

# Flat (Direct Consumption) Taxes

Since the mid-90s, several Eastern European countries have adopted a ‘flat’ personal-income tax (PIT). While these PITs share the application of a single tax rate to earned income, many other important aspects of their tax systems differ substantially. This brief discusses the most salient aspects of flat direct taxes, drawing extensively from McLure and Zodrow (1990), and Keen *et al.* (2006).

## 1. ‘The’ Flat Tax

The flat tax is normally associated with the comprehensive plan introduced in 1981, for the U.S., by R. Hall and A. Rabushka (Hall and Rabushka, 1983, 1995; HR henceforth). The HR flat tax entails combining taxation, at a *single* rate of 19%, labor income and business cashflow associated with real transactions—*i.e.*, all cash receipts minus all cash payments. This plan has three main characteristics: (i) a consumption tax base, (ii) a single tax rate, and (iii) a simple tax base. Since the HR plan is proposed for the U.S. which has a hybrid tax system of an income and consumption tax (Gordon *et al.*, 2004), its advocates get mileage from ‘improvements’ in all three dimensions. However, income-based taxes could also be designed more simply, and with better integration of capital taxation, which could account for much of the gains of the HR plan (Hubbard, 1997). Table 1 summarizes some of the most distinctive differences between income and consumption direct taxation—*i.e.*, characteristic (i) above. (For the sake of brevity, this brief does not treat consumption indirect taxation—*e.g.*, VAT—or international cross-border issues.)

**Table 1.** Most salient differences between prototypical income-based and consumption-based direct taxes

	Comprehensive Income	Consumption (IP/R)
<b>Business</b>	Base: Accrued economic profit	Base: Business net cashflow
Main Issues in Calculation of Base	Estimation of capital depreciation	None, base is given by
	Deduction for adding inventories (LIFO, FIFO?)	cash receipts minus all cash payments
Main Deductions	Capital depreciation, interest	Investment is immediately expensed
<b>Personal</b>	Base: Comprehensive income	Base: Labor income
Taxes dividends and capital gains?	Yes	No
Main Issues in Calculation of Base	Imputation of Housing services	None
	Integration with Business tax to avoid double taxation of dividends	
Main Deductions	Mortgage interest, Personal allowances	Personal allowances
<b>Effective Tax Rate on Capital</b>	Depends on the interaction of (1) depreciation schedules, and (2) integration of business and personal taxation	Taxes economic return in excess of normal rate of discount
<b>Gifts and Inheritances</b>	No deductibility from source Should be added to the recipient’s base	No deductibility from source Unless dynastic view adopted, it should be added in the recipient’s base
<b>Main Advantages</b>	Better suited for Progressive Taxation	Administrative simplicity (if flat schedule)

As noted, the HR flat tax replaces existing depreciation schedules with an immediate write-off, and eliminates all interest deductions. Through this expensing, the government becomes a (silent) partner in investment with two important revenue consequences. First, a surge in aggregate investment (*e.g.*, in good times) will negatively impact tax revenues in the short term. Second, as a partner, the government will eventually collect tax revenue on successful investment projects despite the zero marginal effective tax rate on investment. Capital income (*i.e.*, interest, dividends, and capital gains) is not subsequently taxed at the household level.

In practice, the HR flat tax amounts to an origin-based VAT-type consumption tax, since businesses are taxed on value added net of labor costs, which are, in turn, taxed at the source (after a tax-free allowance, which allows a certain degree of progressivity). To see that the HR flat tax taxes consumption, consider a closed economy. Start out from the national income identity  $Y = (Y_L + Y_K) = C + S$ , where subscripts are used to denote labor and capital income, and use the investment-savings identity to write  $C = Y - S = Y - I = Y_L + (Y_K - I) \equiv$  HR Flat Tax Base.

An undisputed advantage of the HR flat tax lies in its administrative simplicity (McLure and Zodrow, 1990). All income is taxed at its source, and the tax base is simply defined. In addition, for closely-held businesses and self-employed individuals, there is no longer the issue of adequately separating the return to capital and labor—since both are taxed similarly. Moreover, the HR flat tax is neutral with respect of the time-pattern of income—*i.e.*, the tax liability over the life cycle is the same, in present-value terms, regardless of when income is earned or consumed.

More controversial are the effects of the HR flat tax on aggregate savings and efficiency. The proponents of this tax claim that it would increase savings by raising the after-tax return on savings (by avoiding the double taxation of capital income), and by (regressively) shifting income toward richer high-saving households. The efficiency gains would be due to the reduction of marginal rates<sup>1</sup> (but see below) and the larger economic neutrality—*e.g.*, by equating marginal effective tax rates on different types of investment, by the time-pattern neutrality, etc.

Critics qualify these advantages noting that many taxpayers may see their rates increased, involving larger disincentives for work effort, while they also worry about its regressive effects. Distributive issues can be partially addressed by including gifts and inheritances in the individual tax base without allowing deductions to the originator's base (Ruiz-Castillo, 2006). Finally, transitional issues may be quite important and, if relief is granted to adversely affected taxpayers, then a substantial part of the claimed gains may vanish (Gale, 1996).

