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# Implementing Direct Consumption Taxes in Developing Countries

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This paper argues that replacing an income tax with a direct tax on individual consumption may be a feasible policy option for a developing country. Such a tax should include (1) a flat-rate "consumption-based" business tax that allows immediate expensing of all business-related nonfinancial purchases, and (2) an individual tax with progressive marginal rates on a base of all wages and pension receipts plus gifts and inheritances received. It could be supplemented by an individual wealth tax.

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This report examines the possibility of using a direct tax on consumption as a replacement for an existing income tax within the context of a developing country. The structural differences between income and consumption taxes are described, and some simple examples are used to illustrate the basic differences in the taxation of businesses and individuals under the two approaches. A variety of critical structural features of a direct consumption tax are addressed, including (1) the rationale for including a business tax in a consumption-based tax system, (2) the treatment of debt at the business level, (3) the differences between "cash flow" and "tax prepayment" treatment at the individual level, and (4) alternative means of taxing gifts and bequests at the individual level.

The report includes a brief survey of the extensive literature on the choice between income and consumption as the basis for a system of direct taxation. This survey compares the relative merits of the two approaches in

terms of the standard criteria of simplicity, equity, economic neutrality and efficiency, and consistency with economic growth. The discussion focuses on issues that are particularly relevant in a developing country context, and argues (primarily on simplicity grounds) that a consumption tax may well be preferable to an income tax as the form of direct taxation in a developing country.

After a detailed discussion of the choice between cash flow and tax prepayment treatment at the individual level under a direct consumption tax, the analysis concludes that for simplicity reasons the individual tax prepayment approach is the more appropriate one in the developing country context. The report then describes the structure and implementation of such a direct consumption tax. The discussion includes an examination of international and transitional issues, and also comments on the desirability and feasibility of supplementary wealth taxes and taxation on a presumptive basis.

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## IMPLEMENTING DIRECT CONSUMPTION TAXES IN DEVELOPING COUNTRIES

George R. Zodrow and Charles E. McLure, Jr.

### I. INTRODUCTION

Recent years have seen the development of two important trends in the area of consumption taxation. First, and most obvious, is the ascendancy of the value added tax (VAT) as the preferred form of broad-based tax, in both developed and developing countries. As little as twenty-five years ago, the VAT existed only in France, and even there in only a very rudimentary form. Since then, adoption of the VAT has been made a prerequisite for membership in the European Economic Community (EEC), several European countries that are not members of the EEC have adopted the VAT, and the tax has spread throughout the Third World. In all some forty countries now utilize the VAT.<sup>1</sup>

Paralleling the rise of the use of the VAT has been increased interest in a different form of consumption tax, a direct tax that can be tailored to the economic circumstances of the taxpayer. Direct consumption taxes have been given such names as an expenditure tax, a personal tax on consumption, a tax on consumed income, a cash flow lifetime income tax, a personal exemption VAT, the Simplified Alternative Tax, and simply "Plan X."<sup>2</sup> Academic economists have been interested in taxes of this type primarily because they generally do not alter the terms on which present consumption can be exchanged for future consumption; under certain highly

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1/ See Shoup (forthcoming), and Tait (forthcoming).

2/ Among standard references are Andrews (1974), Bradford (1980, 1986), Lodin (1978), Institute for Fiscal Studies (1978), Aaron and Galper (1985), Mieszkowski (1977, 1980), and U.S. Department of the Treasury (1977).

restrictive assumptions, a consumption tax that exhibits such intertemporal neutrality is an "optimal tax" in the sense that it minimizes tax-induced distortions in individual decision making.<sup>3</sup> Opponents of the double taxation of capital income inherent in the traditional income tax favor a switch to a tax based on consumption for a somewhat different though related reason: it is believed that such a switch would stimulate saving and capital formation. To others, the attraction of a tax based on consumption is quite different. They see the possibility of avoiding the two most difficult income measurement problems that are inherent in the implementation of an income tax; specifically, under a consumption-based direct tax, timing issues do not exist, and there is no necessity for inflation adjustment in the measurement of income.<sup>4</sup>

The focus of this report is on the possibility of using a direct tax on consumption as a replacement for existing income taxes, a topic on which little has been written in the developing country context.<sup>5</sup> The

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3/ See Bradford (1980), King (1980), or Feldstein (1978). Note that intertemporal neutrality is achieved only with constant tax rates.

4/ For such an argument, see King (1980). McLure (forthcoming), explains in greater details the difficulties created by timing issues and the need for inflation adjustment.

5/ Experience with direct consumption taxes in developing (and developed) countries has been very limited. India and Sri Lanka (then Ceylon) both twice tried and then abandoned a personal expenditure tax more than twenty years ago. In these cases, the direct expenditure taxes were abolished on the grounds that administrative costs were high while revenue yields were low. (See Cutt, 1969 and Goode, 1962 and 1984.) These experiences appear to have limited current relevance. The direct consumption taxes in India and Sri Lanka were quite limited in scope, as they were applied at relatively low rates to only high income individuals. Moreover, they were structured following a "cash flow" approach, rather than a "tax prepayment" approach; these terms are explained below, where we argue that administrative considerations suggest that the tax prepayment approach is clearly the more appropriate method of direct taxation of consumption in a developing country context. Thus the negative experiences of India and Sri Lanka are of quite limited relevance for the type of direct consumption tax that is the primary focus of this paper -- a broad-based tax that follows the tax prepayment approach.

report is organized as follows. In Section II we describe the structural differences between income and consumption taxes, and also discuss two different approaches to direct consumption taxation. We provide some simple examples that illustrate the basic differences in the taxation of businesses and individuals under the income and consumption tax alternatives. (The discussion of business taxation issues is applicable to both direct and indirect consumption taxes, while the individual taxation examples are relevant only for direct consumption taxes.) We discuss two alternative methods of individual consumption-based taxation -- the cash flow and tax prepayment approaches. The section also includes an explanation of why certain forms of direct consumption taxation are thought to be inappropriate in a developing country context and therefore are not considered further in the paper.

Section III contains a relatively brief discussion of the reasons a developing country might consider basing direct taxation on consumption rather than on income. We compare the two taxes in terms of the standard criteria of simplicity, equity, economic neutrality and efficiency, and consistency with economic growth. Section IV compares the relative merits of the individual cash flow and tax prepayment consumption tax alternatives in a developing country context. We argue that the most appealing approach is the combination of a business tax that allows expensing for purchases of fixed assets with an individual tax based on the tax prepayment approach; the individual tax base should include gifts and inheritances received (with no offsetting deduction for the donor or testator), and should perhaps be supplemented by an individual wealth tax. Section V then discusses the structure and implementation of such a direct consumption tax; it includes a discussion of international and transitional issues. Some concluding comments are offered in Section VI.

It may be useful to comment at the outset on the relationship between the direct consumption tax options discussed in this report and indirect consumption taxes like the VAT, especially since use of the VAT is widespread in the developing countries. One can easily make a case for replacing a VAT with a direct consumption tax. The primary argument for such a reform is that equity goal, especially the elimination of burdens on low-income households, are addressed in a straightforward fashion under a direct consumption tax through the appropriate use of personal exemptions, itemized deductions, and a progressive marginal rate structure; by comparison, freeing low-income households of tax and offsetting the regressivity of a VAT through the use of tax credits or special rates and/or exemptions results in a great deal of revenue loss, complexity, and economic inefficiency.<sup>6</sup> Of course, it must be admitted that imposition of a consumption-based direct tax would also involve complexities that would be difficult for a developing country to handle and that might therefore also create inefficiencies as well as inequities.

However, it is more likely that a direct consumption tax would be implemented as a substitute for an income tax and a complement to an existing VAT or other indirect consumption tax. There would be several disadvantages to such an approach. Since both consumption taxes have similar (but not identical) bases, such a system would be rather redundant, and would likely increase administrative and compliance costs relative to a single, higher-rate direct consumption tax; this would be especially true to the extent that different accounting rules were required under the two

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6/ On the VAT, see McLure (1987). For a comparison of direct and indirect taxation of consumption in the U.S. context, see Zodrow (1988). That paper argues that a direct consumption tax would be appropriate as a supplement to an existing income tax; in this report, we focus on completely replacing an income tax with a direct consumption tax.



taxes. A major advantage of the direct approach is that personal exemptions and deductions serve to eliminate tax on the consumption of the very poor; under a system with both types of consumption taxes, some of the consumption of the very poor would be subject to the VAT, with exemptions under the direct tax freeing lower and middle income groups from taxation. The main advantage of the VAT - better compliance due to the inclusion of wages at the firm level - could also be achieved under a direct consumption tax through the use of withholding taxes on wages.<sup>7</sup> Thus, simultaneous use of the VAT and a direct consumption tax generally seems undesirable. In any case, for the balance of this report (with the exception of a short discussion of wealth taxes in Section V), we consider the direct consumption tax in isolation from the rest of the tax system.<sup>8</sup>

## II. INCOME AND CONSUMPTION TAXES: STRUCTURAL ISSUES

This section considers a variety of structural issues in the taxation of income and consumption. First, we provide several simple numerical examples which illustrate the basic differences between income-based and consumption-based taxation of businesses and individuals. We also consider two alternative ways of implementing an individual consumption-based direct tax -- the cash flow and tax prepayment approaches. To make

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7/ It may appear that the VAT would be more effective than a direct consumption tax in reaching tax evaders, since they would have to pay tax in the form of higher prices. As noted by Bradford (1986), this purported advantage is largely illusory; tax evaders could keep their real incomes constant by raising the prices they charge for their services (since their taxpaying competitors would have to increase prices to cover the VAT).

8/ In particular, we do not consider any relationships between direct consumption taxes and social security taxes or export/import taxes.

the analysis tractable, we restrict our discussion to those forms of direct consumption taxation that are most relevant in a developing country context; accordingly, this section also includes an explanation of why we believe certain forms of direct consumption taxation are inappropriate in a developing country context and are therefore precluded from further consideration in the report.

A. Consumption Versus Income Tax Treatment of Businesses

1. Taxing Businesses Under a Consumption-Based Tax

Some consumption tax advocates support complete elimination of taxation at the business level. In principle, this is consistent with the notion of taxation of consumption since, neglecting problems of personal consumption disguised as business expenditures, only individuals consume. However, it is fairly easy to design a business tax that is generally consistent with consumption tax principles. Moreover, for the reasons detailed below, such a "consumption-based" business tax provides an important complement to consumption taxation at the individual level.

Such a consumption-based business tax would allow immediate expensing for all business-related expenditures, including additions to inventories and purchases of depreciable assets and other expenditures that might normally be capitalized or amortized over several years under ordinary accounting principles. (For expositional convenience we will generally use the term "depreciable assets" to refer to all expenditures of the latter type in what follows.) Such a tax is also commonly referred to as a business "cash flow" tax.<sup>9</sup> This terminology arises from the fact

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9/ As indicated below, the tax treatment of borrowing and lending and of interest income and expense must be consistent with that of depreciable assets; for now this point is ignored, except to note that interest income is effectively (and perhaps statutorily) exempt from tax and interest expense is effectively (and perhaps statutorily) non-deductible.

that the tax base is defined to include receipts and allow deductions for non-financial business expenditures on a cash flow basis; this is in contrast to an income tax where receipts and expenditures are in principle treated on an accrual basis. (Note that this cash flow or consumption-based business tax is to be distinguished from the individual cash flow tax discussed below.) As will be demonstrated below, the implication of such treatment is that, in present value terms, capital income is exempt from tax.

We believe such a business tax is desirable within a consumption tax framework for at least five reasons. First, the government will obtain positive revenue in present value terms from all inframarginal investments. Natural resources and industries not subject to strong competitive forces are particularly important sources of inframarginal returns, especially in resource-rich countries and in developing countries where ill-advised government policies commonly create monopoly profits. To the extent such inframarginal returns are taxed, the business tax supplements the revenue raised from taxes on individual consumption and allows lower tax rates on personal consumption. Moreover, the business tax is likely to be a relatively efficient source of revenue, since inframarginal rather than marginal returns are being taxed.

Second, in a system of direct taxation the existence of a business tax is probably indispensable from a political standpoint. The perception problems associated with complete elimination of business taxation would be enormous in most if not all developing countries.

Third, such a tax provides a convenient means for taxing foreign investors if such taxation is deemed desirable. Revenues are raised from inframarginal investments, which may be an important component of much foreign investment in developing countries, simply by applying the rules of the consumption-based business tax to foreign-owned branches and

subsidiaries. Additional withholding taxes on dividends or interest remitted abroad can be assessed, if deemed desirable.

Fourth, in the absence of a business tax it would be difficult to prevent owners of businesses from disguising personal consumption expenditures as tax-deductible business purchases. The cash-flow business tax provides a vehicle for preventing such abuses, since personal consumption expenses would theoretically not be deductible from the business tax base. Of course, structuring rules that differentiate between legitimate business expenses and disguised personal expenditures is not simple under either a consumption tax or an income tax. Denial (partial or full) of business deductions for expenditures on fringe benefits that are tax-exempt when received by individuals also provides a means of limiting this form of tax avoidance.

Finally, a business tax is desirable because it makes it possible to assess taxes on income from investments made under the pre-reform tax regime and thus prevent the enactment of a consumption tax from conferring a windfall gain to the owners of capital existing at the time of enactment. The magnitude of such taxes would obviously depend on the transition rules applied to receipts from and deductions related to investments made under the pre-reform regime.

In our view, these reasons for maintaining a separate business tax within any direct consumption tax framework are compelling. Accordingly, we restrict our evaluation of consumption tax alternatives for developing countries to those plans which include a consumption-based business tax.

## 2. Additional Features of a Consumption-Based Business Tax

We restrict the consumption-based business tax under consideration in this report in three further ways. In each case, we believe that the treatment specified is clearly appropriate for any developing country contemplating a switch to a direct tax based on consumption.

First, we assume that businesses get a deduction for pension contributions, with pension benefits being included in the individual tax base when received. Alternative approaches which would also be consistent with taxation on the basis of consumption could be designed. However, the treatment specified is recommended by all consumption tax proponents for administrative reasons; we follow this convention in the report.

Second, we assume that the business tax rate is equal to the maximum individual tax rate and that this rate applies to all business "income". ("Income" is placed in quotation marks because the base of the business tax is not actually income, for reasons to be explained below.) This rate structure eliminates the potential for tax avoidance schemes based on differences (in either direction) between the maximum individual and business rates and the inequities and distortions caused by preferential rates that favor investment by "small" businesses. In the aggregate, this choice almost certainly provides desirable protection for the progressivity of the tax system. But in particular cases, it is likely to violate vertical equity by subjecting income attributable to low income taxpayers who own corporate shares (or participate in the earnings of non-corporate businesses subject to the cash flow business tax) to the top marginal rate. Unlike the traditional income tax, a consumption-based direct tax would not cause tax-induced capital flight, since the effective tax rate applied to income from marginal investment is zero.

Third, we assume that all businesses are subject to the same business tax, regardless of their form of organization (corporation, partnership, proprietorship, etc.). This means that no organizational forms are provided with special tax treatment which allows them to avoid the business tax by passing through income and losses to their owners. Such treatment avoids tax-induced distortions in the form of business organization and the economic distortions that may result if certain

activities must, for non-tax reasons, employ a particular form of organization. It also improves both equity and the perception of equity by providing for uniform treatment of all business activity, thereby preventing affluent taxpayers from using tax-preferred business forms as tax shelters. Finally, it simplifies the tax code in two important ways. First, it eliminates the need to define and enforce the rules that distinguish which entities qualify for "pass through" treatment. Second, it eliminates the complexities associated with auditing many partners rather than a single firm.

### 3. The Treatment of Business Investment and Debt

Given the decision to include a business tax of the type specified above in the consumption tax framework, the primary differences in the tax treatment of businesses under an income tax and a consumption tax are in the tax treatments accorded purchases of depreciable assets and the principal and interest on loans. We consider first the treatment of equity-financed purchases of depreciable assets, and then discuss how debt finance affects the analysis.

