbauer (1995) provides a detailed analysis of the interpretations given to these GATT rules. He concludes that the GATT is an evolutionary document and that BTAs may be allowed for direct taxes for imports of goods, but probably not for exports, that symmetry is not required in the treatment of imports and exports, and that BTAs may be allowed for direct taxes for both imports and exports of services.

37. This proposition was first demonstrated in a 1953 report of the European Iron and Steel Commission. More recent and more sophisticated demonstrations include Johnson and Krauss (1970), Harberger (1974), and Feldstein and Krugman (1990).

38. The argument in Hufbauer (1995), p. 68, that the credit for the 7.65 payroll tax on employers is tantamount to earmarking part of revenues for the social security trust funds is not totally convincing. There is no doubt that BTAs would be allowed for the USA Tax if the payroll tax were repealed and revenues from the USA Tax were earmarked for the trust funds. This is not what is proposed. Cosmetics are very important in this business.

39. For a similar exercise, see Hall (1995).

1. This may mean that it applies more heavily to tradeables than to non-tradeables. Samuels (1995) suggests that there would be little effect on competitiveness from this source. Feldstein and Krugman (1990) concentrate on the other side of the replacement, the possibility that the VAT would not be neutral.

2. National accounting provides the following identity:

$$C + S + (T - G) = C + I + (X - M)$$

where C is consumption, S is saving, (T - G) is the budget surplus (taxes minus government spending), I is investment, and

(X - M) is the trade surplus (exports minus imports). All else equal, if S - I increases, the trade surplus must increase.

3. This discussion draws heavily on Grubert and Newlon (1995).

4. Assuming all returns to be distributed immediately, the U.S. consumption-based tax would impose a lower tax burden than a foreign income tax, if:

$$U \times A < F \times T,$$

or: 
$$U < F/a,$$

where U is the tax rate in the United States, F is the foreign tax rate, A is above-normal profits, T is normal profits, and a is A/T, the percentage of total return represented by above-normal returns. Thus, for example, if the United States were to levy a flat tax of 24 percent and the normal return represents one half of the total return, the United States would be competitive with a foreign country with a tax rate as low as 12 percent. Of course, this discussion assumes that the investment is not specific; if it is, tax considerations would not dictate location.

5. This discussion draws on McLure (1989b).

6. The following draws on McLure and Zodrow (1996).



## APPENDIX A

### Six Consumption-Tax Alternatives<sup>1</sup>

Virtually all the consumption-based taxes levied in the world fall into the category of indirect taxes--taxes that are levied on business with the expectation that they will be shifted to consumers--who pay the tax "indirectly." There are few extant examples of a direct consumption tax--a tax levied directly on the consumption of individuals, commonly through wage withholding and the filing of tax returns; the tax recently enacted by Croatia is the only direct consumption tax of general applicability of which we are aware.<sup>2</sup> Among the possible reasons for the dearth of direct consumption-based taxes in other countries, one is paramount: concern that the United States would not allow its multinational corporations to take foreign tax credits against liability for U.S. income tax for direct consumption-based taxes paid to countries in which they operate.<sup>3</sup>

The primary economic difference between direct and indirect taxes on consumption is the capacity of the former to allow for the circumstances of individual taxpayers--their marital status, their number of children, their aggregate consumption, etc., which indirect taxes cannot do. It is possible to exempt a threshold level of consumption from a direct tax and to impose graduated rates on consumption above that level, thereby avoiding burdens on those with low levels of consumption and adding progressivity to the pattern of tax burdens. To avoid burdens on the poor under an indirect tax is very difficult. It involves exemption of food and other necessities--a very blunt and inefficient tool for protecting the poor from taxation, since the non-poor also benefit from such exemptions. Thus it is commonly thought necessary to link imposition of an indirect consumption tax with reform of income maintenance policies, in order to compensate for the burden of such taxation on the poor. It is even more difficult to achieve meaningful progressivity in indirect taxation of the non-poor, through taxation of luxury consumption; moreover, this is an administratively cumbersome device.