### 1.1. Other Prototypical Designs for Direct Taxes

There are other proposals for direct *consumption* taxes. Most notably, the X-tax of Bradford (1986) and the Meade Committee R+F base (Zodrow and McLure, 1990). The tax base for the latter is quite similar to the one described above, except that net financial cashflows are included in the base ('R+F' stands for *real* and *financial* cashflows). The 'F' part implies that proceeds from a loan are included in the tax base, and both repayments of principal and interest are deducted on a cashflow basis.

There is also another distinct family of *flat* taxes: the dual income taxes common in Scandinavian and Latin American countries. Responding to the pressures of globalization, some countries have moved away from comprehensive income taxation—where wage and capital income is aggregated and then taxed on the same (progressive) schedule—towards *dual* income taxes—where capital income is taxed at a (low) flat rate (Zee, 2004).

## 2. Back-of-the-US-Envelope Calculations

It may be useful to look at some actual numbers to help us to put things in perspective. Table 2 displays the collections for the PIT in the U.S. sorted by the highest marginal rate faced by the taxpayer. This table is illustrative of the usual concentration of tax liabilities in the upper tail of the (reported) income distribution—which follows from the concentration of income. The actual distribution may change for other countries,<sup>2</sup> but the pattern is rather typical—*i.e.*, a small share of taxpayers enjoying the lion's share of income and thus contributing the larger share to the tax revenue.

How relevant is the graduated-rate schedule? Table 2 shows that while the taxpayers in the top 35% bracket amount to less than 1% of the returns, they contribute about 27% of collections, *i.e.*, 2% of GDP. Moreover, while the top three brackets amount to only 5.4% of the returns, they enjoy a taxable income of 13% of GDP, and, consequently, contribute 3.4% of GDP in taxes—*i.e.*, 48%, or almost half, of the total revenue.

The progressivity of the tax is associated with increasing effective rates—*i.e.*, the distribution of tax liabilities is more concentrated in the upper tail than the distribution of income. This can be seen in the last two columns of Table 2 which show increasing effective tax rates—relative to adjusted gross income<sup>3</sup> and to taxable income.

Since total collections amount to 13% of adjusted gross income, in a rigid world—where no behavioural responses take place—a flat PIT at 13% with no allowances beyond the standard exemptions would raise the same amount of

<sup>1</sup> Since the welfare cost of taxing individual's  $i$  labor income can be approximated by  $\Delta_i = \eta_i S_i \tau_i^2 / (1 - \tau_i)$ , where  $\eta_i$  is the wage elasticity of his labor supply,  $S_i$ , and  $\tau_i$  is his marginal tax rate (Browning, 1987). It follows that the distortion,  $\Delta_i$ , grows more than proportionately than  $\tau_i$ , and therefore substantial efficiency gains may be achieved by lowering the marginal tax rate,  $\tau_i$ . In practice, however, empirical work has found rather low estimates for  $\eta_i$ , especially for the primary household earner—in a polar case where this elasticity were zero there would be no welfare cost at all associated with labor taxation.

<sup>2</sup> Table 2 shows that the reported adjusted gross income amounts to 55% of GDP, which is a remarkably high figure—most other non-OECD countries will display substantially smaller shares here.

<sup>3</sup> In the U.S. tax jargon, the adjusted gross income is obtained from gross income by subtracting exemptions (fixed amounts depending on filing status), and some deductions (*e.g.*, contributions to individual retirement accounts). The computation of taxable income involves further subtractions, of which the most important are the standard or itemized deductions.

**Table 2.** U.S. PIT collections (gross of credits) by Marginal Tax Rate: 2003.

(Percentages of GDP, except otherwise indicated)

Highest marginal rate at which tax was computed	Percent of Total Returns	Adjusted Gross Income	Taxable Income		Tax Generated			
			Taxed at All rates	Taxed at marginal Rate	At All Rates	At Marginal Rates	As percent of:	
							Adjusted Gross Income	Taxable Income
Total		55.2	38.4	13.5	7.1	3.0	12.9	18.5
5 percent	0.7	0.1	0.0	0.0	0.0	0.0	1.4	5.0
8 percent	0.1	0.0	0.0	0.0	0.0	0.0	2.6	6.6
10 percent	25.5	4.3	1.1	1.0	0.1	0.1	2.6	9.8
15 percent	46.9	18.8	11.5	5.7	1.5	0.9	7.9	12.9
25 percent	21.5	16.8	12.7	2.5	2.1	0.6	12.7	16.8
28 percent	3.4	4.9	3.9	0.3	0.8	0.1	16.9	21.0
33 percent	1.3	3.3	2.8	0.6	0.7	0.2	20.8	24.4
35 percent	0.7	7.0	6.3	3.4	1.9	1.2	27.1	30.0

Source: U.S. IRS and author's calculations.

revenue. If the allowances were set equal to the average of the sum of current existing exemptions and deductions, then the revenue-neutral rate would increase to 19% (which is the HR rate, but note that HR arrive at this figure via a different route, using macro aggregates).