The conventional Haig-Simons definition of the tax base under a tax on real economic income is the sum of consumption plus changes in net wealth. For firms, this definition implies that the purchase of a depreciable asset, in and of itself, should generate no deduction; since money is exchanged for an asset of equal value, there is no immediate change in net wealth. According to this reasoning, deductions should be allowed only to the extent that loss in the economic value of the asset results in changes in the net wealth of the firm. Thus, in any single year, a deduction is allowed only for the estimated economic depreciation -- the loss in economic value -- of the asset. These deductions can be used to offset gross returns to the investment, which are included in the tax base upon receipt. For example, consider an all equity-financed

purchase of a \$1,000 asset which depreciates \$100 in the first year of use. Under an income tax, the expenditure of \$1,000 in the first year is largely offset by an increase in the firm's holdings of fixed assets of \$900; thus, a deduction of only \$100 is allowed against the returns generated by the asset in the first year of operation, with subsequent deductions similarly based on the further economic depreciation of the asset.

In marked contrast, under a consumption-based business tax, all expenditures on depreciable assets are deducted in the year of purchase, or "expensed." In terms of the example above, a deduction for the entire purchase price of \$1,000 would be allowed in year one.

The effects of these two alternative treatments of business investment can be demonstrated with a simple two-period model. (In the discussion of this model only the tax levied at the business level is considered; individual taxes levied on bondholders and shareholders are not considered.) Although highly stylized, the model captures the essential differences between income and consumption tax treatment of investment.

Consider an asset purchased on December 31 of Year 1 for \$1,000 that lasts exactly one year and has no residual value. The asset generates gross receipts of \$1,100 in Year 2, so that the real internal rate of return to the investment is 10 percent. (Note that all returns are assumed to be real. Inflation is a separate issue that is ignored in the analysis below.<sup>10</sup> This rate is also the discount rate used by the firm to calculate present values of future cash flows; this implies that the investment is marginal in that the rate of return is exactly equal to the opportunity cost of funds.

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10/ For a discussion of the effects of inflation within the context of this model, see McLure (1987).

In order to compare expenditures and receipts occurring in the two different years, it is necessary to convert all monetary quantities into present values of one of the years. Since all returns and deductions except the deduction for expensing occur in Year 2, it is convenient to measure all monetary quantities in present values of Year 2, rather than following the usual practice of measuring all quantities in Year 1 present values. An analysis in Year 1 present values would, of course, yield identical qualitative results.

The marginal tax rate faced by the firm is assumed to be 30 percent, and the firm is assumed to have other sources of income that may be offset by the deductions generated by the investment. Expensing under the consumption tax alternative results in a Year 1 deduction of \$1,000, which has a Year 2 value of \$1,100. Economic depreciation allowances under the income tax alternative results in a Year 2 deduction of \$1,000.

The results for the two cases are as follows. For the income tax, gross receipts in Year 2 of \$1,100 less a deduction of \$1,000 for economic depreciation result in taxable income of \$100. Taxable income thus equals economic income, which is equal to the internal rate of return of 10 percent times the investment of \$1,000. The tax paid in Year 2 is \$30. Thus, the effective tax rate, defined as the tax paid divided by economic income, is equal to the statutory income tax rate of 30 percent ( $0.30=30/100$ ).

The results are quite different in the consumption tax case where expensing is allowed. The Year 2 value of expensing (\$1,100) equals the value of gross receipts. Thus, the present value of the business tax base under the consumption tax is zero, which in turn implies a zero effective tax rate.



This simple example demonstrates the sense in which a business tax that allows expensing is consistent with the notion of taxing personal consumption. That is, the business tax imposes no tax burden in present value terms on income from marginal investments; if all investments were marginal, the entire burden of such a tax system, again in present value terms, would be due to the consumption-based tax assessed at the individual level.

Another way of viewing the effects of expensing is also instructive. Expensing costs the government \$300 in Year 1 since the firm's taxes are reduced by that amount. In Year 2, the government receives \$330 in tax revenue. This "tax revenue" is best viewed as a return on the government's "share" of the investment purchased through the reduction in the firm's taxes in Year 1; the government in effect is a "silent partner" in the venture, sharing in both the risk and the return. On a marginal investment such as the one analyzed, the present value of taxes on gross receipts generated by the investment exactly equals the present value of the foregone revenue; that is, the government's share of the investment earns the same 10 percent return earned by the investor. (Note that the investor effectively invests only \$700 in Year 1 and earns net receipts of \$770 in Year 2. That the investor receives the full 10 percent return on the \$700 investment further demonstrates that the effective tax rate is zero.) Viewing the government's participation in investment implied by expensing in this way helps to reconcile the apparent inconsistency between the result of a zero marginal effective tax rate and the fact that tax revenue is being collected under such a system.<sup>11</sup>

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11/ Whether any revenue is collected in the steady state depends on whether the internal rate of return exceeds the growth rate of investment; see McLure (1987).

This example is easily modified to analyze the effects of expensing for an inframarginal investment, that is, one where the rate of return exceeds the discount rate. Consider the above example when the investment results in gross receipts of \$1200, so that the gross rate of return is 20 percent. Under the income tax, gross receipts less economic depreciation yield taxable and economic income of \$200 in Year 2, implying taxes of \$60. The effective tax rate is again equal to the statutory rate of 30 percent ( $0.30=60/200$ ).

For the consumption tax, gross receipts of \$1200 less a deduction for expensing equal to \$1,100 in Year 2 dollars results in a business tax base equal to \$100 and a tax of \$30. This result can be interpreted in a number of ways. The average effective tax rate, again defined as tax paid divided by economic income, is 15 percent ( $0.15=30/200$ ). Alternatively, the business tax can be viewed as assessing tax at the statutory rate on inframarginal or above-normal returns; that is, the tax rate on the inframarginal return of \$100 is 30 percent ( $0.30=30/100$ ). The marginal effective tax rate (on the normal returns to the investment) is still zero, as in the previous example.

However, the most instructive way to interpret the results in the case of consumption tax treatment of an inframarginal investment is as follows. Recall that under the "government risk-sharing" interpretation of the effects of expensing, the government's share of the \$1,000 investment is \$300, and the investor's share is the remaining \$700. Consider the returns to these two components of the investment. The investor receives \$840 in Year 2 (\$1,200 in gross receipts less \$360 in taxes paid under the consumption-based business tax). Thus, the investor receives the full 20 percent return on his investment of \$700. Simultaneously, the government receives \$360 on its "investment" of \$300; thus, like the private investor the government earns 20 percent on its investment. In short, the

government is a partner in the inframarginal returns to investment, as well as in the marginal returns.<sup>12</sup>

To summarize, the government risk-sharing interpretation of the effects of expensing implies that private returns to both marginal and inframarginal investments are exempt under a consumption-based business tax. Thus, capital income is effectively exempt from tax, and the entire tax burden on individuals, again in present value terms, is attributable to the taxation of consumption at the individual level. The government does receive net positive revenue in present value terms under such a consumption-based business tax. This net positive revenue arises only in the case of investments that yield inframarginal returns; it equals the inframarginal returns on the government's share of the investment.

Analogous results can be obtained when debt finance is considered. However, the tax treatment of debt is quite different under the income and consumption tax approaches. Under the income tax, interest payments are deductible from the business tax base (and interest receipts are taxable). Consider the first example above (with gross receipts of \$1100) when the investment is 80 percent debt-financed and the interest rate is 10 percent.

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12/ The government receives \$330 in present values of Year 1. This implies that the government receives revenue that is positive in present value terms; that is, net revenue in Year 1 present values is \$30. The most straightforward interpretation of this result is that the government earns -- in the form of revenue that is positive in present value terms -- the inframarginal return on its share of the investment ( $30 = 300 \times (0.2 - 0.1)$ ). Alternatively, the government does not merely receive the value of its original investment of \$300 (which equals \$330 in Year 2 present values); it also earns an additional \$30 in Year 2 -- the amount of inframarginal return on its share of the investment.

Gross receipts of \$1,100 are offset by a deduction for economic depreciation of \$1,000 and an interest deduction of \$80. Taxable income (which is equal to economic income) is only \$20 and tax is \$6. However, the equity invested in the project is only \$200, so that the after-tax return to equity is 7 percent ( $0.07 = 14/200$ ). This implies that the effective tax rate on equity is again equal to the statutory rate of 30 percent ( $0.30 = 6/20$ ). (Recall, however, that this approach calculates effective tax rates at the firm level, and thus neglects additional individual taxes paid on interest and on the return to equity.)

Under the consumption-based business tax, there are two alternative methods of treating principal and interest on loans; neither alters the results presented above. The simplest method is to ignore loan proceeds and repayments and interest payments and receipts altogether. This approach obviously has no effect on the calculations of effective tax rates presented above. (This method of treating debt corresponds to the treatment of debt under the individual tax prepayment approach described below.)

The alternative approach is to include the proceeds of loans in the business tax base, but to allow a deduction for both interest and the repayment of principal. Such treatment clearly has a zero net effect in present value terms on the business tax base. In the example described above, \$800 would be included in the business tax base in Year 1, but a deduction of \$880 (principal plus interest) would be allowed in Year 2; these quantities are equal in present value terms and thus have no effect on tax burdens or effective tax rates on capital income. (This method of treating debt corresponds to the treatment of debt under the individual cash flow approach specified below.)

To summarize, allowing debt finance has no effect on the results presented in the previous subsection, as long as interest payments are treated correctly. This result holds for both the income and consumption taxes, although the correct treatment of interest is different for the two taxes. It also holds for both of the two alternative treatments of interest available under the business tax component of the consumption tax.

**B. Consumption Versus Income Tax Treatment of Individuals**

The essential difference between the income and consumption taxation of individuals is the tax treatment of saving and the return thereto and of borrowing and interest expenses. Under an income tax, no deduction is allowed for saving and the annual return to saving is included in the tax base. In contrast, under what is referred to as an individual "cash flow" consumption tax (hereafter, an ICF tax), a deduction is allowed for saving placed in so-called "qualified accounts" and withdrawals from such accounts, including earnings thereon, are included in the tax base. (Qualified accounts can be defined loosely as any legitimate investment account.) Thus interest, dividends, rents, and capital gains, as well as the original investment, are taxed only when withdrawn from a qualified account. Loans are also treated on a cash flow basis, as the proceeds of loans are included in the tax base, but repayment of interest and principal is deductible.<sup>13</sup>

The "cash flow" terminology follows from the fact that the individual tax base is net cash flow, defined as cash receipts less cash saving. The tax base is consumption because wages and salaries are taxed

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13/ One well-known version of this type of tax is the "cash flow lifetime income tax" proposed by Aaron and Galper (1985); another is the cash flow portion of the consumption tax plan recommended by the U.S. Treasury (1977).

only if consumed, and capital earnings are taxed only if withdrawn from a qualified account to finance consumption. (Note that the proceeds of a loan used to finance consumption are included in the tax base, while proceeds that are used to finance an investment produce an offsetting deduction due to the expensing of investment, so that the loan/investment combination has no immediate tax consequences.)

A critical question in the design of such a tax is whether gifts and bequests are to be treated as consumption of the donor. We first analyze a model which neglects gifts and bequests and then turn to the question of the appropriate treatment of gifts and bequests and the effects of such treatment.

#### 1. A Model Without Gifts and Bequests

An ICF consumption tax is sometimes characterized as exempting capital income received by individuals from tax, or applying a zero effective tax rate to such capital income. The rationale underlying this characterization is analogous to that presented above in the discussion of a business tax which allows expensing. Specifically, if tax rates are constant and the rate of return equals the discount rate, the tax benefit of the deduction for saving equals in present value terms the tax cost of including both principal and interest in the tax base when savings are withdrawn. As a result, the effective tax rate on capital income is zero. These points can be illustrated with the following simple numerical example.

Consider a two-period life-cycle model of individual behavior where consumption in the two periods is denoted as  $C_1$  and  $C_2$ ; in this model each of the two periods may consist of many years. Individual wage earnings in the two periods are  $W_1 = \$4,000$  and  $W_2 = \$2,000$ . The interest rate is assumed to equal the discount rate and to be one; it is relatively large to reflect the fact that the periods are relatively long rather than a single year. The tax rate is assumed to be constant over the individual's lifetime

and equal to 30 percent.<sup>14</sup> In this example, period two values are discounted to period one present-value equivalents.

If consumption equals spending in both periods, the present value of income tax paid (PVT) would simply be \$1500, since

$$PVT = 0.3(4000) + 0.3 (2000)/2 = 1500.$$

In this case, the PVT under the income tax is equal to the product of the tax rate ( $t$ ) and the present value of the individual's "lifetime endowment" (PVE), which is defined as the present value of earnings, or

$$PVE = 4000 + 2000/2 = 5000,$$

and

$$PVT = t (PVE) = 0.3 (5000) = 1500.$$

A tax in which the base equals the PVE, which can be referred to an endowment tax, provides a convenient benchmark for the subsequent analysis. For the case where consumption equals earnings in each period and the individual saves nothing in the first period, the tax burdens under the income and consumption taxes are the same; thus, the actual tax equals the endowment tax in present value terms under both the income and consumption taxes.

The differences between the income and consumption taxes are brought out only when the individual saves during the first period for consumption during the second. Suppose he wishes to consume \$2,100 in period one and save the rest of after-tax earnings for period two consumption. Under the income tax, saving in the first period ( $S_1$ ) would be \$700 ( $700 = 0.7 \times 4000 - 2100$ ). Period two consumption is thus the sum of after-tax wage earnings in period two, the amount saved in period one (which is untaxed in period two since it represents return of principal),

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<sup>14</sup>/ The implications of this assumption are discussed below.

and the after-tax return on savings, or

$$C2 = 0.7(2000) + 700 + 0.7(700) = 2590.$$

Thus, the present value of taxes under the income tax in this case is

$$PVT = 0.3(4000) + 0.3(2000+700)/2 = 1605,$$

which represents a 7 percent tax increase relative to the endowment tax of \$1,500. The \$105 difference in present value of taxes paid arises purely from the taxation of interest income in period two ( $105=0.3 \times 700/2$ ).

Under the cash flow consumption tax, the individual again consumes \$2,100 in the first period, which implies he is able to save \$1,000 ( $C1=0.7(4000-1000)=2100$ ). (Note that \$1-\$1,000 is deducted from the tax base.) Second period consumption is thus

$$C2 = 0.7(2000) + 0.7(2000) = 2800,$$

where the first term reflects after-tax wage earnings and the second term reflects consumption funded from the after-tax proceeds of withdrawing gross savings of \$2,000, consisting of \$1,000 of principal and \$1,000 of interest. The present value of ICF taxes paid is

$$PVT = 0.3(4000-1000) + 0.3(2000+2000)/2 = 1500.$$

This is again equal to the value of the endowment tax.<sup>15</sup>

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15/ However, note that the equivalence between the present values of the tax burdens under a cash flow consumption tax and under an endowment tax depends on the assumption of a constant tax rate over the individual's lifetime. Matters are much less clear with progressive marginal tax rates. In this case, calculation of the present value of the endowment tax would presumably require the application of a progressive rate structure to a tax base equal to the present value of each individual's lifetime endowment. Since consumption tends to be relatively smooth over time (in comparison to the time path of wage earnings), the tax paid under the cash flow consumption tax would be likely to correspond fairly closely to that assessed under a tax on the present value of the endowment. (In a steady state, this would be true if consumption were equalized over the lifetime.) In this case, the income tax would result in a tax burden higher than would a lifetime endowment tax to the extent that (1) the return to savings were taxed, and (2) individuals with variable wage earnings paid higher taxes because they were subject to relatively high marginal tax rates in high-wage years.



Thus, in contrast to the income tax, the cash flow tax has the effect of exempting the yield from capital income from tax. This occurs because the value of the tax reduction resulting from the period one deduction for saving ( $300=0.3 \times 1000$ ) is exactly equal in present value terms to the tax burden imposed by the taxation of the withdrawal of principal and interest in period two ( $300=0.3 \times 2000/2$ ). Alternatively, the individual forgoes \$700 of consumption in period one by saving \$1000 ( $700=0.7 \times 1000$ ) in order to fund consumption of \$1400 in period two ( $1400=0.7 \times 2000$ ). Because he realizes the full 100 percent return on his investment, the return to saving is said to be untaxed.