#### I. Indirect Consumption Taxes

Retail sales tax (RST) is what most states impose, primarily on sales to households, but (unfortunately) also on many purchases by business. Though relatively simple to collect and a useful benchmark for the analysis of other forms of consumption taxation, a federal RST seems unlikely. It would trespass on the fiscal turf of the states. Unless state taxes were levied as surcharges on a base defined by the federal government, administration would be needlessly complicated.

Value added tax (VAT), the revenue work-horse in Europe (and the rest of the world, for that matter), achieves pretty much the same result as the RST, but in a different and better way.<sup>4</sup> VAT is levied on all sales, but businesses are allowed credits for all tax paid on purchases, including capital goods; since there is

ultimately no tax on business purchases, contrary to the case under the RST, only VAT on sales to households really matters. Like the RST, VAT infringes on the tax base of the states. Since the two taxes are imposed in very different ways, it would be impossible to levy RSTs as surcharges on a federal VAT. Experience in Canada confirms what many feared--that the combination of a federal VAT and state (provincial) RSTs is problematical. Since compliance and administration would be costly, especially for small business, VAT makes sense only if large amounts of revenue--say \$100 billion or more--are needed. Once imposed, the VAT might become a "money machine."

Business transfer tax (BTT), sometimes called a subtraction-method VAT, also does what the RST and VAT do, but in a way that resembles the income tax. Tax is levied on the difference between the sales and purchases of business (including purchases of depreciable assets, but not wages and salaries). Thus the BTT uses an immediate deduction (often called "expensing" in the case of capital goods), instead of tax credits, to avoid taxation of business purchases, including capital goods. The BTT would be easier than VAT to implement. Thus, both states and business might object less to a BTT than to a VAT. That state RSTs could apparently co-exist with a federal BTT make this scheme potentially attractive. Japan is the only developed country to have such a tax, which it levies at a relatively low rate.

## II. Direct Consumption Taxes

The yield-exemption tax (YET), which we have previously proposed under the name "simplified alternative tax," modifies the BTT by allowing a business deduction for wages and levying an individual tax on wages above a given threshold.<sup>5</sup> (It is the capacity to "personalize" the taxation of wages that makes this a direct tax.) The tax-free amount would eliminate tax on low-income households, and application of graduated tax rates to wages above the tax-free amount would allow progressivity, if that were desired. This tax also admits the possibility of itemized deductions, similar to those in the current income tax.

The "flat tax" popularized by Robert Hall and Alvin Rabushka (1983, 1985, and 1995) and supported by Congressman Armey is a variant of the YET. The tax is said to be "flat" because there would be a single tax rate on wages in excess of the tax-free amount; the same rate would be applied to income from capital.

Debt transactions have no tax consequences under the YET. Neither businesses nor individuals pay tax on dividends, interest, and capital gains; interest expense is not deductible. The consumed income tax (CIT) treats financial transactions differently.<sup>6</sup> Proceeds of borrowing, receipt of debt repayments, and interest income are taxable; lending, repayment of debt, and interest expense are deductible. Under certain conditions the YET and the CIT are equivalent in present value terms. The CIT could accommodate either flat or graduated rates.

The hybrid consumption tax (HCT) combines CIT treatment of business with YET treatment of individuals. That is, businesses

pay tax on interest income and the proceeds of borrowing (unless invested) and deduct lending and interest expense. By comparison, individuals ignore all transactions in principal and interest on debt. This hybrid consumption tax is, I think, preferable to either pure form, for reasons stated in the text; it achieves the benefits of both, while avoiding most of their pitfalls.

The Unlimited Savings Account (USA) tax combines a subtraction-method VAT on business with taxation of individuals (essentially, the present income tax with a deduction for net saving) that resembles CIT treatment, but is far more complicated and has undesirable economic consequences. It would allow credit against the individual and business taxes for the 7.65 percent payroll taxes that fund social security.

#### ENDNOTES, APPENDIX A

1. This appendix is based on McLure (1995). For more detailed discussion, see McLure (1993).

2. Many income taxes contain a variety of features that are more appropriate for consumption-based taxes, and Mexico taxes small business on a cash-flow basis.

