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Flat Rate Taxes: A Policy Note

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1. Introduction

The objective of this paper is to provide an assessment of flat tax policies for policy makers. To do this, the paper reviews the theoretical impacts of a flat tax - how might a flat tax affect a country's tax administration, revenue generation, and economy - as well as the experience of countries that have recently introduced flat taxes.

This subject is particularly timely, since in recent years the 'flat tax' has developed an aura as a panacea for some of the ills of tax policy and tax administration. In particular, it has been seen as a vehicle to simplify tax systems both in OECD countries, whose tax systems have become overly complicated with time, and in transition countries, as they have struggled to introduce western-style taxation systems. Some flat tax proponents argue that countries with a weak tax administration and/or those encumbered by complicated tax systems may benefit more from moving to a flat rate income tax than a major reform of its tax system, such as moving to a broader consumption based tax.

To this end, the paper briefly reviews the types of flat taxes that exist, provides a summary of the growing theoretical literature on flat taxes, undertakes some cursory analysis of available international data, and draws policy relevant conclusions.

The paper concludes, inter alia, that there remains considerable confusion among policy makers regarding what a flat tax *is* as well as its benefits. We believe that the jury is still out on the economic impact of flat taxes that have actually been imposed. To date, most of the existing analysis of the economic effects of flat taxes is theoretical in nature, and as such, provides little concrete evidence as to their impact. Further, there is little documented evidence on the administrative and compliance benefits of flat tax systems, although these may well be significant. The paper also concludes that the overall benefits of a flat tax are a function not only of the specific flat tax proposal, but also of the tax system (both policy and administration) and political environment in the country concerned, at that particular time. Thus, policy makers considering introducing a flat tax would be well advised to undertake a detailed estimation of their administrative and compliance impact and weigh these against the range of estimated economic impacts.

The paper proceeds as follows. Section 2 provides an overview of the types of flat taxes that have been proposed and Section 3 considers their appeal. Section 4 briefly considers some theoretical implications of flat taxes and Section 5 reviews recent international experience with them. Section 6 considers available empirical evidence on the impact of flat taxes and some tentative conclusions are proposed in Section 7.

2. What is a Flat Tax?

The term "flat tax" has been used to describe the marginal rate structure of a tax (as in a flat rate income tax) and alternatively to describe a tax system that imposes a single rate on a very broad tax base. Depending on the type of flat tax discussed, proponents claim that introducing a 'flat tax' can strengthen economic growth and improve tax compliance, the latter resulting from the greater simplicity of flat taxes. Flat rate '***income***' taxes, which impose a single, flat rate on individuals' income and, in some cases, businesses, are the type of flat taxes most typically found in the developing and transition economies (DTEs). These taxes are a subset of simplified tax systems (STS) that make compliance and administration simpler, easier and more transparent for both taxpayers and the tax officials. Presumptive taxes[1], which are under consideration for small businesses in a number of DTEs, may be considered a further subset.

Alternatively, flat rate ***'consumption'*** taxes impose a single, flat rate on consumption. These taxes could be direct taxes (taxes on income minus savings) or indirect taxes like a value added tax. It is this type of flat tax that has been at the heart of the flat tax debate in the United States, where the Federal income tax has become overly complicated and the most recent calls for a fundamental system overhaul lead to the

[1] Presumptive taxes are taxes that are based on notional income and they are calculated based on data that is easier to come by or can be more readily monitored as opposed to data that requires one to calculate actual taxable income.

establishment of the 2005 President's Advisory Panel on Tax Reform. There are numerous variants of consumption flat taxes in the United States, including that of Robert Hall and Alvin Rabushka (referred to henceforth as H-R) (1985, 1995). The H-R variant is effectively a direct tax on a base that is close to consumption, but adds a standard deduction to the mix.

Most of the countries that have considered and/or moved to a flat tax system, in fact, have moved to a flat rate ***income*** tax system and these are, therefore, the focus of this paper (Table 1 in Appendix). Nonetheless, we briefly address the theoretical underpinnings of both types of flat taxes in large part, to allay the confusion surrounding the two types, but focus this report on the flat income taxes. The key differences among the various types of flat taxes are summarized in Box 1 below. For policy makers, it is important to highlight the distinction between the flat-rate income tax and flat taxes of the consumption variety because they are fundamentally different tax policies and semantics alone may add to the confusion over the best policy for any one country.

Flat rate *income* taxes

Under the flat rate income tax regimes that have been imposed in many transition countries, tax credits, exemptions and most deductions are largely eliminated so as to 'simplify' the system. In practice, however, many countries have retained a standard deduction. In those cases, the flat tax then has two policy levers – the tax rate and the standard deduction on personal income. These two levers determine the level of revenue, the progressivity of the tax system, and the number of taxpayers in the tax net. There may also be allowances for certain types of income (for example, some pensions in Jamaica and Estonia) or for family size (number of children in Estonia and Slovakia, among other countries).

The flat rate income tax may apply to both personal and corporate income, with the broadest systems applying the same rate to all income sources and avoiding the double-taxation of savings. Full integration of corporate and individual taxes moves a flat rate income tax system closer to a consumption tax (discussed in the next section).

Based on international experiences, flat rate income taxes are characterized by the following principles found in some but not all countries:

- A low, but not necessarily equal tax rate for individuals and businesses
- An increased standard deduction or personal allowance over pre-reform law
- Elimination of additional tax allowances and deductions
- Integration of the individual and corporate income taxes

- **Low Rate**

In general, a flat tax with one (low) rate of tax can raise the same level of revenue as a progressive system with several rates. This assumes that any revenue loss from the rate cut is compensated for by an expanded tax base, increased compliance, reduced avoidance and reduced disincentives to evade. The outcome however will depend, inter

alia, on the rate chosen, the significance of income tax to total revenue, and the relative shares of other taxes. Since tax reforms tend to be introduced as a package, it is in reality difficult to attribute outcomes to the introduction of a flat tax alone.

In practice in the 'flat tax' countries, different types of income are taxed differently. For instance, in Lithuania, there is a 15% flat rate on royalties, interest and other sources of income. Similarly, Russia taxes capital income at rates higher than wages, and businesses under a separate schedule.

- **Standard Deduction/Personal Allowance**

There are numerous versions of a flat tax on personal income, but since most of these combine a flat rate with an increased (over the pre-reform level) standard deduction or personal allowance, only the marginal rate is flat. In the case where there is a standard deduction or personal allowance, the tax is progressive and the average effective rate increases as it approaches the marginal rate. In short, the standard deduction or personal allowance makes a flat rate income tax progressive rather than proportional for a range of incomes, but at higher income ranges the tax becomes proportional as the effective rate of tax comes closer to the marginal rate of tax.

- **Elimination of additional tax allowances and deductions**

In general, with deductions, credits, and reliefs largely eliminated, flat rate tax systems are relatively simple and transparent systems to administer and to comply with. However, the level of institutionalization of credits, tax holidays, and deductions can make the choice of a flat rate tax more difficult politically to introduce since eliminating such tax preferences can be more difficult than changing rates.[2]

- **Integration of individual and corporate income taxes**

In some flat income tax systems, the income tax systems have been integrated so that interest expense and dividend payouts are treated symmetrically. Systems like the U.S., where there is no integration, give rise to different effective tax rates for interest income relative to dividend income. This distorts investment decisions whereby debt is preferred over equity in terms of corporate finance. While flat rate income taxes do not necessarily coincide with integration, a number of countries have considered integration when they have moved to flat rate income taxes.

Flat rate *consumption* taxes

Flat rate consumption taxes are applied directly to consumption activity (via a VAT or retail sales tax) or via an income tax that exempts savings. How is an income tax like a consumption tax? If we start by defining the relationship among income,

[2] Tanzi and Zee (2001) describe the plethora of deductions, exemptions, and tax holidays that are available even in developing countries. Jamaica and Russia are specific examples of countries that successfully reduced (but not eliminated) numerous deductions and exemptions when they moved to flat rate income taxes.

consumption, and savings, it is easy to determine whether a tax is a tax on consumption, income or both:

Income = Consumption + Savings

An income tax that exempts savings is effectively taxing consumption. The Hall-Rabushka flat tax is this type of consumption tax, although they introduce a standard deduction and there are also complications related to old capital in their version of this tax.[3] The treatment of capital is critical to the difference in the impact of a consumption versus an income tax. In a consumption-based tax, individuals are not directly taxed on their returns to investments. Businesses fully deduct the purchase prices of assets (including buildings, land, etc.), but they must also include the sale of assets as taxable income. Interest and dividends are not business deductions so, effectively, the returns to capital are taxed once at the business level.[4] This may theoretically reduce the cost of capital, increase savings and, in turn, increase economic growth. However, the net effect on the cost of capital depends on the pre-reform system, how individuals respond to the reform in terms of the trade off between consumption and savings, how "old capital" is treated, and the maturity of the economy. In developing countries, most of the population has little ability to shift from consumption to savings, while investors' fears of social unrest, a lack of contract law, or an inexperienced judiciary may be more important to investment decisions than a reduced price of capital.