The fact that, under the appropriate assumptions, the ICF effectively exempts from tax the yield to capital income can be demonstrated in an even more straightforward fashion. Suppose that the yield to capital income is explicitly excluded from the tax base; that is, suppose no deduction is given for saving, but the return to saving is untaxed. The effects of such an approach in our two-period example are straightforward. With no deduction for saving,  $S_1=0.7(4000)-2100=700$ . With no taxation of capital income,  $C_2=0.7(2000)+1400=2800$ . The present value of taxes paid is

$$PVT = 0.3(4000) + 0.3(2000)/2 = 1500,$$

or the value of the endowment tax. Thus consumption in both periods is the same as with the ICF tax, and the PVT is the same, although the time path of tax receipts is different. It is in this sense that an individual cash flow tax is equivalent to a tax which exempts the yield from capital income.<sup>16</sup>

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16/ Once again, this equivalence obtains only with constant tax rates. Under a cash flow consumption tax, capital income is subsidized (taxed) if the tax rate at the time the deduction is taken is higher (lower) than the tax rate at the time savings are withdrawn and consumed.

This equivalence suggests that an alternative method of implementing a consumption-based tax at the individual level would be to exclude the yield to capital income from the tax base. That is, in contrast to the ICF approach, both saving and the receipt of capital income at the individual level would simply be ignored for tax purposes. Interest income, dividends, and capital gains would not be included in the individual tax base; symmetrically, interest payments would not be deductible. Loans would thus have no tax consequences. As a result, the individual tax base would consist of only labor income -- wages and salaries plus any other labor-related payments (including pension receipts).<sup>17</sup> Such a method of implementing a consumption-based tax is referred to as an "individual tax prepayment" plan (hereafter, ITP).<sup>18</sup>

One well-known version of the ITP approach is the "flat tax" plan proposed by Hall and Rabushka (1983, 1985). Under this approach all of the individual tax base, after personal exemptions and a standard deduction, would be taxed at a single tax rate. A multi-rate variant of this approach is the so-called "Plan X" proposed by Bradford (1986). It can also be viewed as the "yield exemption" portion of the consumption tax plan described by the U.S. Treasury (1977). Hereafter, we limit consideration to the multi-rate approach; that is, we consider only consumption-based tax plans which provide for a progressive marginal rate structure. This seems appropriate on vertical equity grounds in a developing country context;

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17/ The treatment of pensions and of gifts and inheritances is discussed below.

18/ For further discussion of why a system consisting of an ITP tax coupled with the consumption-based business tax described above is in fact a tax on consumption, see Bradford (1988).

moreover, a flat-rate tax would probably be politically unacceptable in most countries. In any case this assumption places little restrictions on our analysis, since everything said about the multi-rate approach which does not require progressive marginal rates also applies to the flat-rate Hall-Rabushka plan.

In comparison to the ICF approach, no deduction is allowed for saving under the ITP approach, so that period one taxes are larger; on the other hand, no tax is assessed on the return to saving, so period two taxes are smaller. The tax that would be paid on the withdrawal from savings of principal and interest under the ICF tax is thus "prepaid" by virtue of the absence of a deduction for saving under the ITP approach. Turning around the argument made above, the cost of the lost deduction is equal in present value terms to the benefit of the exemption of future capital earnings. (In anticipation of the discussion in the following section, note that the "tax prepayment" reasoning applies regardless of whether the funds saved are consumed or used to fund the making of gifts and bequests.)

To summarize, an ICF tax differs from an income tax in that a deduction for saving is allowed, with all proceeds of dissaving subject to tax. With constant tax rates and a rate of return equal to the discount rate, this is equivalent to exempting capital income from tax. As a result, another way of achieving a tax base similar in present value terms to that under the ICF consumption tax is to exempt capital income from taxation at the individual level; this is the ITP approach to taxation on the basis of consumption.

## 2. The Treatment of Gifts and Bequests

There are two very diverse views among consumption (and income) tax advocates regarding the appropriate tax treatment of gifts and bequests

to other individuals.<sup>19</sup> Most observers agree that gifts and inheritances received represent potential consumption and thus should be included in a consumption tax base of the recipient. The contentious issue is the treatment of gifts and bequests given.

Under one view, gifts and bequests made represent one form of consumption among many alternatives and thus should be subject to tax. This view requires taxation of such transfers to both the donor and the recipient. Under the ICF approach, it implies that a withdrawal from a qualified account to fund the making of a gift or bequest constitutes consumption and should thus be included in the tax base of the donor (as well as the tax base of the recipient).

Under the ITP approach, however, no tax is due when savings are withdrawn for any purpose, including the making of gifts and bequests. (Recall that such treatment is appropriate since, relative to the ICF approach, the tax has been "prepaid," as no deduction was allowed for saving.) Thus, taxation to both the donor and recipient is achieved automatically as long as gifts and bequests are included in the recipient's tax base. Note that under both the ICF and ITP approaches, this treatment can be summarized as including gifts and inheritances received in the tax base of the recipient, but allowing no deduction to the donor for amounts transferred through gifts and bequests.

The lifetime tax base under such a plan is equal to all of the resources under the individual's control, including gifts and inheritances received, as well as wages, salaries and pensions, regardless of whether

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19/ The proper tax treatment of charitable donations is a separate issue. Deductions for charitable donations can be allowed under both the ICF and ITP consumption taxes, as under an income tax, if such treatment is deemed to be a desirable and effective means of stimulating contributions to socially beneficial activities.

some of those resources are used to fund the making of gifts and bequests. Thus, this approach is consistent with a "lifetime endowment" view of tax equity, under which an individual's lifetime command over resources is seen to be the proper basis for taxation of individuals.

The alternative view is that a consumption tax should exclude gifts and bequests given; such transfers would be subject to tax only when actually consumed by the recipient. Under both the ICF and ITP approaches, this view implies that gifts and inheritances received should be included in the tax base, but deductions should be allowed for gifts and bequests made. Note that under the ICF approach, the deduction for the gift or bequest offsets the inclusion in the tax base of the withdrawal from the qualified account. In contrast, under the ITP approach, deductions for gifts and bequests made would offset compensation and, in many cases, because tax has been prepaid, require refunds to the donor.

Under this view, the lifetime tax base is appropriately consumption narrowly defined, with tax on gifts and bequests paid only upon actual consumption by the recipient or heir. Thus, this approach is consistent with a "dynastic" view of tax equity, the view that it is appropriate for only a single tax to be paid, when resources are actually consumed by some member of a multi-generational family.

An alternative way to approximate fair treatment according to the dynastic view of tax equity involves allowing no deduction for gifts and bequests made. In this case, the tax paid by the donor should not be viewed as a tax paid on his consumption, since under the dynastic view the donor theoretically should not pay tax on gifts and bequests given. Instead, the tax on the donor should be viewed as a proxy tax paid on behalf of the recipient; accordingly, gifts and inheritances received should not be included in the recipient's tax base. Note that the proxy tax will be too high (too low) according to the dynastic view if the tax

rate of the donor is greater than (less than) that of the recipient. Under this approach, gifts and bequests are completely ignored in the calculation of the tax base of both the donor and the recipient. This simple (but generally inaccurate) treatment contrasts sharply with the direct method of implementing the dynastic view described above. The direct approach requires inclusion of gifts and inheritances in the tax base of the recipient and deductions from the tax base of the donor for all gifts and bequests made. Such treatment would clearly be difficult to enforce and administer.

The choice between these two views of the proper treatment of gifts and bequests depends on a host of economic and philosophical issues. However, we believe that developing countries considering consumption tax alternatives should adopt the lifetime endowment viewpoint and consider only alternatives consistent with that viewpoint. This belief is based on four considerations.

First, the vertical equity goals of any developing country -- a fair distribution of tax burdens across income classes -- are likely to call for a tax burden across income classes that is mildly progressive, or at least not regressive. Given the common necessity of relying heavily on regressive indirect taxes these goals can be achieved much more easily if the lifetime endowment view is adopted; indeed, it may be very difficult, as well as costly in terms of reduced economic incentives and increased tax avoidance and evasion due to higher tax rates on wealthy individuals, to achieve any particular vertical equity goals under a consumption-based direct tax without adopting this viewpoint. Thus, we believe that adopting the lifetime endowment view of tax equity (and taking steps necessary to enforce the tax provisions it implies) is critical to ensuring the vertical equity of a consumption tax system in a developing country.

Second, such a system will arguably be fairer, and in any case, will certainly be perceived as being fairer, than the dynastic alternative described above. Most observers, in developing countries as elsewhere, are probably accustomed to thinking about vertical equity in terms of annual tax burdens of individuals. Though the lifetime perspective implicit in the discussion above represents a significant departure from this convention, it can plausibly be explained as necessary to achieve horizontal equity between taxpayers with equal lifetime endowments, as well as vertical equity. By comparison, a multi-generational or dynastic view of equity represents a much greater departure from conventional views, since it effectively defines vertical equity over an infinite time horizon for a group of donors and donees (typically a multi-generation family group), rather than over an individual's lifetime or a single year (or several years). Some prominent tax experts are unconvinced that a lifetime view of tax equity is preferable to a standard of equity based on a much shorter time period.<sup>20</sup> In light of this skepticism, it seems unlikely that most observers would be sympathetic to a view of equity based on an infinite time horizon. Accordingly, the dynastic view of equity would probably be unconvincing as a rationale underlying the tax treatment of gifts and bequests.

In addition, allowing wealthy heirs to consume tax-free (under the "proxy tax" alternative version of the dynastic view) would probably be perceived as grossly unfair, even if donors had been taxed on the transfers. (It might be argued that such perception problems are not significant since the income taxes in most developing countries generally tax gifts and bequests lightly without provoking public outcry. However, contrary to the situation under the consumption tax, income from capital is

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20/ See Goode (1980).

commonly subject to income tax. The taxation of capital income under the income tax provides an indirect means of taxing gifts and bequests; that is, income taxation reduces the return to wealth and thus reduces funds available for the making of gifts and bequests. Moreover, in some developing countries, the income tax is supplemented by a wealth tax or a gift/estate tax.) For all of these reasons, it seems unlikely that the dynastic view of tax equity could provide a rationale for the design of a tax structure that would be widely acceptable.

Third, the argument, frequently made by income tax proponents, that the accumulation of wealth confers status, power, and peace of mind to the owner and thus should be included in measures of ability to pay, surely has some validity, especially in developing countries where wealth differentials are commonly very great. This point supports the notion of taxing all individual wealth at least once during each generation.

Fourth, the existence of wealth, estate and gift taxes in many countries, as well as a history of progressive income taxes in most developing countries, suggests that such taxation conforms with societal norms in most countries.

It should be noted that implementing a consumption tax based on the lifetime endowment view would not be without costs. In particular, administrative costs would be high. The most important problems would occur because it is notoriously difficult to ensure that gifts and bequests received are reported in the tax base of the recipient; this is especially true for gifts among family members. It is unclear what types of administrative measures would be most effective in improving compliance in this area. Monitoring of such transfers would be simplified in those cases where the transfers were recorded by some governmental agency for reasons unrelated to the national tax system (such as property transfers recorded by local officials for property tax or other reasons); alternatively, rules



requiring reporting (either by individuals or by institutions) of all transfers of certain types of assets could be implemented in the hope of generating a "paper trail" that would help identify gifts and bequests. A separate estate tax could be implemented, with bequests taxed at the highest individual marginal tax rate under the consumption tax system; heirs could be allowed a credit under the consumption tax for taxes paid on their behalf by the testator. Note also that the likelihood that significant amounts of gifts and bequests will not be reported under a consumption tax based on the lifetime endowment view provides a justification -- though a somewhat tenuous one -- for a separate tax on individual net wealth. Specifically, such a tax may indirectly offset the effects of undertaxation of gifts and bequests received by reducing the wealth of the donors and recipients of such transfers. Of course, all such measures would increase the complexity of a consumption tax system, while still leaving a significant portion of such transfers untaxed. In many developing countries it may be best for administrative reasons simply to omit gifts and bequests from the tax base. This would accord with the alternative view that the lifetime endowment model is consistent with neither equity nor efficiency.

In addition to the tax evasion problem of non-reporting of gifts and bequest received, in many cases, problems in determining the value of gifts and bequests received would be significant even when such transfers were reported. Accurate valuations would be particularly difficult for transfers of ownership interests in closely held businesses or for assets that are unique or infrequently traded, such as art and other collectibles. Measures designed to improve valuation techniques would add complexity and would undoubtedly be somewhat unproductive in the cases of certain types of assets.

Another familiar problem associated with taxing gifts and inheritances arises in those cases in which the asset transferred is a family business (such as a family farm) and a portion of the asset might have to be sold in order to pay the tax liability. To the extent this is perceived to be a problem, special measures allowing installment payments of taxes (including interest payments at a market rate) could be provided. Such measures of course add complexity to the tax system, and are arguably inequitable since such treatment would apply only to certain elements of the individual tax base.

Yet another cost of adopting the lifetime view of tax equity is that individual decisions regarding gifts and bequests, as well as their nature (e.g., cash vs. "in kind" transfers such as expensive educations), would be distorted. In addition, taxation of gifts and bequests would generally involve taxation of the return to saving; this in turn implies that some of the intertemporal neutrality benefits of reducing the taxation of capital income under a consumption tax (to be discussed below) would be reduced.

Despite all of these difficulties, we feel that the arguments for the lifetime endowment view are compelling, and we restrict our analysis to consumption taxes that are consistent with that view. To improve the equity of a system of consumption taxation, every effort should be made to administer and enforce as effectively as possible the treatment of gifts and bequests implied by adoption of the lifetime view of tax equity.<sup>21</sup>

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21/ Note, however, that these problems are not unique to the consumption tax. That is, very similar problems arise if the lifetime endowment criterion is adopted under an income tax, since gifts and bequests received should be included in the tax base, with no offsetting deduction under the income tax for donors. The only important difference is that deficiencies in the taxation of gifts and bequests are offset in a rather indirect fashion under the income tax by the taxation of the capital income of the donors and recipients of such transfers.

Given the decision to restrict consideration of consumption taxes to those consistent with the lifetime endowment view of equity, it is interesting to note that the above numerical analyses of individual income and consumption taxation are basically unchanged when gifts and bequests are considered. That is, as long as gifts and bequests received are included in the tax base and there are no deductions for gifts and bequests given (which are thus treated as consumption of the donor under the ICF tax), the numerical comparisons of the income and ICF and ITP consumption taxes are basically unchanged.

To see this, note that gifts or bequests received would simply be included in the tax base and in the calculation of the present value of the individual's endowment. In terms of the two-period example analyzed above, gifts and inheritances received could be included by separating  $W_1$  into 3,000 of wages and \$1,000 of inheritance. Since no deduction is allowed for gifts and bequests made, the division of  $C_2$  into a consumption and a bequest component has no tax consequences. Thus, all results regarding the differences between income and consumption taxes, as well as the similarities between the ICF and ITP approaches, obtain when gifts and bequests are treated as specified above.

### III. DIRECT CONSUMPTION VS. INCOME TAXES IN DEVELOPING COUNTRIES

The relative merits of income and consumption as the basis for a system of direct taxation have been debated at length in the literature. Economists have generally focussed on the inter-temporal neutrality of the consumption-based alternative, compared with the income tax, which favors present consumption and discriminates against (saving for) future consumption. Since our primary concern in this paper is an examination of alternative methods of direct consumption taxation, our exposition of the

consumption vs. income tax debate is limited to discussing those major points which are particularly relevant in a developing country context.<sup>22</sup>

The analysis focuses on issues which are common to all forms of direct consumption taxes; the relative advantages and disadvantages of specific direct consumption tax proposals are analyzed in the following section. The discussion considers in turn issues of simplicity, equity, economic neutrality and efficiency, and consistency with economic growth. We consider issues that arise under the consumption-based business tax proposed above, as well as those involving taxation of individuals.

#### A. Simplicity

The goal of simplicity is frequently invoked in tax reform debates in both industrialized nations and developing countries, but it is seldom attained in either.<sup>23</sup> Simplicity is even more important in developing countries than in developed ones, for at least three reasons. First, administrative skills are generally extremely scarce in developing countries, and the use of such resources to administer or comply with an unnecessarily complex tax code is a highly unproductive use of a very scarce and valuable asset. Second, on average, the ability of individuals and firms to comply with a complex tax structure is low; thus, complexity increases the likelihood of filing errors and, by increasing the cost of compliance and administration, increases the attraction of evasion. Third, since evasion is frequently endemic, a simple tax structure implies that more governmental resources can be devoted to finding tax evaders rather than regulating and monitoring honest taxpayers. For these reasons, the

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22/ Extensive discussions of the general consumption vs. income debate are provided in Pechman (1980).