3. See McLure, Mutti, Thuronyi, and Zodrow (1990, chapter 9) for a discussion of this issue in the Colombian context. Working in Bolivia, we have recently been unable to convince the Internal Revenue Service that a business cash-flow tax (a component of direct consumption-tax proposals) should be eligible for the foreign tax credit.

4. For a detailed exposition of the operation of the VAT and the BTT, see McLure (1987).

5. See McLure (1988); McLure, Mutti, Thuronyi, and Zodrow (1990); McLure and Zodrow (1990); Zodrow and McLure (1991). Bradford (1986) has also supported this type of tax. See also U.S. Treasury Department (1977).

6. See U.S. Treasury Department (1977) and Aaron and Galper (1985).

APPENDIX B

ECONOMIC EFFECTS OF ALTERNATIVE TAX SYSTEMS<sup>1</sup>

Despite the inherent complexity of modern economies and tax systems, it is possible (and now common) to summarize the economic effects of the taxation of business and capital under various tax systems by calculating the marginal effective tax rate (METR) inherent in such provisions as depreciation allowances, investment credits, the treatment of interest, the rate of inflation, and adjustments for inflation.<sup>2</sup> The METR is the percentage by which taxation reduces the before-tax rate of return. While METR analysis is fairly complicated, for present purposes an extremely simplified form of this method of analysis will suffice. It is based on a two-period model in which a very simple investment is made in Year 1 and the return to investment occurs in Year 2.<sup>3</sup>

Assume that a firm makes an investment of \$100 at the end of Year 1. Assume initially that it uses its own money, rather than relying on debt finance--a complication to be considered below. The investment earns returns for only one full year (Year 2), during which time the value of the investment asset depreciates to zero. (For convenience, all other expenses are ignored, except for interest, in the case of debt finance, to be analyzed below.)

Two cases will be considered. In the first, the investment return is 10 percent, which is assumed to equal "the" rate of interest prevailing in the economy; following common practice among economists, this is called the "normal" return to capital. In the second case, the investment pays an above-normal return of 15 percent.

1. Income tax on economic income

Equity finance. Under a tax on economic income, the cost of the investment would be written off in the second year, since all economic depreciation is assumed to occur in that year. Thus the calculation of the tax base for an equity-financed investment would be as shown in Table B-1.

Table B-1  
Calculation of the Base of a Tax  
on Economic Income; Equity Finance

	<u>10% return</u>	<u>15% return</u>
<u>Year 1</u>		
Investment	Depreciated in Year 2	Depreciated in Year 2
Net taxable income	0	0
<u>Year 2</u>		
Gross receipts	110	115
Depreciation	<u>100</u>	<u>100</u>
Net taxable income	10	15

The result is what one would expect; the income tax base is exactly equal to net income in the two cases: 10 percent of the initial investment in one case and 15 percent in the other. The income tax does not distinguish between the normal return to capital (10 percent in this example) and the above-normal return (the additional 5 percentage points in the case of the 15 percent rate of return); it applies to both.

Debt finance. Consider now the case of debt finance in Table B-2. In year 2 the \$10 deduction for interest expense exactly offsets the return on the investment yielding a normal return, leaving a zero tax base. (The income is taxed as interest income, if interest is subject to tax.) By comparison, in the case of the investment yielding 15 percent, the above-normal return would be subject to tax.

Table B-2  
Calculation of the Base of a Tax  
on Economic Income; Debt Finance

	<u>10% return</u>	<u>15% return</u>
<u>Year 1</u>		
Investment	Depreciated in Year 2	Depreciated in Year 2
Net taxable income	0	0
<u>Year 2</u>		
Gross receipts	110	115
Depreciation	100	100
Interest expense	<u>10</u>	<u>10</u>
Net taxable income	0	5

2. Consumption-based direct taxes

With this background, we are ready to consider the effects of the two consumption-based direct taxes.