Flat consumption tax proposals have proliferated in the U.S. over the past two decades. Bickley (2005) provides a useful summary of recent U.S. "flat tax" proposals in which he documents ten flat tax type proposals introduced in the U.S. Congress between 2001 and 2005. Beside the HR proposal, the most significant of these proposals include the "FairTax", which is a flat rate tax on consumption levied as a retail sales tax[5] and the "X-tax" which as noted above is a variant of the H-R flat tax that introduces a progressive marginal tax rate structure for individuals; while the business tax rate is the same as the highest individual tax rate.[6]

The focus of the remainder of this report is on the flat rate income tax variety of flat taxes, but we will occasionally make reference to the consumption tax as well.

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[4] McLure and Zodrow (2006) provide a helpful synopsis of the conditions under which a consumption tax is neutral with respect to present and future consumption.

[5] The proposal is attributed to Rep. John Linder and was introduced to Congress in 2005 as H.B. 25.

[6] A helpful summary of the flat tax and X-tax proposals is available from the President's Advisory Panel on Tax Reform: http://www.taxreformpanel.gov/.

Box 1: Summary of Major Components of Types of Flat Taxes

Type of Reform	Tax Base	Aspects of Tax Policy and Administration	Equity Issues	Theoretical Economic Impacts
H-R type Flat Tax, USA	Consumption through an income tax administration	Levied at the individual and business level; individuals and business at the same rate; Capital fully expensed; fringe benefits not deductible	Progressive due to a standard deduction and exemptions for dependents, but approaches a proportional tax as income increases	Eliminates taxation on the return to investment, under conditions including constant tax rates across time, ignoring bequests and inheritances and above-normal returns to capital (McLure and Zodrow, 2006).
X-Tax, USA	Consumption	Levied at the individual and business level; individuals at progressive marginal rates; businesses at the top individual rate	Does not propose one flat rate so that progressivity can be tailored	Similar to above
FairTax	Consumption via a retail sales tax	Levied as a retail sales tax thus removing conventional tax administration in the U.S.	Tax itself is likely to be proportional to regressive. Additions such as a basic allowance can increase the equity of the tax.	For developed countries, could increase the rate of savings as individuals post-pone consumption. In developing countries, savings do not have the potential to expand.
Flat rate income taxes - **Pure** - **Progressive** - **Piper & Murphy**	Income; comprehensive definition	Levied at the individual and/or business level and VAT; may or may not be integrated	May be progressive if a standard deduction and/or personal exemption are offered	Depends on the integration of business and individual income taxation and on the treatment of capital inputs and expenses. Treatment is not uniform across countries

Note: This box does not describe all of the components of these types of taxes

3. Appeal of Flat Taxes

Around the world, taxes are both highly political and unpopular. Since at least the times of Adam Smith, economists have attempted to provide policy makers with a set of characteristics that define a "good" tax. Most economists and politicians will agree that for any tax policy to be considered sound, it should follow these guiding principles, among others:

- it should cause as little distortion as possible to economic behavior, which typically calls for relatively low rates of taxation;
- it should be transparent – it must be clear to taxpayers and tax collectors alike who and what is being taxed;
- it should be simple to administer;
- it must be stable: frequent changes increase uncertainty in the economy; and
- it should be equitable, within the confines of a country's political parameters.

In practice, these principles call for broad-based, low rates of taxation that tax most forms of income and/or consumption at a similar rate.[7] Flat taxes fit many of the basic characteristics of a "good tax", namely: low, single or simplified tax rates, relatively broad based, and ability to treat different forms of income similarly.

The benefits of flat taxes as seen by its proponents include, *inter alia*, the following:

- reduction of complexity and bureaucracy;
- the same rate for everyone helps reduce inequities and inefficiencies;
- makes compliance and enforcement easier;
- provides incentives to save and invest by eliminating the taxation of savings and investments;
- provides incentives to work as employees will no longer be discouraged by the high tax rate of the graduated bracket system for top income earners; and
- transparency.

Opponents of the flat tax, on the other hand, argue that:

- It would eliminate all forms of tax exemptions and allowances, reducing the ability of governments to attract businesses, encourage home ownership, etc. through the tax system.
- It would be non-progressive in as far as the marginal rates apply.
- It has also been argued that it would favor the wealthy at the expense of the poor and would cause a shift of the tax burden away from the rich to the low- and middle-income households (Slemrod, 1997).
- Many benefits of a flat tax could be accomplished by reform of current systems that would retain progressivity (Gale, 1998).

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[7] These characteristics were recently reiterated in the President's Advisory Panel on Tax Reform (2005): http://www.taxreformpanel.gov/04132005.pdf.

In the first half of the nineteenth century in the industrialized world, flat tax structures were the norm. Ironically, the first proposals for a 'progressive' income tax structure came from Karl Marx' Communist Manifesto in 1848. Today, however, it is the industrialized countries that retain progressive structures while the former Communist countries favor flat taxes.

Beginning in the early 1990s, there was a resurgence of interest in flat taxes in the transition countries, in large part in an effort to quickly adapt to western styles of taxation. And, a growing number of countries in Eastern Europe adopted a flat tax, putting pressure on many Western European nations to lower their rates and/or give consideration to the introduction of a flat tax. In fact, several European nations (Denmark, Finland, Norway and Sweden) and Japan have turned to the "dual income tax" (DIT) as a means of simplifying their systems.[8] So rather than a revolution, as portrayed by many tax practitioners, the flat tax trend is perhaps one of reverting to an earlier, simpler tax system.

A number of reasons have been given regarding the adoption of flat taxes, especially in the Eastern European economies. While for the Eastern bloc, competitiveness, contiguity and mimicking behavior could have played a major role, with countries copying their neighbors' seemingly successful tax policies, these countries also had tax systems that were not generating sufficient revenue (Piper and Murphy Unpublished). Most of these economies had very weak tax administrations with low compliance in the face of large shadow economies. Further, the tax systems put in place in the early 1990s were complex and difficult for taxpayers and tax officials alike to understand and use. With some of the countries that have adopted the flat tax joining the European Union, the flat tax reforms could be viewed as a way to help harmonize their tax systems with EU tax law.

4. Theoretical Implications of Flat Taxes

Any change in tax policy or strengthening of tax administration will impact the behavior of individuals and businesses and so, effectively change relative prices in the economy. These include the relative price of factors of production, labor versus leisure, consumption goods, consumption versus savings decisions, individual types of investment, etc. Changes in these relative prices, *where individuals and businesses have the means to respond*, will yield changes in work hours, employment of capital and labor, the level of savings, and total consumption in an economy. In addition, if tax reform effectively lowers the price of capital and labor in the world market, there is a potential increase in foreign investment attracted by lower costs of inputs and higher net rates of return on assets. The basis for these interactions is well-grounded in economic theory.

The main lines of potential revenue and economic impact of a flat tax are therefore:

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[8] See, for example. Genser (2006) and Ishi (2006).

- Reduction in the price of factors of production (capital and labor): a flat income tax system that lowers the cost of capital and/or labor by reducing the direct tax on the return to capital (interest, dividends, capital gains) can increase the level of investment and therefore increase economic growth. Flat rate income taxes often reduce the top tax rates and therefore may encourage increased labor supply activity (thus expanding taxable income), especially at higher income levels. This may also lead to increased output and economic growth.

- Increased administration/compliance: a flat rate tax system with few or no exemptions and deductions is easier to understand, makes it harder to hide income or cheat on deductions, is easier to enforce, and may increase the perceived fairness of the system. These factors could reduce administrative costs and increase (voluntary and involuntary) compliance.

A consumption-based income tax may also affect the economy if the tax includes a reduction in the relative price of saving. If consumption is taxed heavier than savings, the price of current consumption will increase relative to saving. In theory, this may increase the amount of saving and so, the amount of capital that is available for investment. An increase in the supply of capital should, in turn, reduce the cost of capital and spur investment, leading to higher rates of economic growth.[9] To our knowledge, the "theoretical" benefits related to simplicity of a flat rate income tax system have not been developed and tested in a systematic model. We focus the remaining discussion on the flat rate income taxes that have recently been imposed around the world.

5. International Experience with Flat Taxes

Aside from two Channel Islands with long-standing flat taxes (Jersey and Guernsey, introduced in 1940 and 1960 respectively), Hong Kong (1947, an optional, dual system) and Jamaica (1986) are the countries with the longest standing flat income and/or consumption taxes.

More recently, there has been a renewed interest in flat rate income taxes in the transition countries which were experiencing difficulties implementing their recently adopted western style tax systems. Estonia was the first of the transition countries to introduce a flat tax of 26% (on both personnel and corporate income) in 1994 and was quickly followed by eight other countries.

[9] A number of authors have estimated the net efficiency gains of consumption- based flat taxes (some of which could apply to a flat rate income tax if, say, the tax rate on all income including capital were reduced), but these are typically theoretical analyses using general equilibrium models in which consumption taxes are substituted for income taxes. McLure and Zodrow (2006), Gravelle (2002), and Gale (1998), among others summarize some of the results of the theoretical literature that is aimed at analyzing the efficiency of a consumption tax. As noted by those authors, there is somewhat of a consensus that consumption taxes are welfare enhancing—but there is by no means universal agreement regarding the assumptions needed to uphold the results of many of these models.