23/ The recent tax reform effort in the United States is certainly an example of this phenomenon. See McLure and Zodrow (1987).

relative simplicity properties of taxation on the basis of consumption and income are of particular importance in developing countries. Generally, taxation on the basis of consumption rather than income is superior on simplicity grounds, as can be seen from a discussion of the following areas.

1. Timing issues

Timing issues give rise to some of the thorniest problems in the construction and implementation of an income tax.<sup>24</sup> The most obvious problem lies in the measurement of depreciation for depreciable assets. Although allowances for economic depreciation are obviously required for accurate measurement of economic income, the determination of economic depreciation is exceedingly difficult. The data required to obtain estimates of economic depreciation are seldom available even in highly developed countries, and the few existing estimates of economic depreciation are highly controversial. Such data are virtually non-existent in developing countries. As a result, rules for tax depreciation are inevitable arbitrary and generally result in taxes on the income from various types of depreciable assets that are either too high or too low from a theoretical standpoint. This leads to investment distortions (and perhaps inequities), as well as attempts to influence depreciation schedules through the exercise of political power. In contrast, under a consumption tax, the need for determining economic depreciation is eliminated, since purchases of depreciable assets are simply expensed.

The same point applies to a wide variety of other costs which must properly be capitalized or amortized under an income tax as advertising, research, and the costs of developing natural resources, for which depletion allowances are commonly provided; under a consumption tax all

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24/ See McLure (1987).

these costs are simply expensed in the year an asset is purchased or an expenditure is made. The simplicity of expensing under the consumption-based tax is clearly in marked contrast to the complexity of an income tax, where precisely accurate allocation of costs is virtually impossible, where even rough approximations introduce considerable complexity, and where inaccuracies induce economic distortions.

Similarly, under a consumption tax there is no problem with investments which generate income over many years and, under an income tax, raise issues of when to deem such income to be realized. For example, taxing income from multi-year production processes only upon completion of a contract allows deferral of tax liability, and therefore creates inequities and distorts economic decisions. By comparison, special "percentage of completion" rules for the realization of income for tax purposes may be preferable from the point of view of income measurement, but they add considerable complexity to the tax code. As receipts are simply included in the tax base when received under the proposed consumption-tax treatment of business receipts and expenses, there is no need to choose between these unsatisfactory alternatives.

In addition, accounting rules are much simpler under a consumption tax. Since all receipts and expenditures are dealt with on a cash flow basis, no attempt need be made to devise accrual accounting rules, and avoidance problems related to the manipulation of cash and accrual accounting systems are eliminated. Other issues which disappear under a consumption tax are special tax rules for original issue discount obligations, expenditures on goods placed in inventory, indirect costs of self-constructed assets, and bad debt reserves of financial institutions and other firms.<sup>25</sup>

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25/ See Bradford (1986) for an extensive discussion of the simplicity advantages of taxation on the basis of consumption rather of income.

## 2. Capital Gains

Under an income tax, (real) capital gains should theoretically be taxed on an accrual basis. Since accrual taxation is administratively impossible in many instances, virtually all income tax systems that tax capital gains do so on a realization basis, and frequently at preferential rates. However, the taxation of gains only upon realization creates a wide variety of tax avoidance opportunities via deferral of tax obligations and, together with the application of preferential tax rates to capital gains, creates obvious incentives to recharacterize ordinary income as capital gain; both situations lead to considerable administrative complexity as tax authorities attempt to limit these avoidance techniques.

In contrast, under a consumption tax, the treatment of capital gains of individuals is very straightforward; under the ITP approach, gains are simply excluded from the tax base, while under the ICF approach, the taxpayer has no basis in assets, so all of the proceeds of sales of capital assets are fully included in the tax base without preferential treatment. (Because of the expensing of purchases of business assets, gains realized by businesses are treated like those of individuals under the ICF approach.) In both cases, administration and compliance is greatly simplified. In particular, there is never a need to maintain records regarding the basis of capital assets for purposes of calculating gain upon sale, since the proceeds of the sale are either excluded or fully included in the base. In addition, the cross-checking of deductions for purchases of capital assets against proceeds reported as income is relatively straight-forward, since both are reported in the same year. By comparison, if only capital gains on assets are subject to tax, it is necessary to compare the basis reported by the seller against the proceeds reported by the previous owner in some previous tax period; this is clearly an administratively difficult task, especially in developing countries.

Finally, there is no need to create a set of complex rules which distinguish between capital gains and ordinary income for tax purposes, and a wide variety of tax avoidance techniques based on the capital gains/ordinary income distinction are simply eliminated.

### 3. Inflation Adjustment

The accurate measurement of real economic income requires an integrated approach in which balance sheet items are adjusted for inflation and these adjustments are reflected in income for tax purposes.<sup>26</sup> Alternatively, a less precise approach involving ad hoc adjustments to depreciation, capital gains, inventories, and interest payments and receipts can be employed. The integrated approach involves complexities and non-tax issues that most countries have been unwilling to accept. Correct (or even approximately correct) ad hoc inflation adjustments, especially for interest payments and receipts, are difficult to design and also inevitably add complexity for both taxpayers and tax administrators. The degree of difficulty can be gauged from the problems experienced by the U.S. Treasury Department (1984) in designing even a partially indexed system, as well the fact that all of the Treasury Department proposals were rejected in the final version of tax reform enacted in the United States. In contrast, under a consumption tax, the complexity of inflation adjustment is unnecessary, since all quantities included in the tax base are simply measured in monetary values of the current year.

### 4. Tax Arbitrage

The income tax systems in most countries, including developing countries, have many features which are appropriate only in a consumption tax context. These include exemptions for various forms of income from

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<sup>26/</sup> See Casanegra (1984), Harberger (1982), or McLure, Mutti, Thuronyi, and Zodrow (forthcoming).



capital, deductions for certain forms of saving, and extremely generous provisions for capital-cost recovery, including accelerated depreciation and first-year write-offs. Such features create opportunities for various forms of tax arbitrage, such as borrowing with fully deductible interest to invest in tax-preferred assets. This arbitrage, in turn, undermines the equity and neutrality of the tax system. For political reasons, tax authorities generally are unable to eliminate the inappropriate provisions that lie at the heart of the problem, and so respond (at best) with rules designed to eliminate or limit such arbitrage, greatly increasing the complexity of the tax system. In contrast, under a consumption tax, all investments are equally tax-preferred as long as particular investments are not actually subsidized through the tax system. Thus, the tax arbitrage problems characteristic of hybrid income/consumption tax systems are eliminated.<sup>27</sup>

##### 5. Saving and Investment Decisions

The type of special provisions that create opportunities for arbitrage also distort investment decisions under an income tax. To the extent that all investments are equally preferred under a consumption tax, investment decisions can be made solely on the economic merits of projects rather than on the basis of differential tax treatment. Moreover, uniform treatment of all types of saving decisions removes the tax treatment of alternative saving instruments as a further complicating factor in saving and investment decisions and as an area requiring administrative scrutiny.

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27/ It is easy to be overly sanguine about this advantage, however. For example, deductions may be allowed for mortgage interest on owner-occupied housing under a consumption tax, even though no other interest expense is deductible and interest income is exempt.

In most developing countries, such an environment would greatly simplify and rationalize saving and investment decisions. Of course, the same could be said of a comprehensive tax on real economic income. However, experience with income tax reform in both developed and developing countries suggests that prospects for "levelling down" or providing equally preferential treatment of all investment under a consumption tax are probably greater than the prospects of "levelling up" or eliminating all preferential treatment of certain investments under an income tax.

#### 6. Corporate Tax Integration

One of the most difficult questions under most income taxes is the integration of the corporate and individual income taxes.<sup>28</sup> It is generally accepted that complete integration, which requires treating corporations like partnerships for tax purposes, is infeasible. But various means of reducing double taxation of dividends have been implemented in many countries and proposed in others; these include imputation of corporate taxes on income underlying dividends to individual shareholders, application of lower rates to distributed earnings than to retained earnings, and full and partial deductions for dividends paid. All of these add to complexity, and none has proved entirely satisfactory. Under a consumption tax, integration problems virtually disappear, since the marginal effective tax rate on capital income is zero at the business level, and capital income is either ignored at the individual level (the ITP approach) or also subject to a zero marginal effective tax rate (the ICF approach). It is true that inframarginal returns are taxed at the rate applied to business income, rather than at the marginal tax rates of the various owners of businesses, but that is generally thought not to be a major reason for concern. Most owners of corporate shares in developing

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28/ See McLure (1979).

countries are likely to have income that would (or should) subject them to the top marginal rate in any case, and owners of small businesses can generally achieve de facto integration by paying themselves deductible wages and salaries.

## 7. Extent of Coverage

One potentially troublesome feature of consumption taxes is that universal coverage of businesses -- very broadly defined -- is generally desirable to eliminate possibilities for tax avoidance. Attempting such broad coverage is unrealistic in many instances, because it is likely to impose large administrative costs for relatively low revenue gains, especially in developing countries, where a large number of very small businesses exist. Moreover, it is generally not feasible to require that every individual who engages in business transactions, no matter how infrequently or how casually, should file a business tax return. But if this is not done there may be opportunities for avoidance, for example, on real estate transactions. However, such problems also exist under an income tax, and it is difficult to draw a distinction between the two taxes on this basis.

### B. Equity

Perhaps the most contentious issue in the consumption vs. income tax debate concerns the relative merits of the two tax bases with respect to the criterion of equity or fairness. There are several aspects to both the horizontal equity (equal treatment of equally situated individuals) and the vertical equity (progressivity) aspects of the debate.

The most fundamental question is whether income or consumption represents the best measure of ability to pay for tax purposes. Income tax advocates stress that the potential to consume in any given period (say, a year) is a better measure of ability to pay than the exercise of that potential in the form of actual consumption. Consumption tax proponents

society's resources (consumption) rather than what the individual contributes to the pool (as measured by his income). Strictly speaking, the latter view argues for the type of consumption tax described above as associated with the dynastic view of taxation. Although we have precluded such a dynastic consumption tax from consideration, it seems clear that those who find the Hobbes argument compelling will favor consumption taxes, even if of the lifetime endowment variety, over an income tax, while those who do not will favor income taxation.

More critical to our evaluation is the question of the extent to which the lifetime endowment view of taxation is relevant for equity purposes. Suppose that tax rates and discount rates are constant over time and that income and consumption tax bases are defined in terms consistent with the lifetime endowment view (i. e., gifts and inheritances received included in the tax base with no deduction for gifts and bequests given). If the individual's lifetime is indeed the appropriate time period for evaluating the equity of a tax system, a consumption-based tax of the type favored here -- that is, a lifetime income tax -- will be superior to an annual income tax; as demonstrated previously, this is true because, with constant tax rates, the present value of the lifetime tax burden is independent of the time path of earnings or of gifts and inheritances received. In contrast, an annual income tax will assess a larger tax burden on those who save more during the life cycle, because they either earn relatively early or consume relatively late during their lifetimes. Consumption tax advocates argue that the present value of the lifetime endowment is the appropriate basis for evaluating the equity of a tax system, and that the invariant burden of the consumption tax is one its major advantages, while the fact that income tax burdens vary as described above implies that annual income taxation is inequitable.

From a theoretical perspective, the lifetime endowment perspective has considerable appeal. Income tax proponents frequently argue that individuals do not plan their lifetime consumption decisions in the meticulous manner consistent with a lifetime endowment calculation and that capital markets are not perfect, as is assumed in such calculations. However, it is unclear that such conditions would necessarily imply a preference for income over consumption taxation. Income tax proponents also argue that a relatively short time period is more appropriate for evaluating the fairness of a tax system than is an individual's lifetime. However, the use of a relatively short accounting period coupled with a progressive rate structure implies that tax burdens will be larger for individuals with uneven earnings streams than for those with smooth earnings streams. Such a pattern of tax burdens would be desirable only if the marginal utility of income is lower during high-earning years than during low-earning years; this line of reasoning does not seem compelling. Moreover, the view that a short time period is the more appropriate for judging equity is inconsistent with the widely accepted view that income averaging is desirable, where feasible, in order to offset the effects of bunching of income.

Recall that we have argued that developing countries should consider only consumption taxes consistent with the lifetime endowment view of tax equity. This decision has major implications for the vertical equity of a consumption tax system, since it implies that the measurement of individual ability to pay will include gifts and bequests received -- a component that is highly concentrated among the wealthy. As a result, to the extent such a policy could be implemented effectively, it would be easier to obtain any particular vertical equity goals with respect to the distribution of lifetime income than if the dynastic view were adopted. (As will be discussed in Section V, vertical equity goals can also be

furthered by coupling a progressive consumption tax with a wealth tax which would affect only the wealthiest individuals in the economy.)

Several more minor points bear on the equity question. First, income taxes in practice are commonly replete with tax preferences for capital income that are of little benefit to the average taxpayer but enable the wealthy to lower their tax burdens dramatically. As a result, high-income individuals may actually bear a smaller share of the tax burden than they would under a progressive consumption tax with a comprehensive base. The enactment of a comprehensive income tax would eliminate such tax avoidance opportunities, but experience suggests that such reform is often politically infeasible. A comprehensive consumption tax with progressive rates may be more effective in achieving the vertical equity goals of a developing country than a preference-riddled income tax, and the political prospects for its enactment may be more favorable.

Second, it is possible that conspicuous consumption is accorded little weight or is even seen to be contrary to the goals of a developing country, while the accumulation of wealth is desirable to the extent it results in more domestic investment, employment, and growth. Such a set of priorities implies that progressive taxation based on consumption, rather than on income, is desirable from a social standpoint.

Third, to the extent that the greater incentives for saving inherent in a consumption tax result in a larger domestic capital stock, wages should be higher and the inequality of income distribution should be less. Fourth, political barriers to fairly progressive marginal tax rates should be reduced if, as under a consumption tax, such rates no longer reduced marginal incentives to save and invest; the end result might be a more progressive rate structure than under an income tax.

C. Economic Neutrality and Economic Efficiency

In one sense, economic neutrality provides the same prescription for income and consumption taxes -- tax all elements of the base equally.<sup>29</sup> Nevertheless, several important additional questions remain. The basic point is that a consumption tax eliminates the distortion between current consumption and saving inherent in an income tax, but probably at the cost of increasing the distortion between current leisure and work effort. It is theoretically unclear which approach involves less costly tax-induced distortions of economic decisions. For example, in a static two-period model with individual utility defined over current and future consumption and leisure, the consumption tax approach corresponds to the "optimal" way of taxing wage and capital income if present and future consumption are equally responsive to changes in the net wage. In contrast, if leisure is more (less) substitutable with current consumption than with future consumption, some taxation (subsidization) of capital income is optimal.<sup>30</sup> Although one could argue that a consumption tax is optimal -- or approximately optimal -- under a "plausible" set of assumptions, such a conclusion would obviously be a tenuous one.

Income and consumption taxes also differ in the extent to which they distort individual decisions regarding investment in human capital rather than in non-human or "physical" capital. The simplest models in this area are characterized by proportional taxation, exogenous labor supply, certain returns to investment, and the assumption that foregone earnings are the only cost of producing human capital; that is, direct costs such as tuition and books are ignored. In these models, both a

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29/ Although the prescriptions of optimal taxation do not equate economic efficiency with the uniform taxation implied by economic neutrality, achieving efficiency in practice is much more likely under a uniform tax system. See McLure and Zodrow (1987).