Equity finance. In the case of equity finance, the only analytical difference between the consumption-based direct tax and the tax on economic income is that under the former the cost of investment is deducted in the first year, instead of being depreciated. Since there is no positive cash flow in Year 1, this deduction must be carried forward with interest (calculated at "the" interest rate of 10 percent) to Year 2, in order to maintain its present value and make it comparable to the monetary magnitudes in Year 2.<sup>4</sup> Table B-3 presents the calculations of taxable cash flows resulting from the two alternative equity-financed investments. The benefit of expensing is sufficiently great that the normal return to investment is, in effect, exempt from tax under the consumption-based direct tax. However, if the investment earns above-normal returns, such above-normal returns are taxed.

Table B-3  
Calculation of the Base of a Consumption-  
Based Direct Tax; Equity Finance

	<u>10% return</u>	<u>15% return</u>
<u>Year 1</u>		
Investment (expensed)	-100	-100
Net taxable cash flow	-100	-100
 <u>Year 2</u>		
Gross receipts	110	115
Cash flow before loss offset	110	115
110% of Year 1 excess deductions	-110	-110
Net taxable cash flow	0	5

Debt finance. Suppose that the business borrows \$100 at an interest rate of 10 percent and makes an investment yielding alternatively 10 percent or 15 percent. The debt is repaid at the end of Year 2. The two cash-flow taxes would treat interest and debt transactions differently.

Under the consumed income tax proceeds of borrowing would be included in the tax base for Year 1, and interest expense and the repayment of debt would be deductible in Year 2. Because the proceeds of borrowing offset investment expense, there are no excess deductions in Year 1, as there are in the case of equity finance (and the YET considered below). Table B-4 illustrates the calculations of the tax base under the CIT for the two years.

Table B-4  
Calculation of Base for the Consumed  
Income Tax; Debt Finance

	<u>10% return</u>	<u>15% return</u>
<u>Year 1</u>		
Proceeds of borrowing	100	100
Investment (expensed)	-100	-100
Net taxable cash flow	0	0
 <u>Year 2</u>		
Gross receipts	110	115
Repayment of debt	-100	-100
Interest expense	-10	-10
Net taxable cash flow	0	5

In the case of the 10 percent return, the investment only covers the cost of borrowing and, as in the case of equity finance, there is no tax liability. If the investment yields a return greater than the interest rate, there is a net tax liability, which is identical to that incurred in the case of equity finance and above-normal returns.

Under the yield exemption tax, neither debt transactions nor interest payments have tax consequences. The excess deductions

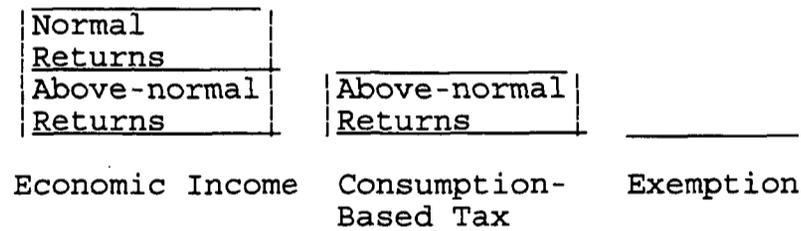
resulting from expensing of the investment in Year 1 are carried forward to year 2 with interest. Table B-5 shows the net results, which are the same as in Table B-4, in the aggregate.

Table B-5  
Calculation of Base for the Yield  
Exemption Tax; Debt Finance

	<u>10% return</u>	<u>15% return</u>
<u>Year 1</u>		
Investment (expensed)	<u>-100</u>	<u>-100</u>
Net taxable cash flow	-100	-100
<u>Year 2</u>		
Gross receipts	110	115
110% of Year 1 excess deductions	110	110
Net taxable cash flow	0	5

Figure 1 can be used to present the results of this section graphically.<sup>5</sup> The three sets of blocks represent amounts of "income" from an equity-financed investment that are taxed under various tax regimes: above-normal returns and the normal return. The base of the tax on economic income is the total return to capital (both normal and above-normal returns). By comparison, the base of the cash flow tax is only above-normal returns.

Figure 1  
Components of the Tax Base, under Various Tax Regimes  
Equity Financed Investment



**ENDNOTES, APPENDIX B**

1. This appendix is taken from McLure and Zodrow (1995). U.S. Congress (1995) pp. 53-58 also demonstrates the equivalence of various types of consumption-based taxes.