With some adjustments, Estonia has maintained its relatively low flat tax system on personal income since 1994. Elsewhere in the transition countries, rates on personal income tax (PIT) now range from a high of 33% in Lithuania (subsequently reduced to 29%) to 12% in Georgia. Perhaps most significantly, in 2001, Russia introduced a flat tax on personal incomes, establishing a marginal rate of 13% above 4,800 rubles (approximately $166 U.S. dollars). Since then, revenues from personal income tax in Russia have risen by 50%, over and above inflation. The Russian reform has been regarded in many quarters as especially successful and has been influential in the introduction of a flat tax in several other countries in the region.

Elsewhere, Iraq and Paraguay have both recently introduced a flat tax. It is also worth noting that several of the U.S. states have a flat rate income tax (Colorado, Indiana, Illinois, Massachusetts, Michigan and Pennsylvania).

The introduction of the new, relatively low flat income tax rates in the transition countries, and the perceived resulting tax competition (besides the influence of Ireland's low corporate rate), has sparked interest in introducing a flat tax system in several Western European countries (notably, Germany, Norway, Spain and the UK) as well as additional transition countries. As noted above there has also been considerable interest in the United States in the introduction of a flat tax for some 20 years, in large part in an effort to simplify the federal income tax code, although revenue enhancement is also a factor. Table 2 provides a list of countries with a flat tax and those that have recently discussed flat taxes. As seen there, the flat income tax rates of most of the transition countries are considerably lower than the tax rates of the Western European countries.

As with any macro policy, tax policies need to be developed within the particular circumstances of a country at that particular time. Different countries face different environments and situations and 'No one size fits all' - NOSFA. In this section, we summarize some of the flat rate income taxes in practice. Of the approximately 20 countries with a flat tax, the actual systems adopted vary significantly.

Low Rate?

Although the literature frequently describes flat tax systems as low, they may not always be low. Lithuania introduced a 33% flat rate on personal income tax in 1994 - higher than most flat tax proposals under consideration in Western Europe and the United States (Table 2).

The scope of the flat taxes (and coverage of the flat tax rate) also varies. Systems may or may not provide for the same rate on all sources of income, including dividends and interest. For example:

- To date, Slovakia is the only country to have adopted a 'comprehensive' flat tax system, which it is argued eliminates much of the practice of tax arbitrage between individual and corporate taxes and types of capital.

- In 2001, Russia introduced a single low (13%) rate on all personal income, but a 35% rate on corporate profits, subsequently lowered to 24% in 2002. Capital income is treated under yet a different schedule.

- The flat tax may be combined with different taxes; for instance, Estonia includes social taxes (33%) as well as local income tax. Some systems also provide for separate charges, such as unemployment insurance and health, and variants on the personal allowances, for instance, for additional children. Part of Russia's reform was to simplify the payroll taxes, but these are administered separately from the personal income tax.

- Hong Kong has a dual, optional system whereby taxpayers can opt to elect to pay a 'regular' income tax or flat tax when their obligations reach 16%. In Hong Kong, however, the tax system is strongly supported by a high annual property tax (16%) on the net assessable value of a property (or how much the property could be rented for).

- Hungary has an elective flat tax system for small businesses which includes VAT but not social taxes, which makes it a more selective type of flat tax.

Personal allowances/standard deduction

As noted above, the second key lever – personal allowances or standard deductions – provides for progressivity and can take many taxpayers out of the tax system completely. This has been used in nearly all flat rate income tax countries. Jamaica's allowance exempts over one third of the employed population. Estonia allows a generous $2000[10] personal exemption plus additional exemptions for children, as does Russia.

The Western versions of the flat tax typically include a personal allowance. For example, the Hall-Rabushka flat tax proposal falls on businesses and households and allows a personal exemption. It is designed to avoid taxing savings and thus, resembles a consumption tax, such as VAT, more than a traditional income tax, which is typically also levied on returns to savings, including interest and dividends. The Fair Tax proposal in the U.S. allowed a "family consumption allowance" that was geared toward relieving the burden of a consumption tax for basic necessities.

Elimination of additional tax allowances and deductions

A further principle is that simplicity will be achieved by removing allowances, credits and deductions in addition to having a single rate. However, exemptions and allowances are considered key to the fairness of many Western European systems. In developing nations, these types of allowances and deductions can similarly be entrenched. So, around the globe, a tax reform that seeks to eliminate deductions for

[10] Against a 2003 GNI of $5380.

home mortgages, allowances for cars, catastrophic medical expenses etc., is likely to meet serious opposition. For instance, Jamaica's pre-1986 income tax had 17 types of credits and 44 allowances in the income tax system. Lobbyists fought hard to keep them in the system but were somewhat persuaded by the perceived fairness of a flat rate income tax system and relented (Bahl, 1991). In short, the simplicity of a flat rate income tax reform hinges on the ability to get these items out of the tax system—which may be no easy task in developing or developed countries.

Treatment of Capital

Capital is typically not treated in a consistent manner across countries. In most cases, there has been an integration of the corporate and individual income tax systems (Estonia, Georgia, Slovakia, for example), but most countries have not gone so far as to eliminate the taxation of returns to investment.

The remainder of this section briefly summarizes key characteristics of the flat tax systems in countries that have either introduced or considered to introduce a flat tax.

Country Experiences with Flat Rate Income Taxes

a. Transition Countries

Estonia

The Baltic nation of Estonia was the first transition country to introduce a flat tax. In 1994, a flat income tax of 26 percent was applied across the board to business and personal incomes, with personal exemptions of about $1,000 a year. The flat tax replaced a multi-rate personal income tax system that had three brackets of 16 percent, 24 percent and 33 percent applied to different income thresholds. Estonia's high level of inflation in the early 1990s resulted in these thresholds being adjusted frequently. Beginning in 2000, profits were not taxed until distributed to shareholders as dividends, providing corporations an incentive to retain earnings and re-invest. This measure is credited with boosting capital formation and improving productivity levels as well as wages and jobs, increasing Estonia's attraction as a destination for foreign investors.

Following the 1994 reform, growth in Estonia has been impressive – reaching double digits in 1997, and has since averaged about 6 percent annually. Simultaneously, the reform has not coincided with an erosion of the tax base – in 1993, general government revenues were 39.4 percent of GDP and in 2002, 39.6 percent. In a bid to maintain the high FDI inflows, Estonia decided to engage in tax competition and reduce its level of taxation to avoid losing business to neighboring countries. Beginning in 2005, Estonia began to reduce the flat tax rate by 2 percentage points per year until 2007 (i.e. to 22 percent). Simultaneously, personal exemptions were increased to $2000. The corporate income tax was also reduced to 23 percent in January 2006; however, corporate taxes in Estonia account for a small portion of total tax revenues (less than 4 percent).

However, as in many of the transition countries, income tax revenues are less important than VAT. In Estonia, in 1993, personal income taxes raised revenues equivalent to 8.2 percent of GDP and in 2002, 7.2 percent, compared to 9.4 percent for VAT. Similarly, as in other transition countries (for instance, Slovakia), the high rates of VAT, rather than the flattening of income taxes, is what sustains government revenues. Estonia's gross foreign direct investment (FDI) inflows reached a high of around 12 percent of GDP in the first half of 2005, up from 10.2 percent in 2003.

Georgia

In 2005, Georgia introduced a 12 percent flat tax on personal and business incomes - the lowest existing flat tax rate - to replace its four rates of 12 percent, to 15 percent, 17 percent and 20 percent, which were already comparatively low. The new tax code retained the former 20 percent profit tax rate, but cut the rate on social insurance from 33 percent to 20 percent and VAT from 20 percent to 18 percent. Further, dividends and interest payments are taxed only once at 10 percent and at the source of payment, eliminating the double taxation of dividends. Following the comprehensive tax reform, tax collections rose significantly from 14.5 percent of GDP in 2003 to an estimated 19.8 percent of GDP in 2005.

Latvia

Latvia introduced a 25 percent flat tax on personal incomes in 1995 and subsequently reduced the corporate tax rate from 35 percent in 2001, 15 percent in 2004 and to 12.5 percent in July 2006. Domestic dividends are exempt from tax. Prior to the comprehensive fiscal reform package, Latvia's economy had been contracting. Subsequently, the economy has recorded impressive economic growth with real GDP growth of 6.4 percent per annum in 2002, 7.5 percent in 2003, and 8.5 percent in 2004 and an estimated 8.3 percent in 2005.

Lithuania

Lithuania's post-Soviet economy was characterized by highly depressed incomes, rigid market structures, high inflation and swelling budget deficits, among other economic and financial shocks. As a result, Lithuania introduced a radical reform package, which included the flat tax. Lithuania was the second Baltic country to introduce a flat tax system by implementing in 1994 a relatively high personal income tax rate of 33 percent for principal income and reducing the corporate tax from 24 percent to a low 15 percent rate. While the personal income flat tax seems high, it is lower and much simpler than the bracketed system (10-35 percent) that it replaced. The 33 percent rate for principal income was reduced to 29 percent in 2003. The flat tax system also allows for generous personal exemptions while on the corporate side, it exempts personal real estate from capital gains and taxes other capital gains at a reduced 10 percent.