30/ See Atkinson and Stiglitz (1980), Feldstein (1978), and King (1980).

consumption-based tax (of either the ITP or the ICF type) and an income tax reduce both the costs (foregone current earnings) and the benefits (increased future earnings) of investment in human capital proportionately. Under the consumption-based tax returns to investments in human and physical capital are thus treated equivalently. In contrast, under an income tax, investments in human capital effectively receive consumption tax treatment, but the return to investment is subject to tax. This taxation of the return to physical capital results in overinvestment in human capital. In such models, consumption taxes are preferable to income taxes on efficiency grounds; for example, in a model with investment in human and physical capital endogenous, Driffill and Rosen (1983) find that proportional income taxes result in much higher excess burdens than equal yield proportional consumption taxes.<sup>31</sup>

These results must be qualified in a number of ways. For example, a progressive consumption tax of the ITP type discourages investment in human capital because future earnings are taxed at a relatively high rate; some taxation of the return to physical capital, as under a progressive income tax, may be desirable to offset this disincentive. Also, the return to investment in human capital may be relatively riskier than the return to investment in physical capital; again, some taxation of the return to

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31/ Driffill and Rosen (1983) include an assumption of endogenous labor supply without changing the basic results.



physical capital may be desirable to offset under-investment in risky human capital by risk-averse individuals.<sup>32</sup>

Thus, it is difficult to ascertain the relative efficiency properties of income and consumption taxes with respect to the allocation of investment across human and physical capital. In the absence of evidence to the contrary, the consumption tax would appear to be more efficient, especially if the range of marginal tax rates is not great. Once again, such a conclusion is obviously a tenuous one.<sup>33</sup>

Another aspect of the efficiency question is that accurate income taxation of many activities is exceedingly difficult, as demonstrated in the discussion of simplicity issues above. In addition, different types of saving are typically treated very differently under existing income taxes in developing countries. Accordingly, non-uniform taxation of various

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32/ Note that this discussion assumes that interest on student loans is deductible under the income tax; if this is not the case, there is no incentive for human capital accumulation under the income tax for individuals who borrow to finance their educations. Note that the direct expense of producing human capital, such as tuition, books, etc., in principle should be deductible (or depreciable) under either an income or a consumption tax - to the extent that the purchase of inputs into the human capital production process is not subsidized and has no personal consumption component. In practice, such deductions are generally not allowed due to the difficulties of separating consumption from human capital investment expenditures, as well as the presence of significant educational subsidies. We would recommend that developing countries follow this practice, using the expenditure side of the budget to offset any disincentives to the production of human capital; note also that the absence of taxation of capital income under the consumption tax would facilitate saving to finance educational expenditures.

33/ Another issue that is important in the developing country context is the extent to which the tax system encourages emigration of highly-skilled individuals or "brain drain." Such emigration would be encouraged under a consumption tax to the extent that future consumption (or labor earnings) would be subject to relatively high tax rates in the developing country, but discouraged to the extent that the return to accumulated wealth would be subject to income taxation in the foreign country. The net effect is unclear and would likely be swamped by relative average rates of taxation and by non-tax factors.

business activities and various forms of saving is likely to result, even under the best of circumstances. This in turn implies distortion of saving and investment decisions and efficiency costs. To the extent a consumption tax avoids subsidies to various industries (by taxing all marginal capital investments at a zero marginal rate in present value terms) and treats all forms of saving identically, this source of economic inefficiency would be eliminated.

It is likely that any income tax reform in a developing country would leave some sectors, including owner-occupied housing and certain other industries, and perhaps non-profit entities with business activities, with preferential tax treatment. The result is that capital investment in such industries is not fully taxed and perhaps even subsidized. In this case, the desirability of full taxation of capital investment in other areas becomes questionable, since it may result in relatively large investment distortions in favor of the lightly taxed or subsidized activities. The consumption tax solution is to eliminate such investment distortions by offering "preferential" or zero marginal tax treatment to all capital investment. This may be viewed as a reasonable solution to the problems caused by existing and immutable tax preferences (provided that currently tax-preferred activities do not subsequently become tax-subsidized under the consumption tax).

The above discussion indicates that a comprehensive consumption tax is a relatively neutral tax, as it does not distort individual consumption-saving decisions or the allocation of business investment. However, it is interesting to note that such a tax does introduce one significant non-neutrality. As explained in Section II, a feature of a business tax that allows expensing is that the government becomes a "silent partner" in private enterprise, sharing in both the risk and the return to

private investments through tax deductions for purchases coupled with taxation of receipts. Such treatment is likely to alter business decisions regarding risky investments. To the extent that the business tax is a flat rate tax and firms can use losses to offset other income, the primary result of such government risk-sharing is likely to be an increase in private risk-taking. If business investors are risk-averse, such a tax-induced increase in risk-taking may be desirable from a social standpoint.<sup>34</sup>

#### D. Consistency With Economic Growth

Although the question is far from decided, many consumption tax proponents argue that eliminating the taxation of capital income would result in significantly greater economic growth. In the developing country context, this may occur for a variety of reasons. First, domestic saving may increase in response to higher after-tax returns to saving. The response of saving to changes in the net return is theoretically ambiguous.<sup>35</sup> Moreover, it would clearly vary across developing countries. Nevertheless, recent empirical research for the United States suggests that a positive response is certainly possible, and arguably the likely outcome.<sup>36</sup> To the extent that increased domestic saving would lead to increased domestic investment (rather than simply replacing foreign-financed investment), a higher level of investment would be achieved.

Second, the amount of domestic savings invested domestically may increase. For example, suppose that domestic savings invested at home bear some income tax burden in the developing country. Investors generally have

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34/ For discussions of how taxation can increase private risk-taking and whether such an increase is socially desirable, see Atkinson and Stiglitz, 1980.

35/ See Feldstein, 1978.

36/ See Boskin (1978).

the option to invest abroad, even when they are subject to exchange controls. The return to such investment is likely to be free of domestic tax, either because such returns are legally exempt from income taxation or because any domestic income tax is easily avoided. Moreover, the foreign tax burden is likely to be light; for example, the U.S. does not tax the capital gains (other than those on real estate) or most interest receipts of foreigners, European bearer bonds provide tax-free interest, and investment channelled through the tax haven countries is largely free of tax. Such a situation implies that domestic investors face a strong tax incentive to invest abroad. Implementation of a consumption tax would mean that the tax treatment of funds invested at home would be as generous as that available for investment abroad. The elimination of the tax incentive to investing abroad should naturally increase the fraction of domestic saving invested in the developing country. Again, total investment in the developing country might increase as well, although any increase in domestically-financed investment would be partially (and perhaps fully) offset by a reduction in foreign-financed investment.

The effect on foreign investment in the developing country is also obviously critical. As discussed in Section V below, decisions by the U.S. and other capital-exporting countries regarding the availability of tax credits for consumption-based business taxes paid by their multinationals would be important in many cases; no developing country can afford to levy heavy taxes that cannot be credited. Of course, taxes on business income are likely to be reduced under a consumption-based business tax that allows expensing for foreign-owned as well as domestic investment. In this case, revenue loss to the developing country may be as important a problem as the potential loss of creditability. Also, to the extent that taxes on foreign investment are reduced, some additional foreign investment

may be expected, as long as the tax reduction is not absorbed by reduced foreign tax credits in capital-exporting countries.

#### IV. THE CHOICE BETWEEN THE ICF AND ITP APPROACHES

Thus far, we have argued that any direct consumption tax adopted by a developing country should include a business tax that allows expensing and should be consistent with the lifetime endowment view of tax equity. The last remaining major question -- the choice between the individual cash flow and tax prepayment forms of consumption taxes -- is perhaps the most important one; it should be determined primarily by technical considerations.<sup>37</sup> Although most observers tend to think of consumption taxes in cash flow terms, we believe that the individual tax prepayment approach is the most appropriate one in the developing world context. In this section, we explain our rationale for this decision, discussing first the three major differences between the ICF and the ITP approaches -- the use of so-called individual "qualified accounts" in the cash flow approach, the treatment of individual transitional problems, and the treatment of gifts and bequests -- and then a wide variety of other issues.<sup>38</sup>

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37/ Some early consumption tax proposals advocated a mix of ICF and ITP treatment; for example, see U.S. Treasury (1977). However such an approach presents formidable administrative problems; in particular, it would be difficult to police certain tax evasion techniques (discussed below) that take advantage of the differences in tax treatment of certain transactions under the two approaches. Accordingly, we limit consideration to plans that would allow only one of the two approaches (perhaps with exceptions for a few well-defined types of transactions).

38/ This discussion is based largely on Zodrow (1987).

**A. The Use of Individual Qualified Accounts**

The most important difference between the two types of consumption taxes is that the ICF tax allows individuals deductions from the tax base for investments in so-called "qualified accounts" and taxes all withdrawals from such accounts. In contrast, since an ITP tax treats all individual transactions on a tax prepayment basis, saving and dissaving are ignored for tax purposes, capital income is not taxed at the individual level, and no deduction is allowed for interest expense.

This results in dramatic simplicity advantages for the ITP tax. For example, all aspects of loans are simply ignored in the calculation of the individual tax under an ITP tax. In contrast, the inclusion of the proceeds of loans in the tax base as required under the ICF approach would probably be politically unpopular, would require an extensive informational and educational campaign, would result in considerable additional record keeping requirements for all debt arrangements, and would create opportunities for tax abuses within families in the form of loans with below-market interest rates to lower-bracket children.

Another potentially serious area for abuse under a consumption tax (as under most income taxes) is "tax base shifting" to lower bracket family members. Such problems might be quite serious under a progressive cash flow tax with individual qualified accounts, as taxpayers could establish such accounts in the names of their children, especially to the extent gifts to children were to fall below any lifetime gift/bequest exclusion under an ICF tax. Such problems would not arise under an ITP tax, since all business income would be taxed at the top marginal rate, and tax on earnings would be assessed on the earner. Owners of closely held firms could inflate the earnings of employed children, but this type of abuse is common to all systems of direct taxation and is relatively easy to police.

Under the ICF tax, ensuring that all interest income is included in the individual tax base would present the same monitoring and enforcement problems that plague the income tax; such problems disappear under the ITP approach since interest income is tax-exempt at the individual level.

Note that ITP treatment of interest would very likely raise revenue relative to income tax treatment for two reasons. First, even though lenders frequently avoid tax by not reporting interest receipts, borrowers are very likely to report the associated interest deductions. Second, borrowers tend to have higher tax rates than lenders, so that the revenue loss due to deductions for interest payments is greater than the revenue gain from taxing interest receipts, for a given amount of interest income/expense. Exempting interest income from tax would probably result in less revenue loss than the gain that would result from the disallowance of deductions for interest expense. An important exception to this general rule involves interest on public debt, which is included in taxable income under an income tax, with no associated deductions. Since such interest income would presumably be excluded from the ITP tax base, this aspect of the ITP tax would lose revenue.

In addition, withholding would be much more complicated under the ICF approach. To ensure timely payment of tax, a system of withholding on loans used to finance consumption might need to be introduced. In principle, withholding on loans should occur at the individual's marginal tax rate, although some type of average rate would likely be used to simplify administration. Such a system should theoretically also be accompanied by "negative withholding" on consumption loan repayments, since such repayments are deductible from the ICF tax base. All of these complexities are in marked contrast to a an ITP tax, where withholding would generally be much more accurate than under either an ICF tax or an

income tax, since returns to capital would be excluded from the individual tax base.

In order to avoid some of these problems, proponents of ICF taxes sometimes recommend that some amount of loans be treated on a tax prepayment basis; for example, Aaron and Galper (1985) recommend that up to a total of \$20,000 in outstanding loans be granted such treatment at the discretion of the taxpayer. This would simplify compliance for many taxpayers, although in principle records would still have to be kept to determine whether the limit was exceeded.

However, monitoring costs under such an approach would be increased in two ways. First, tax administrators would have to ensure that repayments of tax prepaid loans were not illegally deducted from the cash flow base. Second, the limit would have to be enforced. This would seem to be a difficult proposition even in a developed country, as it would require significant cross-checking capability across financial institutions; loans between individuals (including fictitious or reciprocal loans intended to take full advantage of the exemption) could further complicate matters and open avenues for evasion. It would be significantly more difficult if not impossible to implement such a scheme in most developing countries.

Individuals who could avoid the limit on prepayment-basis loans could defer tax liability to a significant degree by depositing the proceeds of such loans in qualified accounts. Moreover, they could reduce such liability if they could use prepayment-basis loans to take advantage of future lower rates. That is, a taxpayer could "average" or smooth taxable consumption by borrowing on a tax prepayment basis to make a deposit in a cash flow account during a relatively high-rate year, and then withdraw the proceeds from the qualified account to repay the loan during a relatively low-rate year. While there is nothing inherently wrong with



smoothing the effects of progressive rates, its benefits should not be available only on a selective basis.

Monitoring systems would generally have to be more comprehensive under an ICF tax with individual qualified accounts than under the ITP approach. The incentive to avoid reporting withdrawals would be great, since the principal amount withdrawn, as well as the return, would be subject to tax; monitoring systems would have to be sufficient to insure reporting of all withdrawals from all qualified accounts.

The use of individual qualified accounts also would result in additional opportunities for evasion and complexity in the international area. Individuals with access to foreign borrowing to finance deposits in qualified accounts -- like taxpayers who could avoid the limit on "tax prepayment" loans -- would have significant opportunities to defer or reduce taxes; to the extent this was viewed as undesirable, complex restrictions and monitoring of such transactions or perhaps even exchange controls would be required.

In addition, as noted by Graetz (1979), the existence of individual qualified accounts coupled with the opportunity to invest abroad on a tax prepayment basis (either legally or illegally with little chance of apprehension) would provide opportunities for tax avoidance or evasion. A typical scheme would involve an investment that consists of two components, with one made through a qualified account and the other made on a tax prepaid basis. The investment would be structured so that a disproportionate share of the deductions would occur in qualified accounts, while a disproportionate share of the income would accrue in the tax prepaid account. Measures taken to combat these avoidance or evasion strategies would add complexity. Indeed, all of the arguments presented above indicate that the use of qualified accounts under the ICF approach

would result in more complexity than the ITP method, although the magnitude of the additional complexity is difficult to assess.

Under the ICF approach problems would also arise with respect to the treatment of individuals who migrate. Since an ITP tax would tax earnings on a prepayment basis and exempt the receipt of income, there would be no problems of deferral of tax and subsequent migration. In contrast, the cash flow approach would result in opportunities to avoid tax through emigration. As a result, transfers abroad from qualified accounts would likely have to be treated as taxable events. For example, Aaron and Galper recommend that all qualified accounts would have to be held in institutions with an established domestic residence and that a withholding tax should be imposed at the maximum individual tax rate on all transfers from qualified accounts to individuals or businesses with a foreign residence. Such measures would obviously increase the complexity of the ICF tax.

A final effect of using qualified accounts should be mentioned. To the extent deductions for deposits in qualified accounts were taken at higher tax rates than those applied to subsequent withdrawals, an ICF tax would subsidize saving rather than simply be neutral with respect to the consumption-saving decision. (By comparison, the ITP tax would be neutral.) As noted above, the efficiency case for such tax treatment is unclear, and neutral treatment seems to be more likely to be optimal than policies that either tax or subsidize the return to saving. However, it is certainly not inconceivable that subsidization of saving might be viewed as desirable in a developing country in order to stimulate saving and increase the rate of economic growth.

#### **B. Transitional Issues**

Implementation of a consumption tax is generally viewed as involving particularly difficult transitional problems. These may be

especially troublesome in LDCs, where tax administration is notoriously weak. It is not clear in the context of most developing countries that these would be significantly more difficult than the transitional problems associated with implementing an ideal comprehensive tax on real economic income, or even a reasonably close approximation to such a tax. For example, in most developing countries, a switch to income tax rules for indexing interest income and expense, taxing indexed capital gains at ordinary interest rates, and eliminating all saving and investment incentives would involve significant transitional problems. Nevertheless, the resolution of transitional problems is critical to the implementation of any consumption tax.

In principle, transitional issues are important if the magnitudes of the net changes in individual wealth induced by implementing reform are sufficiently large. These changes must reflect all effects of reform and all special transitional provisions. Nevertheless, it is convenient to isolate several effects of implementing a consumption tax and discuss the reform-induced gains and losses caused by each; this approach is followed in the discussion below. Since we have assumed that both the ICF and ITP taxes would include a consumption-based business tax, their business transitional issues are the same; these are discussed in Section V. The following considers the differences in the individual transitional issues associated with implementing the two consumption tax plans.

The transitional issue that has received the most attention is the treatment of individual savings extant at the time of enactment of a personal consumption tax. Two types of difficulties arise, which have been termed "price change" and "carryover" problems.<sup>39</sup>

Price change problems are unexpected changes in wealth that result from changes in the relative prices of assets induced by changes in the tax

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39/ See U.S. Department of the Treasury (1977).

structure; these occur because of reform-induced changes in future after-tax returns. For example, unless all factors are perfectly mobile, the elimination of favorable tax treatment for a business activity will lower after-tax returns to immobile assets employed in the activity and thus lower their values. Such price change problems would be broadly similar for both plans, and indeed for any reform including a movement toward a comprehensive income tax. They presumably would be mitigated with the standard sorts of delay, phase-in, grandfathering or compensation provisions, are quite similar for both ITP and ICF taxes, and are therefore not discussed further here.