2. The locus classicus for METR analysis is King and Fullerton (1984). It has now been applied, commonly many times, in many countries.

3. For more extensive use of this methodology, see McLure et al. (1990).

4. In the case of a "stand-alone" investment, there would be an excess deduction (negative cash flow or "losses") in the first year. Some taxpayers would be able to use the deductions currently to offset other income. The conclusions presented here are independent of which of these analytical conventions is used. In either event, the excess deductions would be carried forward with interest to offset positive cash flow in the second year. It would be appropriate to use the prevailing 10 percent interest rate to compound deductions taken in Year 1 to make them comparable to the monetary magnitudes in Year 2.

5. Since the possible existence of above-normal returns may confuse the issue, it is convenient to recast Figure 1 to eliminate such returns, as is done below. This shows why it is sometimes said (imprecisely) that a consumption-based direct tax is equivalent to exemption of the return to capital. If there are no above-normal returns, such a tax is equivalent to exemption of the return to capital.

Components of Tax Base under Various Tax Regimes  
Equity Financed Investment, Ignoring Above-normal Returns

	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr><td style="padding: 2px;">Expenses</td></tr> <tr><td style="padding: 2px;">Normal return</td></tr> </table>	Expenses	Normal return	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr><td style="padding: 2px;">Normal return</td></tr> </table>	Normal return	
Expenses						
Normal return						
Normal return						
Gross Receipts	Economic Income	Consumption Based Tax	Exemption			

## APPENDIX C

### TRANSITION ISSUES

Individuals, families, business firms, governments, and other institutions have made countless commitments on the expectation that the income tax will continue to exist in roughly its present form. Unless accompanied by carefully crafted transition rules, substitution of a consumption-based tax for the income tax would confound those expectations and create windfall gains and losses.<sup>1</sup> A few examples should help clarify this.

Expensing replaces depreciation allowances under a consumption-based tax. What then, should be done about the existing undepreciated capital stock? Allowing immediate write-off for the remaining basis would entail large revenue losses. But requiring that the remaining basis be written off according to original depreciation schedules would place owners of existing depreciable assets at a competitive balance, relative to owners of new assets, which would be expensed. Besides, existing assets would presumably benefit from expensing if it were sold. Such "churning" is not efficient (unless it is merely a tax-motivated paper sham with no substance).

The USA Tax would allow depreciable assets with remaining recovery lives of 15 or less years to be written off over 10 years; assets with remaining lives of more than 15 years would be recovered over 30 years. On average these rules seem very harsh.

The USA Tax takes an even more draconian approach to several other issues of business taxation. It would eliminate carryovers for net operating losses and capital losses, for foreign tax credits, and for credits for minimum tax paid in prior years.

Existing debt creates another type of problem. Under the flat tax, interest is neither taxable nor deductible. But how should interest on existing indebtedness be treated if a flat tax is adopted? Continuation of income-tax treatment of outstanding debt would postpone realization of the simplicity benefits of the flat tax and probably lead to abuse. But if flat-tax treatment were extended to interest on existing debt, there would be huge windfall gains (to creditors, who would receive interest tax-free) and losses (to debtors, who could not deduct interest expense). The suggestion that debtors would simply call debt and reissue it at lower interest rates is unrealistic; much debt does not have call features.

The consumed income tax has different transition problems. Under the CIT, tax is paid on dissaving. But what about savings that have been accumulated under the income tax, from after-tax income? (Savings accumulated from before-tax income, with the expectation that they will be taxed upon distribution, are less problematic; they are already taxed under CIT principles.) Subjecting them to taxation when dissaving occurs would impose large windfall losses on holders of existing wealth, many of whom expect to rely on such savings for retirement income. The

complicated proposal to deal with this problem under the USA Tax, discussed in the text, is quite unsatisfactory.

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**ENDNOTES, APPENDIX C**

1. For more complete discussion of transition of transition issues, see Sarkar and Zodrow (1993) and U.S. Congress (1995) pp. 83-92 and literature cited there.

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