It should be noted that the Lithuanian personal income tax law makes a distinction between income from a principal place of employment, which is taxed at the flat rate after extensive deductions, and income from supplemental sources, which is taxed according to a progressive schedule of brackets ranging from 10 percent to 35 percent. Deductions from income for the primary flat tax include a non-taxable minimum, which is higher for disabled persons, single parents and other specified groups, plus all social security and social assistance payments, death benefits, court awards, gifts, allowances for insurance payments, charity donations, and most payments to pension accounts. The lowered flat tax rate in 2003 was accompanied by the introduction of a 1.5 percent real estate tax. Gifts and inheritances are taxed at 0 percent, 5 percent and 10 percent depending on the amount involved.

While not possible to correlate growth with tax reform, immediately following adoption of the flat tax, the GDP per capita continued to fall, but quickly began to turn upwards, realizing the fastest growth in GDP in the Baltic region in 2002 at 6.8 percent, and subsequently, 9.8 percent and 6.7 percent[11] in 2003 and 2004 respectively.

Romania

Romania introduced a 16 percent flat tax in January 2005 to replace a five-bracket personal income tax with rates ranging from 18 percent to 40 percent. The flat tax applies to both individual and business income. With a shadow economy estimated to account for about one third of Romania’s economic activity, it was anticipated that the flat tax will play a role in bringing the shadow businesses into the formal sector, as well as boost investment and growth. However, GDP growth is estimated to have halved - to 4.1 percent in 2005 down for 8.4 percent in 2004 - largely as a result of severe floods.

Russia

The Russian Federation overhauled its tax structure in 2001 by moving from a progressive income tax to a flat rate income tax and also broadening its tax base. Russia replaced its three-bracket personal income tax system with a flat tax rate of 13 percent and reduced its corporate tax from 35 percent to 24 percent. The flat tax exempts income below 4,800 rubles (previously 3,168 rubles). The new flat tax, however, is unusual in that, to discourage schemes that encourage tax avoidance, activities such as gambling, lottery prizes, loans at less than market rates, among others are taxed at a 35 percent rate. The new tax code also altered the structure of social insurance payments significantly, with the employers’ contributions being reduced from 38.5 percent[12] to marginal rates

[11] The slight reduction in real GDP growth was attributed to an unfavorable external environment, notably stagnating EU markets. However, real GDP growth remained robust at 6.7 percent in 2004, making the country the second fastest-growing economy in the EU (World Bank, 2005, "Country Brief 2005: Lithuania.")

[12] Before the tax reforms, separate contributions were paid to the pension, social medical and employment funds at a combined rate of 38.5 percent on the employer and one percent on the employee and it was applied at all income levels. After the reforms, a single unified social tax was charged on the employer.

ranging between 35.6 percent and 5 percent, with the lowest rate applying to salaries in excess of 600,000 rubles. The new system retains differential treatment of capital income and provides a number of allowances for children, pensioners and veterans among others.

Before the 2001 tax reforms, Russia's tax system had performed poorly since its establishment in 1991. The system was cumbersome, with some 30 separate federal taxes and over 170 local and regional taxes, particularly for an economy that had just introduced income taxation[13]. Tax evasion was also rife in Russia, despite its 89 regional tax offices and 2,639 local tax offices employing over 180,000 tax officials. Nominal tax rates were high (Table 5.1 below) and there were numerous exemptions for a wide range of favorably treated taxpayers. Russia also lacked clear tax legislation and procedures, with central and regional authorities frequently issuing inconsistent instructions that contributed to tax inspectors acting autonomously, furthering the perceived inequitable treatment of taxpayers.

Table 5.1: Russia's PIT Rate Structure Before Reform (2000) and After Reform (2001)

Before Reform		**After Reform**	
Taxable Income (rubles)	Marginal Rate	Taxable Income (rubles)	Marginal Rate
Below 3, 168	0	Below 4,800	0
3 168 to 50,000	12	Above 4,800	13
50,000 to 150,000	20		
Above 150,000	30		

Source: Adapted from Ivanova et al (2005), IMF WP/05/16

In the first year after Russia introduced the flat personal income tax, revenues increased by 25 percent in real terms and doubled in 2004. Real GDP growth averaged 5.5 percent during the 3-year period to 2003 and Russia ended 2005 with its seventh straight year of growth, averaging 6.4% percent annually since the financial crisis of 1998.

Russia's flat rate income tax has received increasing attention due to the significant increases in revenue post flat tax reform. However, the flat tax was only one of several major tax reforms (including, inter alia, the introduction of unique tax IDs). Ivanova et al (2005) find that the strongest increases in tax payments came from individuals least affected by the marginal tax rate changes of the flat tax reform and therefore conclude that the flat tax reform itself may have not had a large impact on the increase in tax revenue in the Russian Federation

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[13] Income taxation was non-existent under the communists and Tsars, Himes and Milliet-Einbinder 1999.

Serbia & Montenegro[14]

Serbia (formerly Yugoslavia) introduced a flat income tax in 2003, however, the personal income tax is something of a hybrid. A 14 percent[15] flat tax is levied on salaries, with an additional 10 percent levied on annual incomes over four times the average salary. This replaced previously progressive rates that ranged between 10-40 percent. Individuals are also taxed at 10 percent on self-employment income. Corporate income is subject to a flat tax rate of 10 percent and it is the lowest rate in Europe.

Simultaneously, **Montenegro** still has four rates for personal income tax ranging from 0-24 percent and corporate income is taxed at 15 percent for profits up to 100 000 Euro and at 20 percent for profits exceeding 100 000 Euro.

Following the introduction of the tax reforms, Serbia's real GDP slowed down to 3.0 percent in 2003 from 4.0 percent in 2002, but more than doubled to 7.5 percent in 2004 and a still robust 5 percent was recorded for 2005. Foreign direct investment (FDI) flows into Serbia have grown dramatically since the tax reforms, although the trends have been highly volatile, and attributed largely to changes in the political climate[16].

Slovakia

Slovakia introduced a flat tax of 19 percent in 2004 that applies to personal income, corporate income and VAT – the closest of any country to a 'comprehensive' flat tax system. Under this system, all personal income up to 1.6 times the poverty line is exempt from taxation. Before the reform, Slovakia had an extremely complicated tax code with, inter alia, five brackets ranging from 10 percent to 38 percent and 90 different exemptions; 27 items had their own specific tax rates, and the system underwent frequent tax rate changes (often twice a year). The new system taxes profits on businesses, but not the dividends they distribute.

Overall, the Slovakia tax reform package is ambitious and was supposedly intended to create a competitive and non-distortionary market environment (Durajka 2005). Although too early to conclude, the outcomes of the tax reform, coupled with other simultaneous, structural reforms appear favorable[17]. For instance, Slovakia was named the 'Top Economic Reformer' by the World Bank in 2004, primarily due to its comprehensive tax reform, which has coincided with improved compliance and increased

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[14] Serbia's Parliament recognized Montenegro's independence on June 5, 2006.

[15] The 2006 Index of Economic Freedom quotes Serbia's flat rate tax on both individual and corporate income as 10%.

[16] FDI flows were EUR 600 million in 2002, EUR 1,200 million in 2003, EUR 800 million in 2004 and EUR 1 221 (USD 1 481) in 2005. This was converted using the USD/EUR mid-year average exchange rate.

[17] While the share of income as a percentage of GDP was expected to fall to 4.9 percent in 2005 from 6.5 percent in 2003, VAT revenue was estimated to go up to 8.3 percent from 7.0 percent over the same period. Real GDP growth rose to 5.5 percent in 2004 up from 3.9 percent in 2003 and it is forecast at 5.3 percent in 2005 and at 5.7 percent in 2006.

FDI. There is also broad support within the country for the simplicity and transparency of the new code. The high payroll tax, however, is a notable drawback to the tax system: social security contributions of employees and employers amounted to almost one half of labor income in 2004, providing an incentive to convert labor income into business income and to drive economic activity into the shadow economy.

Ukraine

Ukraine introduced a 13 percent flat tax on personal income on January 1, 2004 replacing a five-bracket income tax system, which had had a top rate of 40 percent. Prior to reforming its tax system, it was estimated that the shadow economy accounted for more than half of Ukraine's economic output. The economic performance of Ukraine, however, has been determined largely by the political climate of recent years.

b. Other Relevant Flat Tax Countries

Hong Kong

Hong Kong has a flat tax of 16 percent but this is subject to large personal exemptions for those with children or dependent parents. Hong Kong also generates a lot of its tax revenue through the relatively high property tax, which is an annual 16 per cent tax on net assessable value of a property (or how much the property could be rented for).

Iraq

A 15 percent flat rate income tax was introduced in Iraq by the Coalition Provisional Authority Order #37, "Tax Strategy for 2003." The tax was implemented on January 1, 2004. As noted by Rabushka (2004), the magnitude of the income tax is expected to be very small for the coming years (0.02 percent of expenditures in 2004).