Carryover problems arise in two forms. The first occurs when new tax rules imply that income earned under the old tax regime but untaxed due to deferral provisions will escape taxation under the new regime; for example, a switch from a realization-based income tax to an ITP tax would imply that capital gains accrued but untaxed under the income tax would escape tax entirely. The second form of carryover problem occurs when income which was fully taxed under the old system will be subject to a second tax under the new system; for example, adoption of rule that deemed all existing financial assets to be held in qualified accounts at the time of a switch from an income tax to an ICF tax would result in double taxation of those assets that were subject to tax under the prior income tax regime.<sup>40</sup> Such problems are frequently cited as one of the most disturbing features of switching to a consumption tax.

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<sup>40/</sup> Note that there would be no carryover problem for assets that effectively received ICF treatment under the pre-reform income tax. For example, such assets would include those in ICF-type retirement accounts (those for which the taxpayer received a deduction from current income for deposits made into the account) and pension fund assets in those cases in which contributions to the fund were untaxed.

The two types of plans appear to face very different transitional problems of the carryover type. Under the ICF approach, any existing assets that would be newly classified at the time of enactment as qualified account assets would face double taxation to the extent they were accumulated out of after-tax income. Accordingly, Aaron and Galper propose the following set of transition rules designed to mitigate the effects of such double taxation. The proceeds of all sales of "old" assets -- those extant in the year of enactment of the ICF consumption tax -- would be fully included in the ICF tax base; however, taxpayers would get a deduction related to the remaining tax basis of the asset in the year of enactment.<sup>41</sup> Old assets sold in the year of enactment would simply get a deduction for remaining basis. Old assets sold subsequent to the year of enactment would get a deduction equal to the basis remaining in the year of enactment, indexed by a factor equal to one plus a market-related nominal interest rate each year. Thus, the deduction for basis would in all cases be equal in present value terms to the basis remaining in the year of enactment of reform. This treatment of existing assets would be coupled with immediate disallowance of all interest deductions on all existing loans.

These transitional rules would have the effect of providing "old" assets and loans with consumption tax treatment in the year of enactment. Old assets would effectively be accorded ICF treatment. That is, assets sold in the year of enactment would receive expensing of remaining basis in that year, while assets sold in years subsequent to the year of enactment

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<sup>41/</sup> For example, for a depreciable asset, the remaining tax basis would equal the portion of the cost of the asset that had not been deducted under the income tax at the time of enactment of the consumption tax.

of reform would receive the same treatment in present value terms. The proceeds of all asset sales would be fully included in the tax base. Simultaneously, old loans would be accorded ITP treatment. That is, repayments of interest and principal would not be deductible, and also would not be included in the tax base of the lender. As demonstrated in Section II, ICF and ITP treatment are roughly equivalent, and both are consistent with a consumption tax. As a result, the Aaron-Galper transition rules would provide old assets and loans with consumption tax treatment at the time of enactment and thus avoid incentives for the churning of assets after a switch to a consumption tax.

The effects on holders of existing assets of such an immediate application of consumption tax rules would depend on the relative magnitudes of remaining basis and outstanding principal of debt. Owners of existing assets would gain (be indifferent, lose) to the extent that remaining basis was greater than (equal to, less than) outstanding principal of debt. Such treatment would be quite generous to investors whose assets were primarily equity financed, since they would immediately receive the benefits of expensing of the remaining basis for all existing assets, without losing much from the loss of interest deductibility. On the other hand, it would be quite harsh to investors whose assets were debt-financed but had little or no remaining basis. To such investors, expensing of basis would be of little benefit, but the loss of interest deductibility would be a large cost, since the investor would not be allowed the interest deductions expected when debt was incurred; of course, no deduction would be allowed for repayment of interest or principal under the ICF tax.

In addition, under the Aaron-Galper transition rule, indexing the deduction for basis from the time of enactment using nominal interest rate would add some complexity, and the choice of the interest rate might prove controversial. Moreover, rules to reduce the revenue loss due to deductions of basis of existing assets would add to the complexity of the system.

Under an ITP tax, the carryover problem is the need to tax income accrued but untaxed under the income tax, such as unrealized capital gains. One approach, recommended by Hall and Rabushka, is to provide no special treatment, that is, to exempt such accrued pre-reform gains. Unless capital gains were effectively taxed at zero or relatively low rates under the pre-reform system, this would result in a windfall gain since accrued but unrealized gains would permanently escape tax. Given the difficulty of effectively taxing capital gains in developing countries, even where required by law, this may not be a major problem.

An alternative would be to require gains on pre-existing assets to be included in the ITP tax base on a cash flow basis as a transitional measure, calculating the amount to be included using an approach identical or similar to that proposed by Aaron and Galper. Viewed in this way, the transitional problems (and perhaps the solutions) under the two reform plans are quite similar. Note that Aaron-Galper type rules would be somewhat simpler under an ITP tax, since the revenue loss associated with granting immediate deduction of basis would be significantly smaller since reinvestment of funds would not reduce current tax liability.

### C. The Tax Treatment of Gifts and Bequests

As stressed above, we believe that developing countries should consider only consumption tax proposals consistent with the lifetime endowment interpretation of tax equity. As described in Section II, this criterion implies somewhat different treatment of gifts and bequests made

under the ITP and ICF consumption taxes. But as demonstrated there, the two treatments are in fact roughly equivalent. However, to the extent the taxation of gifts and bequests to both donor and recipient generates political opposition, questions of perception may favor the ITP approach. This point is valid only if the double taxation of gifts and bequests implied by the lifetime endowment view is less obvious under the ITP approach. This may be true, since the gift or bequest is simultaneously included in the tax base of the donor and the recipient at the time of transfer under the ICF tax; in contrast, only the recipient pays tax at the time of transfer under the ITP approach, since all forms of consumption funded by saving, including the making of gifts and bequests, are "tax prepaid". As a result, there might be less sentiment for generous exclusions for gifts and inheritances received under the ITP approach. (Note that Aaron and Galper recommend a \$200,000 lifetime gift/bequest exclusion under their version of the ICF tax.)

#### D. Additional Issues

##### 1. Opportunities vs. Outcomes

An interesting equity issue raised by the two plans is whether fairness across individuals should be judged on the basis of "opportunities" or "ex ante equity" or on the basis of "outcomes" or "ex post equity." The opportunities notion of fairness implies that individuals who face the same investment opportunities (have the same wealth and same portfolio choices) should face the same tax burden regardless of the outcomes of their investment decisions; this view of fairness has been attributed to the ITP approach. In contrast, the outcomes notion of fairness implies that the actual outcomes of investment decisions are critical and should form the basis of taxation; this view has been attributed to the ICF approach and is sometimes phrased as the notion that "winners" should pay higher taxes than "losers."



Early discussions suggested that this difference was critical and that a system based on opportunities was likely to be perceived as fundamentally unfair.<sup>42</sup> More recently, this difference has been shown to be more apparent than real in many important cases; in particular, as long as investments can be replicated, tax rates are constant across time periods, and the government can invest tax proceeds (which are received at an earlier point in time under the tax prepayment approach) at the average rate of return in the economy, both investor returns and government receipts are the same under the two approaches.

A simple example will illustrate this point. Consider an investor in a 30 percent tax bracket who earns and invests \$1,000. The investment has a 0.2 probability of a five-fold return and a 0.8 probability of becoming worthless after one "period"; the average or expected gross rate of return in the economy, which is assumed to equal the government's discount rate, is thus  $0.2 (0.2 \times 5 + 0.8 \times (-1) = 0.2)$ . Under the ITP approach (the "opportunities" approach where tax is prepaid), the investor pays tax of \$300 in the first period, invests the remaining \$700, and has period two consumption of either \$4,200 ( $6 \times 700$ ) or zero, depending on the outcome of the investment. Under the ICF (the "outcomes" approach), the investor invests the full \$1,000, but must pay tax at a rate of 70 percent on any returns. Depending on the outcome, the investor again has period two consumption of either \$4,200 ( $6 \times 1000 \times 0.7$ ) or zero, but pays tax in period two of either \$1,800 ( $6 \times 1000 \times 0.3$ ) or zero. Consumption possibilities are clearly the same under either approach for both "winners" and "losers." Moreover, as long as the government can invest at the average rate of return in the economy, the expected value of tax revenues

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42/ See Graetz (1979) and U.S. Treasury (1977).

in period two dollars is \$360 in both cases ( $300 \times 2$  for the ITP tax and  $0.2 \times 1800 + 0$  for the ICF tax).

This argument is not entirely convincing, since it must be qualified in several important ways. First, situations in which investment opportunities can not be replicated, such as unique market opportunities identified by a single entrepreneur, are by no means trivial; presumably these are precisely the types of situations that underlie concern with this issue. Second, the government may be unwilling or unable to invest at the average gross rate of return in the economy, so that the present value as well as the time path of revenues would be different under the two approaches. Third, government revenues and private consumption may be larger under the ICF approach if individuals are risk averse and government risk-sharing encourages individual risk-taking. In this case the tax-induced increase in individual risk-taking yields positive returns on average.

Finally, the perception problems associated with the tax repayment approach, especially within the context of a tax system with progressive marginal rates, could be significant. Application of the opportunities approach would probably conflict with commonly perceived notions of equity, especially in developing countries, where there is relatively little economic sophistication. Such problems could arise for two reasons. First, some observers might feel that the above qualifications are sufficiently important that the equivalence result is of little policy significance. Second, and more likely, is that most people would either not understand or not be aware of the result, but would certainly be aware of the intuitively appealing notion that "winners" should pay more tax than "losers." On the other hand, the least sophisticated citizens of developing countries probably pay little attention to such issues in any event.

Nevertheless, these results suggest that, from an economic perspective, the difference between the opportunities and outcomes approaches is substantially smaller than commonly believed. The distinctions that are real are probably not of sufficient importance to be a deciding factor in the choice between the ITP and ICF approaches, since most highly successful investments, such as venture capital success stories and highly productive investments in natural resources, would in fact be taxed on an "outcomes" basis under a properly structured business tax. Finally, if certain types of outcomes are perceived as being appropriate for taxation at the individual level, this could be accommodated within the ITP framework; for example, prizes, awards, and lottery winnings could be included in the individual tax base, even though they are not labor income.

## 2. Income Averaging

Explicit averaging generally should not be considered in the developing country context, since it introduces many problems, including complexity, administrative difficulties in coping with changes in the taxpaying unit due to marriage, divorce and death, and the difficulties associated with monitoring of multi-year records.

The ICF tax would provide more opportunities than the ITP approach for implicit averaging, since the timing of taxation would be determined by consumption rather than earnings patterns; as argued in Section II, such averaging is desirable on equity grounds from a lifetime perspective. To the extent the tax structure provides for relatively narrow rate differences, this problem would be reduced in importance. Moreover, the recommended treatment for pensions provides an effective averaging mechanism, if only for the typically small portion of the tax-paying population in a developing country that participates in pension plans.

Finally, some critics of the ICF consumption tax argue that it is, or would be perceived to be, unfair because it imposes relatively high tax

burdens during the high-debt period of youth and the high-dissaving period of old age. This problem does not arise under the ITP approach, since tax burdens track wages. Any problems of the ICF tax in this area could be mitigated by the provision discussed above that would allow some fixed amount of loans to be treated on a tax prepayment basis; similar provisions could be made for housing purchases.

### 3. Housing and Other Consumer Durables

Apart from any subsidies (which could be applied under either approach), the tax treatment of owner-occupied housing would be similar under the two types of consumption taxes. It would be extraordinarily difficult, from both an administrative and a political standpoint, to impute the returns to investment in owner-occupied housing and include them in an individual cash flow base; as a result, both ITP and ICF plans would almost certainly treat housing on a tax-prepaid basis. That is, investments in owner-occupied housing would not be deductible, and no attempt would be made to impute rent to the owner. The primary difference is that down payments withdrawn from a qualified account would result in a bulge in tax base under an ICF-based tax. One solution to this problem, if it were thought significant, would be to allow something like ten-year averaging for down payments for owner-occupied housing withdrawn from a qualified account; this would add some complexity to the system.

Consumer durables and collectibles presumably would also be treated on a tax prepayment basis under both plans. In principle, if there were concern about large and untaxed gains on such items, one solution would be a special tax on capital gains on collectibles (and even owner-occupied housing) after an adjustment for inflation; in fact, such a tax would be administratively infeasible because of the difficulty of taxing such gains. (Such a tax would be complex, especially since basis would be indexed.) Moreover, one can argue that such a tax is unnecessary as a

matter of principle; the tax on the return to investment, which is composed partly of consumption benefits and partly of appreciation, has been prepaid (since no deductions for the investment was allowed). In theory, then, such a capital gains tax should be designed to capture only extraordinary gains. This implies that, for purposes of computing the extraordinary gain, the basis should be increased by a factor based on a nominal rate of return (after some allowance for consumption benefits) rather than just the inflation rate. Such fine-tuning would add further to the difficulties of administering such a tax.

#### 4. The Taxation of Non-Wage Returns to Entrepreneurship

An ICF consumption tax couples a consumption-based business tax at the business level with cash flow treatment at the individual level. Such an approach results in the double taxation of non-wage returns to entrepreneurship. This occurs because when an individual contributes entrepreneurial skills to a start-up venture neither the individual nor the firm gets a deduction for this risky "investment." Suppose that the venture is successful and the individual receives payment in the form of stock in the company. The result is that the returns to this entrepreneurship are taxed first at the company level, since there is no deduction for the "investment", and then at the individual level either as capital gains or as dividends. (Contracts that provided for large (deductible) wage payments contingent upon the success of new ventures could provide a partially satisfactory means of dealing with this problem.) This problem does not arise under an ITP tax, since dividends and capital gains are not taxed at the individual level.

The double taxation of non-wage returns to entrepreneurship under a ICF tax would have several important and potentially undesirable effects. To the extent such returns represent pure economic profits, double taxing them would be efficient (although arguably inequitable) and would allow

lower rates of tax on other activities where taxes are distortionary. However, to the extent such payments represent returns to risk-taking, a disincentive to risk-taking may arise, especially in the presence of a progressive rate structure and limitations on loss offsets and carry-forwards. Such a result would be inconsistent with the goal of encouraging economic growth in developing countries. Finally, from a political perspective, double taxation of the returns to entrepreneurship would seem to be an undesirable proposition. On balance, the absence of double taxation of the returns to entrepreneurship under the ITP tax seems to be a distinct advantage.

#### 5. Treatment of Loans at the Business Level

As described in Section II, loans at the business level can be treated in one of two ways under a consumption-based business tax. (As noted there, these correspond to the differing treatments of loans under the ICF and ITP approaches.) The simplest treatment is simply to ignore them; interest receipts would not be included in the business tax base, and interest payments would not be deductible. This approach has the distinct advantage of treating debt and interest in exactly the same way as equity and dividends. An alternative approach is to treat loans on a cash flow basis, with proceeds included in the base and repayment of interest and principal deductible. Thus loan proceeds, but not equity contributions, would be included in the business tax base, and deductions would be allowed for interest paid and principal repayments but not for dividends or the return of equity.

The former would seem to be the preferable approach, both on simplicity grounds and because any administrative and enforcement problems regarding relabelling of dividends as interest (in order to get deductibility at the business level) would be avoided.

## 6. Defining Activities Subject to Business Taxation

It would be highly desirable for any consumption tax plan to be structured in such a way as to prevent abuses which involve "gaming the system" by assigning deductions and/or losses to cash flow accounts while receiving tax prepayment treatment (i.e., exclusion) for income and/or gains.<sup>43</sup> This problem arises only under the combination of the consumption-based business tax and the ITP tax, where business receipts and purchases are included in the tax base on a cash flow basis, but individuals receive tax prepayment treatment. Accordingly, under an ITP tax, the definition of businesses, which are required to use cash flow treatment for receipts and purchases, would have to be quite broad (e.g., including speculative land purchases and the ownership of rights to royalties) in order to prevent opportunities for such schemes. Determining which activities would require the filing of a business return would be difficult and would inevitably require some arbitrary distinctions; administering such rules would also be difficult.