But what about progressivity? If a single flat rate of 19% were established while the current exemptions and deductions were substituted by a simple fixed allowance (possibly graduated with household size)—who would win and who would lose? Again, in a static world, taxpayers in the top three brackets which currently face effective rates above 19% would be the winners, and most everyone else, 95% of the taxpayers would lose—not all, since for a few, the larger allowance may offset the higher rate, and decrease taxes for taxpayers at the lower end. Nonetheless, these calculations make apparent that any non-regressive revenue-neutral (or revenue-enhancing) movement towards a flat tax needs to rely on two things: (1) significant behavioral responses on the labor-supply and compliance fronts, and (2) higher collections from business through the cash-flow tax replacing the CIT.

### 3. 'Flat' Taxes meet the Real World

Since engaging in a comprehensive tax reform is like changing a bicycle tyre while pedalling uphill, no country has yet adopted a coherent tax system resembling the HR flat tax, as noted by Keen *et al.* (2006). The so-called flat PITs in place (Table 3) only share the characteristic of partially fullfiling characteristic (ii) above, that is, a single tax rate, but only for *labor income* (net of social insurance contributions). There is often little or no integration with capital taxation, and, more importantly no expensing. In such a tax schedule, the marginal tax rate for labor income is zero until income reaches the basic allowance, and it remains constant thereafter. The average tax rate progressively (and asymptotically) approaches the single rate. While some countries also apply the single rate to other types of income, some do not.

**Table 3.** Recent 'Flat' Labor Taxes.

	Year of Reform	Pre-Reform Rates		Post-Reform Rates		Change in Allowance (A)	Change in PIT collections	Simultaneous Tax Reforms
		PIT	CIT	PIT	CIT			
Estonia	1994	16–33	36	26	26	modest ↑	modest ↓	↓ CIT rate
Lithuania	1994	18–33	29	33	29	substantial ↑	modest ↑	VAT, excises
Latvia	1997	10 & 25	25	25	25	modest ↓	modest ↑	No
Russia	2001	12–30	30	13	35	modest ↑	substantial ↑	↑CIT, VAT, Social C.
Ukraine	2004	10–40	30	13	25	↑	modest ↓	↓CIT
Slovak Rep.	2004	10–38	25	19	19	substantial ↑	modest ↓	↓CIT, VAT, Social C.
Georgia	2005	12–20	20	12	20	eliminated	modest ↓	VAT, excises, Social C.
Romania	2005	18–40	25	16	16	↑	modest ↓	CIT, excises

Source: Keen *et al.* (2006).

Keen *et al.* (2006) analyse these reforms in detail, some of the most salient characteristics are:

- While the first-wave reformers, 1994–97, set the single rate close to the maximum pre-reform rate, the second-wave reformers, from 2001, set the rates close to the minimum.
- Four of the eight countries set the CIT rate equal to the PIT rate. Three of the remaining four cases tax capital more heavily than labor.
- Second-wave reformers simultaneously reduced Social Insurance contributions.

Regarding the effects of the reforms, Keen *et al.* (2006) note that:

- Except in Russia, the second-wave of flat-tax reforms have been associated with revenue losses. Moreover, Russia's strong revenue performance seems to be due to a strong macroeconomic recovery rather than to the reform (Ivanova *et al.*, 2005).
- No strong behavioural responses to work incentives have been identified. Similarly, while the common progressivity indices may indicate some increase in progressivity due to the increase in the basic allowance, there is no totally convincing evidence on this issue.
- Because in most cases the tax base has not been cleaned from exemptions and special treatments, there have been no significant simplicity gains.
- Flat tax reforms seem to have been embraced by new governments to signal a fundamental market-oriented regime shift. This signalling role seems to have worked successfully but it may be absent elsewhere.

#### 4. Issues

- ★ A *comprehensive* flat tax plan, like HR, may be appropriate if a tax system is to be designed *ex-novo*, or if implemented in a country with little administrative capacity, which raises little revenue from income taxes. Nonetheless, its desirability may be more controversial in more tax-mature economies, especially if transitional relief is required for adversely affected taxpayers (*i.e.*, business with substantial tax capitalization).
- ★ The schedule of social insurance contributions—which typically raise substantial more revenue than the PIT—is relevant for the effective tax on personal income, and often the associated effective tax schedule for these contributions (*e.g.*, in Russia) is far from flat even when the PIT is indeed flat (Ivanova *et al.*, 2005). Similarly, the existence of other taxes (*i.e.*, VAT) must be taken into consideration for the evaluation of the overall tax system. The HR plan can be thought of as a pre-payment system—tax is paid only once when income is earned, and the remaining net income can either be consumed or re-invested with no more taxes owed on interest or dividends—a VAT obviously does not belong in the HR design.
- ★ Income-based tax systems could be simplified (Hubbard, 1997), or, alternatively, the base for direct taxation switched to consumption without necessarily flattening the schedule of PIT rates (Bardford, 1986). Flattening the PIT rates is likely to benefit the rich by shifting tax burden to poorer households.

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