Jamaica

During the early 1980s, the Jamaican economy was in a very depressed state with real GDP in 1982 lower than it had been 10 years earlier. With the world market prices for its principal exports, bauxite and alumina, deeply depressed, its foreign exchange earnings had declined significantly. Moreover the Jamaican tax system at the time was considered a disincentive to production as the rates were very high. As a result, Jamaica embarked on an extensive tax reform which not only focused on raising revenue, but also addressed the effect of the tax structure on investment, saving, production, employment and incomes (USAID). Following the recommendations of the Jamaican Tax Reform Commission, the Government in 1986 passed legislation that included a flat rate tax of 33 1/3 percent (this was one and a half percentage points below the recommended rate) on personal income with a personal allowance of Jamaican $8,480 and a new corporate income tax was set equal to the personal income tax flat rate. The new system was

introduced in 1987. Since 1987, the income tax has been further adjusted. The personal income tax rate has fallen to 25 percent while the corporate rate remains at 33 1/3 percent

c. Countries Giving Consideration to a Flat Tax

A review of policy options considered by various governments reveals some serious "flirtations" with flat taxes in developed as well as developing nations. In Canada, China, and the U.S., the consumption tax seems to be at the heart of the policy discussion, while in some transition countries, there is more focus on the flat rate income taxes used largely by other transition countries.

Canada

In Canada in 2000, the Canadian Alliance, then the largest opposition party in Canada, came up with comprehensive tax proposals for a 17 percent flat tax plan, which was subsequently modified to a transitional dual tax rate plan with a base rate of 17 percent. Kesselman (2000) examines, inter alia, key issues that are needed to assess the economic and social policy implications of various tax reduction plans by comparing the Canadian and US tax plans as well as investigating the progressivity of the rates by looking at the flat tax and the dual tax plans. With regard to the progressivity of the proposed Canadian Alliance flat tax, the author finds its average tax rates (ATR) rise quickly with income but then level off as it approaches the single tax rate and do not rise much more even at very high incomes. He concludes that a person earning $1 million will face an ATR of just 1.5 percentage points above that earning $100 000 and this difference compares with the 6 percentage point that exists between the two incomes in the current federal tax rate.

China

The People's Republic of China has given serious consideration to the idea of a flat tax - to the extent that it had the second edition of The Flat Tax by Hall and Rabushka translated into Chinese in 2003, with the preface written by the Vice-Minister of Finance. Further, several Chinese professors of public finance have written articles supporting the replacement of the current personal income tax system with a flat tax. They have outlined the economic and fiscal benefits that will result from sharply reducing the top personal income tax rate of 45 percent[18] to say, a flat 20 percent rate. Most recent indications, however, suggests that the Chinese are no longer pursuing a flat rate income tax

Croatia

Facing stiff competition from neighboring countries that have adopted flat tax systems, Croatia has given serious consideration to introducing a flat tax system. Given

[18] China currently has a nine-bracket personal income tax with a top rate of 45 percent.

the apparent success of the flat tax in countries which have adopted it, and the prospect that others of Croatia's neighbors are likely to follow suit in the next few years, Croatia recognized early on the need to be competitive with neighboring countries to attract foreign investment.

Croatia's current tax law has four rates; 15, 25, 35 and a top rate of 45 percent. Given these high rates, it is easy to see why individuals would prefer to earn their income in any of the neighboring countries that have implemented the flat tax. Rabushka (2005) further points out that Croatia's current high tax rates send a signal to foreign investors that Croatia continues to believe in the confiscatory regime of high tax rates on successful individuals.

Currently, Croatia is reviewing legislation to 'flatten' its system to introduce a new higher income zero rate, a flat rate of 15% on intermediate earners and a 25% marginal rate on higher income earners, as well as a number of flattening and simplified tax measures for presumptive and corporate taxes. The legislation is expected to be enacted in early 2007.

U.S.

As noted earlier, much of the U.S. discussion of flat taxes has centered around a consumption-based tax, rather than simply a flat rate income tax. Below, we highlight a few of the proposals that have been discussed over the past several years.

The Hall-Rabushka Flat Tax Proposal

As discussed above, Hall and Rabushka (1985)[19] proposed a new tax system for the United States that has a broad base and a low flat rate of 19 percent. The Hall-Rabushka tax system introduces progressivity by providing a generous personal allowance.[20] Their original plan proposed a personal allowance of $16,500 for a married couple filing jointly, $9,500 for singles and $14,000 for single heads of household. Their system is based on a very basic administrative principle that income should be taxed only once and as close as possible to its source. When comparing their proposed system with the one currently in place to compute the 1983 tax revenue from corporate income, Hall and Rabushka found that with a corporate tax rate of 46 percent, $44 billion was raised while their 19 percent flat tax would have raised $129 billion. Their wage-salary tax on the other hand, would have yielded only $206 billion in 1983 as opposed to the much higher $290 billion raised. They argue that the substantial revenue that the government would receive from the flat business tax would compensate for the reduced revenues from the flat wage-salary tax.

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[19] For Hall and Rabushka though, the starting point was December 10, 1981 when they first published in the Wall Street Journal their proposal to replace the federal tax system with a flat tax and a simple tax form that would fit on a postcard (Hall, R. E. and A. Rabushka (1983). Low Tax, Simple Tax, Flat Tax. New York, McGraw-Hill Book Company.

[20] They proposed personal allowances of up to $25,500 for a family of four in 1995.

The Steve Forbes' Plan

Another strong endorser of the flat tax in the United States is Steve Forbes[21] (Forbes 2005), whose flat tax proposal is quite similar to the Hall-Rabushka system. He recommends a fair and simple flat tax system to replace the current federal income tax code and whose return would be a single sheet of paper or postcard. The Forbes tax would be a single-rate federal income tax and corporate tax of 17 percent with income taxed at its source or as close to the source as possible. There will be no double or triple taxation, i.e., income will be taxed once and only once. He proposes generous and refundable exemptions for the following groups: adults ($13,200 standard exemption); married couples ($26,400 deduction); and families ($4,000 exemptions for each child or dependent, including a refundable tax credit of $1,000 per child under 16). His proposal also allows for the retention of the Earned Income Tax Credit (EITC) and does away with taxes like the 'death' tax, social security tax, among others. His flat tax is not mandatory, tax payers are free to continue to use the current system.

The Armey-Shelby Plan

Taking the flat tax debate a step further, two congressmen, Richard Armey and Richard Shelby sponsored a bill that was introduced as legislation in 1994 and 1995, and revised in 1997[22]. The Armey-Shelby flat tax plan, based on the Hall-Rabushka proposal, would establish a single 17 percent[23] tax rate on a much broader base by doing away with the current five brackets and removing virtually all deductions, exemptions, credits and exclusions.

U.S. States

In the United States, five states currently impose a flat tax on state individual income while the sixth state, Colorado, imposes a 4.63 percent flat tax on federal taxable income. These taxes are flat rate income taxes, more similar to those of the transition countries than the various flat taxes proposed at the federal level. The state of Illinois imposes a 3.0 percent flat tax on individual income with personal exemptions of $2,000 on single adults as well as dependents while Indiana's flat tax is 3.4 percent with a $1,000 personal exemption applied to both single adults and dependents. Massachusetts' flat tax on personal income is the highest among these six states at 5.3 percent, however, it offers a higher personal deduction of $3,575 on singles and $1,000 on dependents. The flat tax for Michigan is 3.9 percent with personal deductions of $3,200 for both singles and

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[21] Steven Forbes offered the flat tax proposal in the 1996 presidential primaries as a presidential candidate.

[22] The first person to introduce the Hall-Rabushka flat tax proposal as a bill in Congress though was Senator Dennis DeConcini on March 1, 1982 (Calegari, M. (1998). "Flat Taxes and Effective Tax Planning." National Tax Journal **LI** (4): 689-713.

[23] The Armey-Shelby flat tax plan set the rate at 20 in 1996-97 and 17 percent thereafter (Aaron, H. J. and W. G. Gale, Eds. (1996). Economic Effects of Fundamental Tax Reform. Washington, D.C., Brookings Institute Press.

dependents. Pennsylvania flat tax of 3.07 percent is more of a pure tax in that it does not include any deductions and the same applies to that of Colorado.

In summary, for the transition countries, without a long tradition of tax policy or compliance, the flat rate income tax appears to be a useful 'simplification' of the tax systems. For countries such as the U.S. or U.K. with mature tax systems, the benefits of simplification may come less from reducing the number of brackets than reforming the system of allowances and exemptions. In many countries, politically it may not be worthwhile to undergo the costs of a significant tax reform only for a unification of rates.

6. **Evidence on impacts of Flat Rate Income Taxes**

Supporters of flat taxes argue that in the longer term, increased compliance (a result of simplifying the system under a flat tax) and economic activity (a result of reducing the average effective tax rate on capital and labor) lead to increased revenues. However, there is simply very little empirical evidence regarding the impacts of flat rate income taxes.[24] One way to view the relationship between the introduction of the flat rate income taxes and economic and fiscal performance is provided in Table 5. In that table the flat tax countries are reported with data on annual GDP growth, foreign direct investment and the estimated level of the shadow economy as a share of GDP. Post flat tax reform, the annual growth in GDP is strong for Latvia, Serbia, and Estonia, but less strong for Lithuania, Slovakia, Romania, and Russia. As far as foreign investment, there is growth in FDI post-reform in Estonia, Latvia and Serbia but again, more mundane growth in the first year for Russia, and less growth in Lithuania and Slovakia.