Note that a de minimis rule exempting small businesses from filing returns generally would be desirable on simplicity grounds.<sup>44</sup> However, such a rule would open avenues for abuse of the type described above, since "small" firms qualifying for the tax exemption would effectively be treated on a tax prepayment basis. Finally, note also that monitoring international transactions to insure that similar techniques were not used to avoid or evade taxation would be difficult under both plans.

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43/ See Graetz (1979).

44/ In many developing countries, such a rule would imply that only "modern sector" firms would be subject to the business tax.

**E. Summary**

In our view, the above discussion presents a compelling argument in support of the ITP approach as the preferred method of structuring a direct consumption-based tax in a developing country. Its primary advantage over the ICF approach is that it is much simpler in terms of compliance, monitoring, and administration. In addition, structuring the tax to be consistent with the lifetime endowment view of tax equity would be marginally easier, while transitional problems would be broadly similar under the two approaches. All of the remaining points considered above either favor the ITP approach, or are not sufficiently important to outweigh its simplicity advantages. Accordingly, we believe that developing countries considering a direct form of consumption taxation should seriously consider only the ITP approach.

**V. THE DESIGN OF AN ITP CONSUMPTION TAX IN A DEVELOPING COUNTRY**

In this section, we provide additional details on the implementation of an ITP consumption tax in a developing country. We focus on structural issues, including details of the business tax, as well as on international and transitional issues. We also consider the advisability of both a supplementary tax on individual wealth and taxation on a presumptive basis within the context of an ITP consumption tax.

**A. Details of the Business Tax**

As described in Section II, the consumption-based business tax under the ITP plan is basically a straightforward tax on gross receipts less deductions for business-related expenditures, including purchases of equipment and structures and additions to inventories; no deductions are



allowed for dividends or interest paid. Nevertheless, a number of issues must be resolved in designing the business tax component of the ITP plan.

1. Limits on Wages Paid and the Use of Stock Options

Under an ITP tax, there need be no limits on wages and salaries that can be paid out by a business to owners or employees, except for excessive wages and salaries paid to children, spouses and relatives in order to avoid higher marginal tax rates. Thus, business income, which is all subject to the maximum individual tax rate, can be converted into wage income of the owner, which is subject to a progressive rate schedule. Such payments are all subject to tax at the individual level. This, in effect, allows "do-it-yourself" integration for owners of small businesses.

Note also that the use of stock options as a form of compensation does not present problems under an ITP tax. In the typical case, an individual contributes entrepreneurial or managerial skills to an enterprise and receives options on the stock of the company rather than (or in addition to) salary. Since neither the firm nor the individual gets a deduction for this "investment," all returns are fully taxed at the firm level (at the maximum individual rate).<sup>45</sup> Thus, no additional tax need be assessed when the individual exercises the stock options; the individual has effectively made a tax-prepaid investment in the firm.<sup>46</sup>

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45/ There seems to be no reason to allow the firm a deduction for the value of the stock option and simultaneously include this amount in the compensation of the individual. Such an approach would have little revenue effect in most cases (since the firm deduction and individual inclusion would cancel out in the absence of rate differentials) and imputing a value to the stock option would be very difficult in most cases.

46/ See the discussion of the taxation of non-wage returns to entrepreneurship in Section IV.D.4.

## 2. Sales of Fixed Assets

The taxable gross receipts of a business include all sales, including those of fixed assets. Such treatment is consistent with expensing of such assets under a consumption-based business tax, and is essential to prevent tax-motivated churning of assets. Monitoring of sales of used fixed assets would be critical to effective tax administration to prevent tax abuses. Indeed, it might be desirable for cross-checking purposes to require purchasers of used fixed assets to provide taxpayer identification information on the seller when claiming deductions for used equipment purchases. (For administrative reasons it might be desirable to require reporting only for large individual purchases or for large aggregate purchases during the year. One could also argue that the benefits of expensing are sufficiently great that all sales of fixed assets should be subject to such rules; however, administrative considerations would probably preclude such treatment.) The transitional problems caused by the inclusion in the business tax base of sales of fixed assets are discussed below.

## 3. Treatment of Losses

The expensing of purchases of equipment, structures and additions to inventories under the ITP tax poses several troublesome problems. First, the ability of profitable businesses to "zero out" their tax liability with sufficiently large investment programs is likely to cause perception problems in many developing countries. This result is, of course, inherent in the allowance for expensing of fixed assets and inventories, a common feature of all consumption-based taxes.

Second, new and rapidly growing capital-intensive firms are likely to be in a loss position for tax purposes. Accordingly, the treatment of losses is critical under a consumption-based business tax. Losses cannot

be deducted from the individual tax base; this precludes business losses from being used to shelter individual compensation. It is appropriate that losses be carried forward indefinitely, with interest at a market-based nominal interest rate. Such treatment is essential to reduce the competitive disadvantage of new firms, relative to established ones, and to mitigate tax incentives for mergers, takeovers and buyouts. (Even this approach will not totally eliminate the problem, since it can be expected that the firms in question cannot borrow at the interest rate used to adjust losses carried forward.)

#### 4. Treatment of Loans

Loans have no tax consequences under the "tax prepayment" version of the business tax, as the proceeds of loans are not included in the tax base and interest payments are not deductible. (This is consistent with the exemption of interest at the individual level under the ITP tax.) All business lending, including purchases of another firm's bonds, is treated in a consistent manner; purchases are not deductible, and interest receipts are not included in the tax base. Such treatment is consistent with the tax treatment of the borrowing firm, which does not include the proceeds of the loan in the tax base and gets no deduction for interest paid. It also guarantees that debt is treated in the same way, whether held by firms or households.

As argued above, such treatment of loans is generally much simpler than that under an income tax or under cash flow consumption tax treatment of loans (which requires inclusion of the proceeds of loans in the tax base coupled with deductions for interest paid and repayment of principal). However, tax prepayment treatment of loans gives rise to two opportunities

for tax avoidance.<sup>47</sup> The first is the use of installment sales to defer tax liability when the purchaser is not subject to taxation under the consumption-based business tax. (The purchaser might be an individual, a tax-exempt institution or a foreigner). In principle, an installment sale should be treated as a cash sale at the time of purchase coupled with a loan. However, under a cash flow business tax, installment sale payments would not be included in the gross receipts of the seller until received. This would result in an opportunity to defer tax without penalty, since the interest on the installment sale loan would not be included in the tax base of the seller.<sup>48</sup> In order to eliminate this avoidance possibility, installment sales to entities other than taxable businesses could be treated as cash sales at the time of purchases, with subsequent installment sale payments having no tax consequences.<sup>49</sup>

The second problem caused by tax prepayment treatment of loans occurs when a taxable business is simultaneously trading in goods and borrowing/lending money with an entity that is not subject to the consumption-based business tax. If the taxable firm is a seller/lender, it has an incentive to couple sales at an understated price with an above-market interest rate on the loan, since the interest received would not be included in gross receipts. If the firm is a buyer/borrower, it has an incentive to strike a deal for an inflated purchase price coupled with a below-market interest rate, since only purchases are deductible from the

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47/ These avoidance problems are outlined in the discussion below. For more thorough explanations, see McLure, Mutti, Thuronyi and Zodrow (1987).

48/ If the purchaser were a taxable business, there would be little problem since the deferred receipts of the seller would be offset by deferred deductions for the buyer.

49/ Note that similar problems with installment sales arise under an income tax.

base of the business tax. In both cases, the entity that is not subject to the consumption-based business tax would generally be indifferent to the price/interest rate manipulations described.

Solutions to these problems are far from obvious. They would likely involve interest rate floors and ceilings, would be somewhat arbitrary, and would be difficult to administer and enforce.<sup>50</sup> Thus, in these cases, the use of tax prepayment treatment of loans would not simplify the tax structure; rather it would require anti-avoidance rules that would complicate the tax structure while at best only limiting abuses.

#### 5. Stock Purchases

In general, business deductions are allowed only for real investment outlays. Thus, business purchases of another firm's stock are not deductible, and dividends are not included in the tax base. Such treatment is consistent with the tax treatment of the firm whose stock is being purchased, since it does not include the proceeds of the stock sale in the tax base and gets no deduction for dividends paid.

#### 6. Treatment of Land

The treatment of land must also be specified. The most consistent approach is to allow expensing of the cost of land purchased, with the proceeds of land sales included in the business tax base; under this approach, buying and selling land other than that associated with owner-occupied housing would be deemed to be a business activity. However, to minimize transitional problems or to tax land differentially, it may be desirable simply to exclude land purchases and sales from the business (and

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50/ Alternatively cash flow treatment could be required for such "linked" loans; such treatment would clearly be very complicated from both an administrative and a compliance standpoint.

individual) tax base, except for firms whose business is buying and selling land. Presumably no attempt would be made in this case to isolate and allow an exemption for the portion of gross receipts that is attributable to land; this would imply that the marginal effective tax rate on income from capital invested in land would be the statutory rate, rather than the marginal effective tax rate of zero applied to income from all other capital investment. Initially, this treatment would distort investment decisions away from land, but the final equilibrium result should be lower land values with few real effects on resource allocation. (The most important effect on resource allocation would probably be a disincentive to conversion of land from agricultural to urban uses, an important phenomenon in most developing countries. Whether this would be detrimental or beneficial cannot be known in general.) Such an approach would cause serious administrative problems because of the need to separate the values of land and structures and the strong incentives to recharacterize non-deductible land purchases as deductible purchases of structures.

#### 7. Fringe Benefits and Mixed Business/Personal Purchases

The taxation of employer-provided fringe benefits would be problematical under an ITP consumption tax, as it is under an income tax. The existence of fringe benefits (other than pensions or other directly labor-related payments), as that term is usually understood in developed countries, is generally less prevalent in developing countries than in more advanced countries, and therefore less of a problem. But the provision of consumption benefits such as housing and cars that are exempt in practice, if not by law, to owners and managers of business firms and independent professionals may be every bit as much of a problem.

The most straightforward approach would be to deny firms deductions for fringe benefits and for the costs of all expenditures

representing consumption on the part of owners or employees. Rules would be drawn as tightly as possible in order to capture as much as possible of the personal consumption component of the tax base (e.g., no deductions would be allowed for meals, entertainment, automobiles with an important personal use component, etc.). Although relatively simple, this approach would effectively tax benefits at the firm's rate which, as argued above, should equal the individual maximum rate.<sup>51</sup>

Such treatment would probably be justified in the case of most fringes and consumption benefits, especially since this rate could be avoided at the discretion of the taxpayer by making cash payments, rather than payments in kind. However, the result is a disincentive to providing fringe benefits to lower-rate employees. Such a disincentive would be undesirable to the extent that employer provision of certain goods as fringe benefits is economically efficient; for example, employer provision of some benefits may allow economies of scale to be realized, and the provision of health care insurance to all employees of a firm may be an effective way to deal with the adverse selection problem. An alternative would be to allow a partial deduction for fringes, which would subsidize high-rate employees while providing less of a disincentive to low-rate employees.

Another approach would be to treat the costs of providing fringe and other benefits as income to be imputed to employees. Firms could even be given the option of imputing benefits, rather than having deductions for

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51/ No rule in this area can be truly simple, because in many cases, it would be difficult to determine which costs should be allocated to the provision of fringe benefits. Furthermore there is a grey area of workplace amenities between essential business expenditures and provision of consumption benefits to employees.

their costs disallowed. Such a procedure would eliminate the inefficiency problem, but would result in a significant increase in administrative complexity. In addition to the problems mentioned above, it would be difficult to determine how costs allocated to fringe benefits should be allocated among employees.

The tax treatment of business purchases and sales of "collectibles" presents serious problems under a consumption tax (as it does under an income tax). We recommend no special treatment; that is, business purchases and sales of collectibles should be treated on a cash flow basis. Such an approach implies that the personal consumption component of such items would escape tax; it also opens evasion possibilities in the form of non-reporting of sales of collectibles. However, cash flow treatment of such transactions eliminates the need for complex and somewhat arbitrary rules defining "collectibles" and specifying which firms deal in "collectibles" and thus should be allowed deductions for purchases with inclusion of sales.<sup>52</sup>

#### 8. Consistency with Financial Accounting

The simplicity features of the ITP approach, which are its major advantage, are achieved primarily by avoiding many of the complex issues involved in measuring real economic income properly. Accordingly, since the tax base is not income, the accounting information required to determine the tax base is not sufficient to determine income as required for financial purposes. Accurate financial accounting would require

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52/ Note, however, that cash flow treatment of business purchases and sales of collectibles coupled with tax prepayment of such transactions at the individual level gives rise to tax avoidance opportunities. For a discussion of this issue, see McLure, Mutti, Thuronyi, and Zodrow (1987).



precise measurement of income (including adjusting for inflation and dealing with all timing issues properly).

This divergence between tax and financial accounting has several implications. It is clear that some of the simplicity gains obtained with the ITP approach are lost in the sense that financial accounting is still complex even if tax accounting is much simpler. However, all of the information required to prepare tax returns is certainly included in the information required for accurate financial accounting, so introducing an ITP consumption tax would add little complexity to private accounting procedures while greatly simplifying tax procedures. In particular, auditing and monitoring taxpayer compliance should be somewhat simpler because measurement of the tax base is simpler. Moreover, even if financial accounting practices do not conform to the principles of accurate income measurement, tax distortions and opportunities for tax evasion would not arise if the tax base were calculated according to the rules of an ITP consumption tax.

#### 9. Using Reduced Interest Payments to Reduce Prices

A difficult problem common to an ITP consumption tax (and the ICF tax, a comprehensive income tax, and a value added tax) occurs when a business engages in linked transactions with its customers in which it pays relatively low rates of interest, while simultaneously reducing the price of goods and services sold by the business. Under the consumption-based business tax, this results in the substitution of tax-reducing price cuts for non-deductible interest expense, producing an artificially low level of gross receipts and thus an understatement of tax liability. In theory the general principle to be applied is that market rates of interest should be imputed to customer balances so that artificially low gross receipts are not reported.

The two most prominent examples of this problem occur with financial institutions and life insurance companies. In the case of financial institutions, a typical example is a bank which provides services such as checking accounts and automatic tellers and takes payment in the form of reduced interest payments on deposits. A similar problem arises with life insurance companies that pay relatively low rate of interest on the cash value of policies in exchange for charging relatively small premiums for life insurance coverage. In both cases, the conceptually correct solution is to impute a market return to consumer balances -- deposits in the bank case and the cash value of policies in the insurance case. However, such treatment would clearly increase the complexity of the ITP consumption tax and is not recommended.

#### 10. Leasing

Leasing transactions would be handled like all other business transactions under the consumption-based business tax. The lessor would expense purchases and include lease payments in receipts. The lessee would get a deduction for those lease payments.

It is interesting to note that simultaneous borrowing and leasing, say of business equipment, generally would not confer an advantage to the borrower relative to simply purchasing the equipment; this is true even if interest payments are fully included in the lease payment. The borrower/lessee gets a full deduction for lease payments, and thus effectively gets an interest deduction. However, the lender/lessor has to include the entire lease payment in taxable gross receipts, and thus effectively is taxed on interest income. As long as the tax rates of the two businesses are equal, there is no particular advantage to leasing, relative to purchasing. Note that this result does not obtain if the lessor is a tax-exempt entity; this implies that the leasing/lending

activities of such institutions should be taxed in order to eliminate opportunities for abuse. Finally, leasing by the domestic financial sector should generally pose no problems, provided that the lease payments received by the financial institution were subject to tax.

The possibility of simultaneously leasing and borrowing from foreign financial institutions would open an avenue for abuse. Specifically, domestic firms could arrange for inflated, fully deductible lease payments, coupled with an artificially low interest rate. Such an arrangement would lower the tax liability of the domestic firm since the inflated deductions for the lease payments would be fully deductible while the interest payments are non-deductible in any event; it would presumably be a matter of indifference to the foreign financial institution which would include both interest receipts and the lease payments in its income tax base. Substantial administrative vigilance would be required to detect this type of abuse.