If the flat tax succeeds in reducing compliance costs, then we might expect the shadow economy to shrink as more individuals and businesses come into the tax net. The data available to consistently estimate the shadow economy is difficult to come by—especially for new flat tax countries. In Table 5, for countries where data are available, estimates of the shadow economy pre and post flat tax reform are presented. From this information, it does not appear that these countries witnessed much change in the size of their shadow economies. In addition, Schneider (2005) reports shadow economy estimates for 1999-2003 for groups of countries including the transition countries. His estimate is that from 1999 to 2003, the average size of the shadow economies of this group of countries (East and Central European and Former Soviet Union Countries), grew from 38.1 percent to 40.1 percent.

Figure 1 presents another view of the growth in GDP for flat tax countries. Without controlling for any other factors, this figure tracks real per capita GDP for many of the transition flat rate income tax countries. The trend lines in real per capita GDP do not give overwhelming support to the idea that flat taxes fuel economic growth. In Estonia, Russia, Latvia and Slovakia, GDP growth was on the upswing before the flat rate income taxes were imposed. In the other countries, the flat tax introduction and GDP

[24] The case of Russia's flat rate income tax has received most attention in the empirical literature. See Ivanova, et. al. and Martinez-Vazquez et. al.

growth came in the same year. It is difficult to believe that the flat rate income tax could have that quick an impact. Tax revenue as a share of GDP actually fell in Estonia and Lithuania, while increasing in Latvia and Russia post flat-tax reform.

We conducted a more systematic analysis of the growth in GDP and the growth in revenue. We ran a series of panel regressions using the share of individual income tax to total revenues as well as to total tax revenues, as a function of GDP per capita, agricultural share of GDP, manufacturing share of GDP, openness and included time variables, fixed effects and the flat tax dummy. Similar estimations were made using the ratio of corporate income tax to total revenues as well as to total tax revenue. In all the cases we could not find a consistent relationship between the flat rate income tax variable and revenue growth.

We did a similar analysis for individual income tax revenue as a function of the flat rate income tax using a time series-cross section (panel) analysis for 40 countries. These countries are a mix of developing, developed, and transition countries. The model takes into account country fixed effects:

$$Tax_{it} = \alpha_o + \beta_1 GDPPC_{it} + \beta_2 Agric_{it} + \beta_3 Manuf_{it} + \beta_4 Openness + \delta_0 Flattax + a_i + \mu_{it}$$

Both *agriculture and manufacturing* are shares of GDP while *openness* is the sum of imports and exports divided by GDP. Flat tax is the flat tax dummy which takes the value of 1 for the years that a country had a flat tax and zero otherwise. The dependent variable is income tax revenue as a share of total tax revenue and separately as a share of total revenue.[25] In both cases, we find that countries with a flat tax have about a 0.1 percentage point higher level of individual income tax revenue than countries without a flat rate income tax. However, the impact is exactly opposite for the corporate income tax, but corporate tax revenues are much lower to begin with in these countries.

We also made a comparison of tax effort indices for a few countries, which included some transition countries with flat taxes chosen from our larger sample of 40 countries (see Table 6) for the period 1995 to 2001. The computation of the tax effort index enables us to determine if countries are using their taxable capacity effectively. Using the ratio of tax revenues to GDP as our dependent variable (tax effort), we used the same traditional explanatory variables that are controlling for each country's economic structure as indicated above. The tax effort index was computed as the ratio of the actual tax revenue share to the predicted tax revenue share and it measures the variance in the taxable capacity of a country. Our results indicate a generally upward trend in the tax effort indices of the sample countries with a slight exception of Estonia, Romania and Seychelles. However, for most of these countries, with a notable exception of Croatia, Jamaica, Seychelles and Slovenia, their tax effort indices are less than one, indicating that these countries are not exhausting their taxable capacities and they are collecting less tax than predicted, that is, given their tax structures and prevailing economic and social conditions.

[25] We did a similar analysis for total tax revenue as a share of GDP.

There is some additional empirical evidence regarding the economic success of the flat tax movement. For example, Ivanova et al's (2005) evaluation of the Russian Flat rate income tax states that "A key conclusion (from Russia) is that tax-cutting reforms of this kind should not be expected to pay for themselves by greater work effort and improved compliance".[26] Subsequent IMF analysis of Romania in 2005 concluded that there would be a revenue shortfall due to the flat tax (16%), despite the increase in VAT to 20% and additional increases in excise tax. Martinez-Vazquez et al (2006) also evaluate Russia's flat rate income tax and find evidence that the labor is not very responsive to changes in net wages that accompany the tax reform.

The empirical evidence on the impact of flat rate income taxes is slowly growing, but it is likely that each country's experience is its own and not generalizable. This is because those relative price changes that affect the economic impacts are specific to each individual country. Slovakia, for example, reports positive impacts of its flat rate income tax. According to the director of Slovakia's Hayek Institute, income-tax revenue is 0.5 percent of gross domestic product larger than predicted by "static" analysis (reported in the Washington Post, Dec. 22, 2005).

It is widely claimed that flat taxes will improve compliance and so, reduce a country's tax gap. The idea here is that a flatter, simpler tax system may reduce the value of non-compliance and will also increase the perceived fairness of the tax system. However, the evidence to date is misleading and apportionment of the improvement in the countries cited - difficult. In general, empirical conclusions also differ as to whether higher tax rates discourage compliance. Friedman et al (2000) concluded that higher flat tax rates do not encourage evasion, while Yitzhaki (1974) and others demonstrate that higher rates may increase evasion, but there are other mitigating factors to consider such as penalty rates.

For instance, in several countries, and Russia in particular, the introduction of a flat tax coincided with more general tax reforms. While compliance did improve significantly, it is difficult to substantiate that the improvement resulted from the reform or other changes in enforcement that were introduced simultaneously. Specifically, the introduction of the flat tax in Russia coincided with the introduction of withholding of taxes at source, the introduction of taxpayer IDs, as well as the audit of suspected tax evaders. Martinez et al (2005) find little evidence that the administrative focus of the tax administration in the Russian Federation was responsible for much of the revenue increase.

The level of shadow economies found by Schneider also brings into doubt the impact of flat rate income taxes on compliance. To be fair, for many countries, it may be too early to be able to measure such changes, but in Estonia, for example, he finds an increase in the shadow economy between 1999 and 2003 (we do not have a baseline of the shadow economy for Estonia for pre-reform).

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[26] Ivanova, A, M. Keen and A. Kremm, 'The Russian Tax Reform', IMF Working Paper, January 2005.

More detailed analysis suggests that actual flat tax systems are more complex than the headlines suggest. For example, personal allowances and exemptions complicate collection, and high social security payments in Estonia (33 percent), Slovakia (35.2 percent by employer and 13.4 percent by employee) and Russia (26 percent for employers and 2 percent for employees with incomes over 600,000 rubles, currently about US $22,000) for example, affect labor utilization. In Hong Kong, the high share of revenues from the property tax supports the island's otherwise low flat tax on income.

For the western world, the culture of 'fairness' tends to prevail over simplification. While the elimination of allowances, deductions and other reliefs that the flat tax would bring provide the main benefits of simplification and transparency – these changes are politically not feasible in the west. So, the introduction of a single flat rate on income tax in Western Europe would carry the entire weight of a political tax reform, with few of the benefits.

Nonetheless, in time, the complexity of the mature western tax systems may merge with the increasingly prevailing view that equity is more readily realized through expenditures than taxation.

Thus overall, it is possible to conclude that the flat tax option is an important mechanism to simplify tax structures, and a relatively more attractive one for young tax systems than for the mature and more complex systems of the industrial world. However, the impact of this simplification on tax revenues has been difficult to document. The additional economic impact of reduced income tax rates on capital and labor have also been difficult to analyze. Over time, as more data are available, it may become more feasible to empirically analyze the impact of flat rate income taxes on revenue generation and economic growth.

7. Conclusions

The policy world's interest in flat taxes is likely to continue given the number of countries considering flat taxes and the level of debate in the developed world regarding flat taxes. To date, however, international experience with flat rate taxes is mostly with flat rate ***income*** taxes. These types of taxes may be successful simplifications of the income tax system, and may in fact give rise to increased revenues through increases in compliance and easier administration. However, there is little documented evidence that this is the case and it may be simply too difficult to disentangle from other changes occurring in the countries' tax systems and their economies. Nonetheless, the transition economies have, to date, performed well in the years following the introduction of their flat tax systems, and some recognition of this is in order.

Flat rate income taxes do not necessarily, even theoretically, yield increases in economic growth. For taxes to have an impact in an economy, they must actually be imposed, administered, and collected. A high marginal tax rate that is never imposed on a taxpayer may be no more a deterrent to economic growth than a very low marginal tax

rate that is or is not administered. The empirical evidence on the effect of the existing flat rate income tax cases on economic and revenue growth is mixed. This is because each flat rate income tax system is unique and each was born out of a different pre-reform system. The economic impacts are driven by the effect of a tax reform on changes in relative prices that affect economic agents (the cost of consumption versus savings, take home pay, the net return to an investment). Since each country starts from a different position regarding how it taxes these factors, a change to a flat rate income tax will affect each country differently.

Finally, most flat rate income taxes are not technically flat or a 'pure' flat tax. As discussed in this paper, most countries utilize some form of standard deduction or personal exemption that effectively eliminates some taxpayers from the tax rolls. The decision regarding the "correct" level of progressivity or redistribution from the income tax system is in the purview of each government. It is obvious that the countries reviewed felt that vertical equity was an issue that needed to be specifically addressed under the flat rate income tax.

As with any macro policy, tax policies need to be developed within the particular circumstances of a country at that particular time. Different countries face different environments and situations and 'No one size fits all' - NOSFA.

For the transition countries, without a long tradition of tax policy or compliance, the flat tax appears to be a useful 'simplification' for the 'younger' economies. But for countries such as the US or UK with a mature tax system, the benefits of simplification come less from reducing the number of brackets (Flat rate income tax) than reforming the system of allowances and exemptions. So for these economies, it is probably not worthwhile to undergo the costs of a significant tax reform only for a unification of rates.

Finally, the simplicity of a flat rate income tax reform hinges on the ability of policy makers to have exemptions and deductions removed from a country's tax system - which is no easy task anywhere in the world.

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Table 1: Comparison of Flat Taxes

Region/Country	Year PIT Introduced	Flat Tax on			Exemptions	Comments/ Former Top Rate
Transition		**PIT**	**CIT**	**Consump/VAT**		
Estonia[1]	1994	26/2	26[2]	-	$1000	
Georgia	2004/5	12	12	-		33 PIT; 35 CIT
Latvia	1995	25	15[3]		LVL 32 monthly persona alloance plus LVL 22 for dependant relative.	20 PIT; 20 CIT
Lithuania[4]	1994	33	15		$1200 + others	37 PIT; 45 CIT
Romania	2005	16	16	-		40 PIT; 25 CIT
Russia	2001	13	24[5]			35 PIT; 35 CIT
Serbia	2003	14	14			40 PIT; 34 CIT
Slovakia	2004	19	19	19	Pensions and contributions to NGOs	38 PIT; 25 CIT
Ukraine[6]	2004	13	-	-		90 PIT; 35 CIT
Poland	2004	-	19			40 PIT; 30 CIT
Others						
Jersey	1940	20	20	-	Family allowance	
Guernsey	1960	20	20	-	Business expenses	
Hong Kong	1947	16	-	-	Optional	
Iraq	2003	15	15	-		45 PIT & ITC
Jamaica	1986	33.5	33.5			57.5 PIT; 45 CIT
Paraguay	2005	10				

[1] In 2005, Estonia passed legislation to reduce the flat rate by 2 percentage points for each year through 2007, i.e., to 20%. Personal exemptions were also increased to over $2000 in 2005.
[2] In 2000, corporate retained earnings were exempted from tax.
[3] 2004
[4] In 2005, the PIT was reduced to 29% and to 27% with effect from July 1, 2006 and 24% from January 1, 2008. A 15% flat rate remains on royalties, interest and other sources of income.
[5] 2002, a reduced corporate tax, not a flat tax.
[6] On January 1, 2005, Ukraine began taxing dividends and interest on bank deposits at 5%. The corporate rate was reduced but is not flat.

Table 2: Comparison of Flat Tax Rates and Top Rates on Personal Income Tax: Europe and the Transition Countries (Marginal Rates)

0-9%	10-19%	20-29%	30-39%	40-49%	50%+
Bosnia-Herzegovina	**Georgia (12)**	Albania	**Belarus***	Britain	Austria
	Macedonia	Bulgaria(10)	Cyprus	**Croatia(15)**	Belgium
	Iraq (15)	Denmark	Czech Rep.(15)	Germany (25-30)	France
	Romania (16)	**Estonia (26)**	Finland	Greece(25)	Netherlands
	Russia (13)	**Latvia (25)**	Hungary (20)	Ireland	Norway
	Serbia (14)	Moldova	**Lithuania (33)**	Italy	Slovenia (20)
	Slovakia (19)		Luxembourg	**Poland (15)**	Sweden
	Ukraine (13)		Malta	Portugal	
			Monaco	Spain (30)	
				Turkey	

Notes:
Countries with flat taxes are shown in bold and the rate in parentheses.
Countries that are or have considered the introduction of flat taxes are shown in italics and the proposed PIT rate in parentheses.
* Plans to harmonize its tax code with Russia (Edwards, 2005).

Table 3: Taxes as a Share of GDP (1990s average, select countries)

Country	%	Country	%	Country	%
Albania	20.1	Georgia	8.81	Nigeria	7.83
Argentina	19.76	Germany	37.27	Norway	40.7
Armenia	15.07	Ghana	13.02	Panama	18.57
Australia	27.76	Greece	32.09	Paraguay	9.41
Austria	42.02	Guatemala	7.71	Peru	14.47
Azerbaijan	21.5	Hungary	41.39	Philippines	15.29
Bangladesh	7.49	Iceland	32.72	Poland	38.76
Belarus	42.59	India	14.54	Portugal	31.14
Belgium	44.5	Indonesia	15.76	Romania	30.17
Benin	10.03	Ireland	32.04	Russian Federation	30.23
Bhutan	6.1	Israel	35.95	Rwanda	8.03
Bolivia	14.58	Italy	41.95	Sao Tome and Principe	10.97
Bosnia and Herzegovina	29.7	Jamaica	24.01	Senegal	15.39
Botswana	33.8	Japan	28.06	Seychelles	34.38
Brazil	26.77	Kazakhstan	15.67	Sierra Leone	11.23
Bulgaria	32.8	Kenya	22.38	Singapore	16.33
Burkina Faso	9.88	Korea, Rep.	20.86	Slovak Republic	37.13
Burundi	15.18	Kyrgyz Republic	14.06	Slovenia	41.04
Cameroon	9.6	Latvia	32.51	South Africa	25.57
Canada	37.24	Lesotho	39.2	Spain	32.45
Cape Verde	16.28	Lithuania	30.13	Sri Lanka	17.35
Central African Republic	8.38	Luxembourg	40.92	Sudan	6.28
Chad	6.58	Macedonia, FYR	37.82	Swaziland	29.68
Chile	19.64	Madagascar	8.15	Sweden	49.47
China	12.58	Malawi	15.52	Switzerland	32.81
Comoros	12.23	Malaysia	20.54	Syrian Arab Republic	17.59
Congo, Rep.	13.27	Mali	10.68	Tajikistan	23.39
Costa Rica	21.17	Malta	26.82	Tanzania	13.27
Cote d'Ivoire	16.73	Mauritania	17.57	Thailand	17.2
Croatia	44.53	Mauritius	19.22	Togo	13.52
Czech Republic	37.12	Mexico	16.42	Trinidad and Tobago	23.2
Denmark	48.49	Moldova	26.18	Turkey	24.37
Dominican Republic	13.54	Mongolia	25.15	Turkmenistan	12.96
Equatorial Guinea	12.67	Mozambique	17.97	Uganda	8.76
Estonia	34.97	Namibia	30.15	Ukraine	36.29
Ethiopia	10.37	Netherlands	43.24	United Kingdom	34.57
Finland	38.07	New Zealand	33.74	United States	27.05
France	42.48	Nicaragua	25.55	Uzbekistan	27.89
Gambia, The	19.88	Niger	6.72	Zambia	17.49
				Zimbabwe	23.62

Source: IMF Government Finance Statistics and the World Bank, World Development Indicators

Table 4: Income Tax Share of Total Tax Revenue, Select Countries (2000)

Country	Share (%)	Country	Share (%)
Argentina	18.7	Mauritius	13.1
Bahrain	16.4	Mexico	38.1
Belarus	11.7	Moldova	4.1
Bhutan	53.4	Mongolia	16
Bolivia	9.9	Myanmar	34.5
Bulgaria	14.6	Nepal	21
Canada	58.6	Nicaragua	14.1
Chile	22.9	Pakistan	28.1
Congo, Dem. Rep.	12.6	Panama	29.4
Congo, Rep.	11.3	Paraguay	17.9
Costa Rica	14.5	Peru	24.8
Cote d'Ivoire	24.6	Poland	20.9
Croatia	9.5	Romania	14.8
Czech Republic	13.8	Russian Federation	13.7
Denmark	40.2	Seychelles	22
Dominican Republic	19.6	Singapore	50.2
Estonia	15.8	Slovak Republic	20.7
Georgia	8.8	Slovenia	14.9
Hungary	22.3	South Africa	56
India	37.3	Switzerland	17.7
Iran, Islamic Rep.	41.7	Tajikistan	3.4
Israel	45.7	Thailand	33.8
Jamaica	41.9	Tunisia	22.3
Kazakhstan	31.2	Turkey	37.4
Latvia	13.5	Ukraine	15.2
Lithuania	12.9	United States	61.3
Macao, China	9	Uruguay	16.9
Madagascar	15.7	Venezuela, RB	40.3
Maldives	4.6		
Median		18.7	
Mean		23.8	

Source: IMF, Government Finance Statistics (2000).