## B. International Issues

### 1. Exports and Imports

The treatment of exports and imports under the business tax must be specified. The most straightforward approach is to include the value of exports in gross receipts and allow deductions for only the domestic cost of imported inputs; that is, in sales tax terminology, the tax would be assessed on an origin basis. Such treatment would be inconsistent with the destination principle treatment normally used with a value added tax (taxing imports and exempting exports). In a world with floating exchange rates, the choice between these two methods is unlikely to have a major effect on international competitiveness in the long run.<sup>53</sup> However,

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<sup>53</sup>/ See McLure (1987).

because exchange rates do not adjust instantaneously and are affected significantly by movements of portfolio capital, there could be prolonged periods following a tax change in which competitiveness and the efficiency of international trade and capital allocation would be affected. Moreover, an origin-based would probably suffer from adverse perception effects. A more serious problem is that of documenting and monitoring the value of exports, especially to foreign affiliates. This is a standard problem under the origin principle.

## 2. Treatment of Investment by Foreigners

The second critical international issue is the determination of the treatment of foreign investment, given the fact that implementation of a consumption tax in any developing country would occur in a world in which all other nations would, at least in principle, continue to use income taxation for at least a significant period of time. To avoid revenue loss, the developing country adopting an ITP consumption tax might consider income taxation of foreign investment as an alternative to extending the benefits of consumption tax treatment to foreign investment. Of course, this would be denounced by capital-exporting countries (and it might jeopardize foreign tax credits otherwise allowed by such countries). If this approach were deemed to be undesirable, revenue objectives could presumably be achieved by assessing withholding taxes on dividends and interest paid to foreigners.

Alternatively, if foreign firms paid significant amounts of tax under consumption tax rules, another potentially critical problem would arise.<sup>54</sup> Specifically, it would be important to structure the tax treatment of foreign investment in such a way that foreign tax credits

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54/ For a more thorough discussion of this issue, see McLure, Mutti, Thuronyi, and Zodrow (1987).

provided in countries such as the United States would be available for taxes paid under an ITP consumption tax regime. It is unclear whether this would be possible for an ITP consumption tax, since it can be argued that a tax which disallows interest deductions is not a tax on net income, and thus does not satisfy the controlling criterion for being creditable in the U.S.<sup>55 56</sup> Finally, it must be noted that too much can easily be made of the issue of creditability, especially in the United States. Recent changes in U.S. law will result in many firms having paid more foreign income taxes than they can credit in the United States; that is, they will be in an excess foreign tax credit position. For these firms it may make relatively little difference whether a consumption-based business tax levied by a developing country is creditable.

### 3. Taxation of Foreign Investment Income

At the individual level, foreign (as well as domestic) capital gains, interest receipts, and dividends received would presumably be exempt from tax under the ITP approach. In many developing countries, including those that nominally employ the worldwide principle, this would simply formalize existing practice. The primary result of adopting the ITP consumption tax approach would be to put domestic and foreign investment on an equal (tax-exempt) footing, which would likely increase the fraction of domestic funds invested at home.

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55/ It is interesting that the U.S. raises no similar objections to provisions of the income taxes of other countries, such as accelerated depreciation, that are equally inconsistent with the basic rationale of income taxation but reduce taxes rather than raising them.

56/ Whether this obstacle could be circumvented by allowing an interest deduction and then levying a withholding tax on interest paid to foreigners at the business tax rate is unclear. Certainly this approach would be questionable if applied in cases covered by the relatively few tax treaties between developing and developed countries.

The treatment of foreign investment and foreign-source income received by domestic firms would also have to be determined. Under consistent application of the consumption-based business tax on a worldwide basis, a deduction would be allowed for foreign business investment, and foreign-source business income would be subject to tax; by comparison, foreign investment by individuals would be treated on a tax prepaid basis. Most consumption tax proponents advocate implicitly allowing a deduction rather than a credit for foreign taxes paid; that is, the receipts attributable to foreign investment and included in the firm's business tax base would be net of any foreign taxes paid, and no additional deductions or credits would be allowed.<sup>57</sup> (Foreign taxes paid by individuals on income from capital would be of no relevance, since the foreign-source income would be exempt from tax.)

An obvious problem with this approach is the difficulty in ensuring that the return to foreign investment is included in the business tax base. Accordingly, it might be desirable to require separate accounts for foreign investment and prohibit the use of foreign losses or deductions to offset domestic income; allocation of costs between domestic and foreign operations would be a source of complexity and potential abuse under this approach.

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57/ Note that the allowance of a deduction rather than a tax credit for foreign taxes paid is consistent with a tax policy goal of maximization of national income. By comparison, allowing a tax credit implies the policy goal of maximization of worldwide income (or achieving an efficient worldwide allocation of capital). See Musgrave (1969) or, for a more recent exposition of these points, Rosen (1985).

Another problem with this approach is that taxpayers could invest abroad both as individuals and through their own businesses. This would result in possibilities for taxpayers to "game" the tax system by assigning deductions and/or losses to business cash flow accounts while receiving individual tax prepayment or exemption for income and/or gains. Monitoring such transactions would be important but difficult. One possible solution is to require individuals to treat foreign investment on a cash flow basis in a segregated account -- or an individual foreign investment "basket." In any case, it is unclear whether such opportunities for international tax evasion are any worse under a consumption tax than they are under an income tax.

A more drastic solution is simply to ignore both foreign investment and the returns to foreign investment for domestic tax purposes for both individuals and businesses. This would effectively be tax prepayment treatment for businesses (as well as individuals), since no deduction would be allowed for foreign investment and the receipts generated by such investment would not be included in the tax base. As demonstrated in Section II, such treatment is generally roughly equivalent to cash flow treatment. In particular, in the case of foreign investment it is similar to the cash flow approach described above, as it effectively implies that a deduction rather than a credit is allowed for foreign taxes paid; this is true because returns to domestic investors are net of foreign taxes paid, but no tax credits are allowed. Again, cost allocation would result in difficult problems.

Finally, note that the considerations relevant to the determination of the appropriate tax treatment of foreign-source income under the ITP tax are generally the same as those under an income tax. The major difference may be one of perception. Specifically, if the exemption

of capital income under the ITP tax were coupled with an exemption of foreign-source labor income, most citizens working abroad would pay no taxes to their home country. It is possible that this would be perceived as unfair, and that pressure for the taxation of such income would be greater than if the capital income of such individuals were subject to a domestic income tax.

### C. Transitional Issues

Since individual transitional issues were discussed in Section IV, this discussion focuses on business transitional issues. For business, the primary transitional issues are the tax treatments of income flows and deductions attributable to investments made prior to the switch from an income-based to a consumption-based tax.

On the income side, accurately identifying returns from pre-reform investments would be very difficult; accordingly, full inclusion of all investment returns in the business tax base seems to be the only viable option. Note that interest income would generally not be included in the business tax base; however, to the extent phase-in rules were applied to the elimination of interest deductions on indebtedness existing at the time of reform, the same rules should apply to the elimination of taxation of interest income from pre-existing debt.

On the deduction side, the primary business issues involve the tax treatment of interest, depreciation, amortization and similar deductions attributable to investments existing at the time of enactment of the consumption tax. One possible approach is the set of transition rules proposed by Aaron and Galper and described and discussed at some length in Section IV.

To the extent that investment is very heavily debt-financed in developing countries, it may be desirable to provide for more generous transitional treatment in the case of the elimination of interest



deductions. For example, the elimination of interest deductibility could be phased-in over a period of years. Alternatively, special grandfathering provisions could provide for full deduction of an amount of interest related to the amount of outstanding debt prior to the enactment of reform, with these provisions being phased-out over time. In either event it would seem appropriate to allow continued deduction of depreciation allowances, following the schedule in effect at the time assets were placed in service.

This brief discussion suggests that business transitional issues are difficult and that no consensus exists regarding the appropriate treatment of income and deductions attributable to investments existing at the time of enactment. Nevertheless, these transitional problems do not appear to be insurmountable, and are typical of those faced in any comprehensive reform proposal, including income tax reform.

**D. The Desirability of a Supplementary Wealth Tax**

It is quite conceivable that an ITP consumption tax would be supplemented in a developing country with a wealth tax, specially in countries which already have such a tax. This is especially true to the extent that an ITP tax is appealing primarily for its simplicity properties. Viewed from this perspective, the exemption of capital income on marginal investments is an implication of the consumption tax technique rather than an explicit goal of tax reform. Accordingly, a supplemental wealth tax, which would represent a tax on the present value of capital income, may be desirable to achieve vertical equity goals, to tax the capital income of only wealthy individuals, to reduce concentrations of wealth, or to tax additional "ability to pay" not captured in the ITP tax base.

Alternatively, note that the ITP tax base includes gifts and inheritances received. Since evasion and avoidance are notorious problems for these two items, and estate and gift taxes are also exceedingly difficult to administer, the wealth tax could also be viewed as a very rough proxy for the inclusion of gifts and inheritances in the tax base of the recipient. This rationale for wealth taxation is obviously quite tenuous, especially since it may not be much easier to tax net wealth than to tax gifts and bequests.

In any case, it must be noted that accurate measurement of wealth in practice requires accurate measurement of income; this in turn implies the multitude of income tax problems described in Section III. With a supplemental wealth tax, this complexity would be limited to a relatively small number of high income individuals. However, in principle, the values of all business holdings should be included in the wealth tax base at current market value; this implies that all firms should be valued using accurate income measurement principles. In addition, it should be noted that the information required to measure wealth accurately is not available from tax returns filed under an ITP consumption tax; much additional computation would be required to calculate the wealth tax base.

Alternatively, the wealth tax base could be limited to assets whose values could be easily determined or approximated (such as land, real property, and securities listed on public exchanges), or very rough but simple rules could be used to determine the value of assets included in the wealth tax base. Such a limited wealth tax would probably resemble the property taxes currently employed in many developing countries. To the extent it applied to publicly traded securities it would retard achievement of open capital markets, a goal of many such countries.

**E. The Desirability of Presumptive Taxation**

Widespread under-reporting of income and tax evasion are commonplace problems under the income taxes of developing countries. A tool that is sometimes used to combat these problems is the taxation of "presumptive" income. One approach is to determine net wealth and then calculate presumptive income (from capital) as the product of net wealth and some rate of return on such net wealth; if presumptive income exceeds reported income, the tax base under the income tax becomes presumptive income. (Presumptive income is also sometimes calculated on the basis of gross receipts.) This approach is based on the notion that assets are in many cases more difficult to conceal from tax administrators than is the income generated by those assets, so that the taxation of presumptive income is an effective way to ensure that tax evaders pay at least some taxes.

In principle, the wealth-based approach to the taxation of presumptive income serves as a type of minimum tax on capital income. Since capital income is effectively excluded from tax under a consumption tax, such an approach to the taxation of presumptive income is fundamentally inconsistent with taxation on the basis of consumption.

Nevertheless, tax evasion would certainly be a problem under a consumption tax. Accordingly, it would be useful if some type of presumptive taxation could be instituted that would be consistent with taxation on the basis of consumption. Unfortunately, such a system would be very difficult to design. For example, firms could evade tax under the consumption-based business tax by under-reporting gross receipts. However, there is no necessary relationship between a firm's assets and its gross receipts. Alternatively, a firm could under-report gross receipts and then under-report wages paid in order to avoid paying withholding taxes on those wages. Again, it would be difficult to require the payment of withholding

taxes on a presumptive basis, since there is no particular relationship between a firm's assets and its wage payments.

One possible method of implementing taxation on a presumptive basis would be to estimate -- on an industry-specific basis -- the relationship between the assets of a "typical" firm and its gross receipts and/or wages paid. Such an approach would generate "presumptive gross receipts" or "presumptive wages paid" for each firm on an industry-by-industry basis. These quantities would then be used in the determination of tax liability (or withholding taxes due) if they exceeded the quantities reported by the firm.

Such an approach to taxation on a presumptive basis would be quite difficult to implement. Even modestly accurate estimates of the relationships between a firm's assets and its gross receipts and/or wages paid would be difficult to obtain in a developing country. Administration would be difficult, especially since different rules should in principle be applied to each of a wide variety of industries. The system would be arbitrary in many if not most cases, and the burden of presumptive taxation would most likely vary considerably across industries and across firms within industries. Such presumptive taxation thus would be both unfair and distortionary. It would no doubt correctly be perceived as such, and would result in significant political opposition. For all of these reasons, we recommend against the inclusion of presumptive taxation within a consumption tax framework, even though it would in principle be beneficial to have some type of system that would effectively ensure that tax evaders paid some minimum amount of tax.

Note also that taxation on the basis of consumption would be simpler than the tax systems currently utilized by developing countries. As a result, adoption of a consumption tax would mean that resources could

be diverted from the interpretation, explanation, and administration of complex income measurement rules to administering and enforcing a simpler consumption-based system. This should result in more effective administration and enforcement, which is clearly a superior way to improve compliance than is an indirect and rather arbitrary approach such as presumptive taxation.

## VI. CONCLUSION

Musgrave (1987, p. 250) has recently argued that developing countries should facilitate capital formation by taxing consumption rather than saving, especially the luxury consumption of relatively high income individuals who are the source of private sector domestic saving. He notes that a direct progressive expenditure tax is the "obvious" tax policy choice; however, he also argues that a personal expenditure tax (of the ICF type) is not feasible for developing countries due to its inherent complexity.

In this report, we have argued that the advantages of taxation on the basis of consumption can be achieved without the complexity implied by taxation of individuals on a cash flow basis. Specifically, we believe that direct taxation on the basis of consumption is a feasible policy option for a developing country provided that the tax system has the following features. First, the tax on individuals should follow the relatively simple "tax prepayment" approach rather than the more familiar "cash flow" approach. Second, the individual tax base should include gifts and inheritances received, and the individual rate structure should be characterized by progressive marginal rates. Third, the individual tax should be supplemented by a flat-rate "consumption-based" business tax that provides for tax prepayment treatment of debt and interest and applies to

all business entities of sufficiently large size. Finally, if deemed desirable, this consumption tax system could be supplemented by an individual wealth tax.

To support this position, we have provided detailed discussions in this report of (1) the differences between income and consumption taxes and the major structural features of the direct consumption tax outlined above, (2) the relative merits of the income-based and consumption-based approaches to direct taxation in terms of the standard criteria of simplicity, equity, economic neutrality and efficiency, and consistency with economic growth, (3) the choice between cash flow and tax prepayment treatment at the individual level under a direct consumption tax, and (4) the structure and implementation of such a direct consumption tax, including international and transitional issues and the desirability and feasibility of supplementary wealth taxes and taxation on a presumptive basis.

Of course, with the exceptions of the brief experiences in India and Sri Lanka cited above, no country has attempted direct taxation on the basis of consumption rather than of income. A natural question is whether this fact indicates that such a reform is politically impossible. Although we obviously can not answer this question definitively, we would like to make the following four points.

First, and most obvious, is that we believe that the arguments made above present a compelling case that a direct consumption tax of the type described is a feasible policy option, from the standpoint of both economics and politics. Second, some of the political opposition to a direct consumption tax is based on the belief that it is hopelessly complicated from an administrative standpoint; although this may well be true of the individual cash flow approach, we believe that a consumption tax based on the individual tax prepayment approach is administratively

simpler than either an income tax or a consumption tax based on the individual cash flow approach.

Third, the tax systems of many countries already have many features typical of the consumption tax approach, especially in the form of various saving and investment incentives. Indeed, "income" taxation at the firm level is in many cases more generous than that prescribed by a consumption-based business tax (as the combination of investment incentives and full deduction for nominal interest expense produces marginal effective tax rates on capital investment that are commonly negative, especially at high inflation rates), while the taxation of capital income at the individual level is far from comprehensive. Thus, in many cases it is unclear that a movement to taxation the basis of consumption would represent as dramatic a political change as is commonly argued; certainly it need not result in a reduction in the taxation of income from business and capital.

Finally, we note that the question of the appropriate tax treatment of existing wealth should be separated from the question of the treatment of wealth accumulated after the enactment of a consumption tax. Tax reform discussions should focus on whether consumption tax treatment of new wealth is acceptable from a political standpoint; as long as there is sufficient flexibility in the choice of transition rules, the treatment of existing wealth can be as lenient or as harsh as deemed politically acceptable.

We conclude by noting that we have purposely kept our discussion very general so that it would be as widely applicable as possible. However, an obviously interesting direction for future research is a numerical analysis of the revenue and distributional effects of the implementation of the direct consumption tax system described above in some

specific developing country. Such an analysis should include a complete specification of transition rules, calculate time paths of tax rates that would hold revenues constant (or increase them by some specific amount), and consider both long run and transitional revenue and distributional effects. We hope to conduct such an analysis in a future report.



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