Table 5: Key Economic Indicators in Countries with Flat Tax – Before and After

Country	Year PIT Introduced	PIT rate	GDP Growth % p.a.		FDI (US $ m.)		Shadow economy % of GDP	
			Before (3-year average)	After 1st year 2nd year	Before (3-year average)	After 1st year 2nd year	Before	After
Transition								
Estonia[1]	1994	26/22	-11.7	-1.6 4.5	118[9]	214 202	33.9[5]	38.5[5] 39.1[7]
Georgia	2004/5	12	7.1	6.2	205		66.1[7]	
Latvia	1995	25	-11.6	-0.9 3.8	96	180 382	34.8[6]	39.6[7]
Lithuania[2]	1994	33	-14.4	-9.8 3.3	30[10]	31 73	26[5]	25.2 29.4[7]
Romania	2005	16	5.8	4.1	1,494[9]		33.4[7]	
Russia	2001	13	10.0	5.1 4.7	2,929	2,469 3,461	46.1	45.1[7]
Serbia	2003	14	4.0	3.0	222	1,360		
Slovakia	2004	19	4.9	5.75	2,093[9]	1,707	26.7[7]	
Ukraine[3]	2004	13	7.9		970		51.2[7]	
Poland	2004	19[11]	2.1		4,123		27.4[7]	
Others								
Jersey	1940	20						
Guernsey	1960	20						
Hong Kong[4]	1947	16						16.6[8]
Iraq	2003	15						
Jamaica	1986	33.5	-1.0	1.6 8.0	5	-4.6 53		49.6[8]
Paraguay	2005	10	3.2		92.5			

Notes:

[1] In 2005, Estonia passed legislation to reduce the flat tax rate by 2% (percentage points) for each year through 2007 i.e. to 20%. Personal exemptions were also increased to over $2000 in 2005.

[2] In 2005, the PIT was reduced to 27% from July 1, 206 and to 24% from January 1, 2008. A 15% flat rate remains on royalties, interest and other sources of income.

[3] On January 1, 2005, Ukraine began taxing dividends and interest on bank deposits at 5%. The corporate rate was reduced but is not flat.

[4] Hong Kong has an optional dual system whereby taxpayers can elect to opt for flat tax payments at 16%.

[5] 1990-93 average

[6] 1994-95 average

[7] 2000-01 average

[8] 1999/00 average

[9] 2-year average

[10] FDI net inflows (BoP current US$)

[11] This is an optional flat tax on personal business income

Sources: GDP and FDI – *World Development Indicators* and Various reports
Shadow Economy – Friedrich Schneider Discussion Papers (June 2002 and March 2004), Global Development Network

Table 6: Tax Effort Index

	1995	1996	1998	1999	2000	2001
Argentina	0.566	0.514	0.517	0.587	0.721	0.788
Canada	0.739	0.738	0.698	0.743	0.713	
Croatia	1.401	1.498	1.512	1.689	1.561	1.587
Czech Republic				0.890		
Estonia	1.018	0.983	0.830	0.836	0.712	0.755
Georgia			0.495	0.733	0.580	0.643
Jamaica	1.408	1.415	1.313	1.385	1.436	1.508
Latvia	0.741	0.791	0.850	0.853		
Lithuania	0.846	0.885	0.831	0.925		
Mauritius	0.799	0.800	0.807	1.009	0.993	0.963
Romania	1.131	1.082	0.932	1.233	1.139	0.890
Seychelles	1.520	1.401	1.296	1.375	1.303	1.204
Slovenia	0.882	1.019	1.005	1.220	1.055	1.232
Turkey	1.031	1.207	1.363			
United States	0.651	0.612	0.577	0.600	0.639	0.835

Figure 1

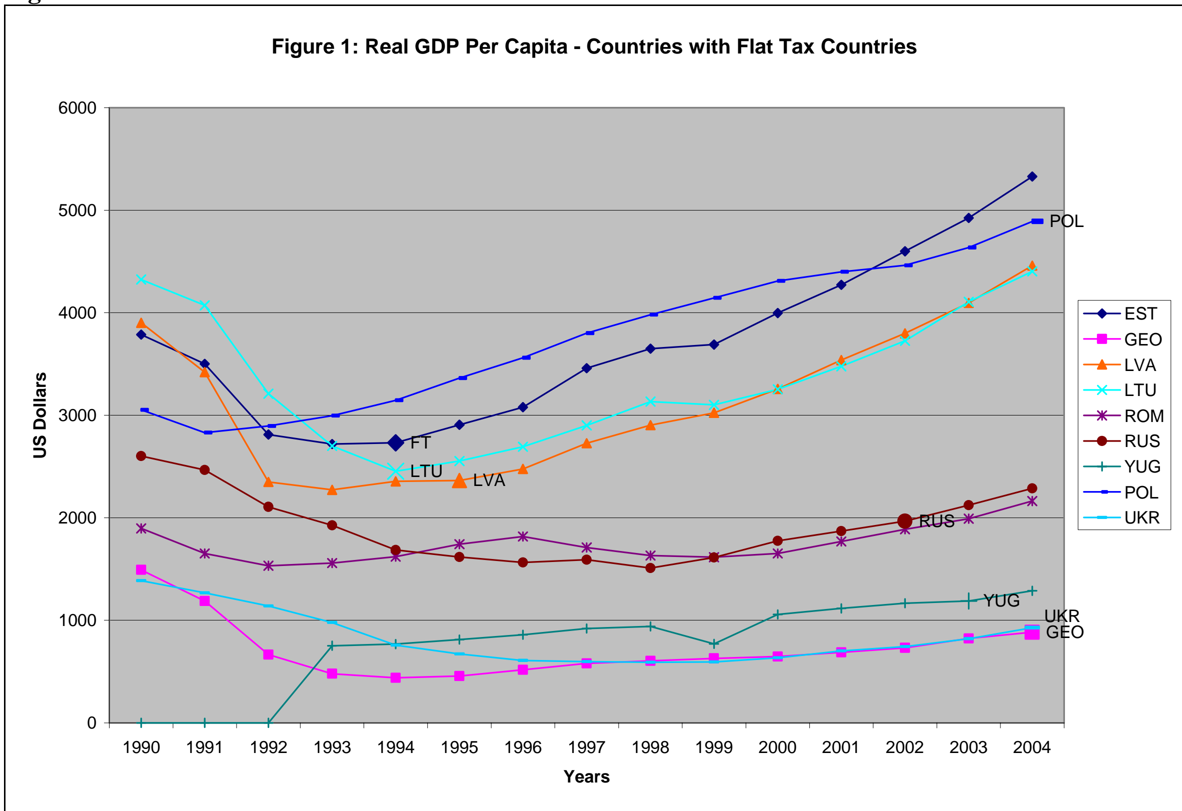

Figure 2

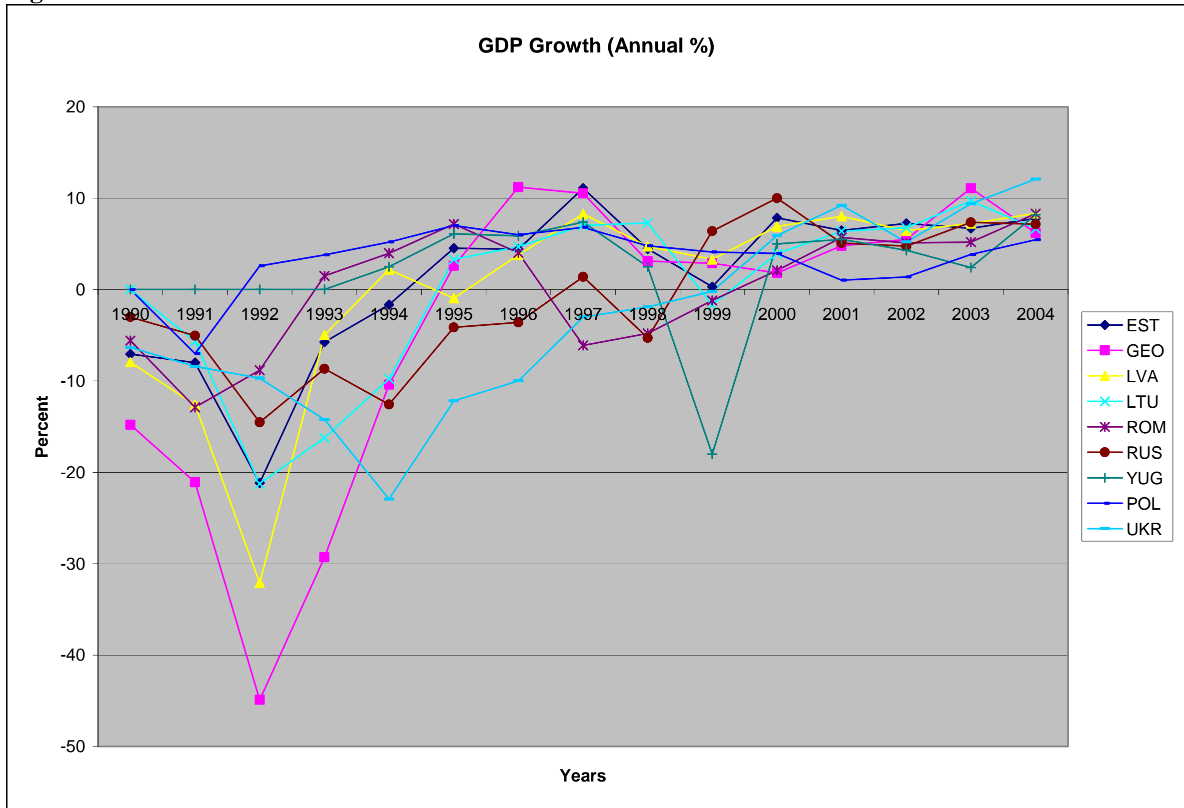

Figure 3