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1. Introduction

As the governments of countries in Eastern Europe and the former Soviet Union continue to grapple with the challenges of transition, many significant policy developments have already taken place over the past six years, developments of interest to policymakers and economists alike. Conditions in these Countries in Transition (CITs) have presented a formidable challenge to reformers, a challenge that has been met with bold, rapid action in some cases; timid, tepid response in others.¹ Now, as CITs enter the seventh year of transition, perhaps lessons can be drawn from their experience which may be of value in the future to those countries that will, in time, be in transition from socialist to market-based economic systems.²

Economic reform in CITs has encompassed virtually every sector of the economy. Effective reform of tax policy and tax administration has been widely recognized as vital to the success of the economic transition experiment. The breadth and pace of tax reform has varied significantly, from those countries that have readily adopted western-oriented public institutions such as the Czech Republic, Poland, and Hungary to those that have steadfastly refused to reform their governmental institutions, such as Belarus. There is some evidence now that the scope, speed, and stability of economic policy reforms have significantly influenced the ability of CITs to reestablish economic growth (or limit economic decline) during the first

¹ CIT refers to all previous centrally planned or socialist countries in Central and Eastern Europe and the former Soviet Union.

² This paper does not address the cases of China, Vietnam, Cambodia, the Lao People's Democratic Republic, North Korea, Cuba, or Mongolia. A distinctive feature of this group of countries is that, with the exception of Mongolia, the varying degrees of economic and fiscal reform are taking place in the context of authoritarian regimes.

years of the transition (Barbone and Polackova, 1996; de Melo, Denizer, and Gelb, 1996; Fisher, Sahay and Vegh, 1996).

The goal of this paper is to review the transition experience in tax reform over the past six years, offer a preliminary evaluation of the impact of different approaches to tax reform, and extract lessons from the successes and failures of this experience. The rest of the paper is organized as follows. We start with a brief review of tax systems in socialist planned economies in Section 2, and then move on to an examination of the enduring legacy of tax systems under central planning in Section 3. Many of the failures, problems, and idiosyncrasies of the reform efforts during the transition can be traced to the past, when these tax systems started. In Section 4, we review the two general paradigms for reform that policymakers faced early on in the transition: the adoption wholesale of a western-type, modern tax system or a tax system adapted to transition economies. Many of the current problems in the fiscal arena can be partially attributed to the scope, pace, and stability of the reform process. In Section 5 we offer a short description of the evaluation and current structure of tax systems in CITs. In Section 6 we make a preliminary attempt to quantify the impact of different approaches to tax reform on economic performance of CITs. In Section 7, we summarize the lessons from tax reform in CITs. While no strategy could be comprehensive and infallible, there are lessons to extract from the concrete experiences, relatively better practices and mistakes of CITs for the remaining centrally-planned economies when they in turn embark upon comprehensive market reform.

2. A brief review of the tax system of socialist planned economies

Most centrally planned economies (CPEs) in Eastern Europe imitated the tax system of the Soviet Union (Bakes, 1991). Most tax revenues in CPEs came from profit, turnover, and payroll taxes levied on state-owned enterprises. The private sector was commonly outlawed and property taxes did not exist. The profit tax, by far the most important source of revenue, was used to accumulate and centralize resources and to regulate enterprise income. Tax rates were typically set at the 50 to 60 percent range, but some countries had progressive tax structures with marginal rates as high as 100 percent (Gandhi and Mihaljek, 1992). In reality, the final tax liability of enterprises was often the product of negotiation, and profits were defined, at times, as a fixed percentage of production and distribution expenses. Turnover taxes applied mainly to consumer goods and to some services. They were generally single rate levies differentiated by commodity and sometimes by type of enterprise *and* were used as a residual wedge between retail and producer prices (Tait, 1988; Gandhi and Mihaljek, 1992). Wage and payroll taxes were withheld at the enterprise level with their revenues generally earmarked to fund social expenditures. Individual income taxation was relatively unimportant.³ Allowances or deductions from individual income were negligible or non-existent. Although wage policy was used to influence employee behavior, for this purpose CPEs relied more on other policies such as fringe benefits, access to good supplies and restrictions on residential mobility. The state also played a major role in mediating between enterprises and households through subsidies and transfers, spending at times more than half of gross domestic product (GDP) on this

³ Taxes on income other than enterprise wages and profits were largely schedular taxes falling on wages and salaries earned in the private sector and on professional fees and royalties paid by performing artists, sportsmen, writers, and some small retailers (Gandhi and Mihaljek, 1992).

endeavor. Customs tariffs were generally imposed on goods imported from countries outside the Council of Mutual Economic Assistance (CMEA) but typically represented a small portion of total tax revenues; planning authorities preferred quantitative restrictions over nominal tariffs to regulate imports.

Although tax administration was underdeveloped in CPEs (Tanzi, 1993; Balerowicz and Gelb, 1995), the relatively small number of taxpayers meant that (i) the state could conduct a reportedly 100 percent audit each year to ensure compliance (Kodrzycki and Zolt, 1994); (ii) that restrictions on payment methods and the monopolistic role of the state banks facilitated administration and enforcement; and (iii) that the state could and often did retroactively adjust the structure of taxes and administrative procedures to meet its perceived revenue needs. There was little opposition to otherwise controversial tax measures because the state served a dual role as the owner of enterprises and as the tax collector.

Two major periods may be identified for taxation systems in CPEs. Under “classical socialism,” the taxation system was for the most part just another element of the monetary reflection of the real economy, much like the case for prices and wages (McLure 1990). Under what Kornai (1992) has termed “reform socialism,” for example, after 1968 in Hungary or 1987 in the Soviet Union, governments began to use taxes as indirect levers to collect revenues and influence economic decisions.

3. The legacy of planned socialism

The principals and practices of tax systems under planned socialism have largely determined the path of tax reform during the transition period. The legacy from planned socialism includes:

(i) *An Interventionist Tradition:* Taxes in CPEs were used to raise revenues for public expenditures, support the monetary side of the plan, appropriate surpluses in the role of owner of capital,

and under reform socialism to affect the allocation of resources. The multiple uses of taxes reflected the state's strong intervention and control of society and the economy. This tradition, although at a much lower scale, has lingered during the transition, and the use of tax laws for economic and social engineering has been on the increase in CITs.

(ii) *Customized and Negotiated Taxes*: Tax liabilities in CPEs were frequently negotiated, which meant there was a lack of systematic relationship between statutory tax bases and actual tax liabilities. Negotiated taxes constituted part of the soft-budget constraint facing firms and it virtually protected them from bankruptcy risk (Gray 1991; Kopits and Offerdal, 1994; Kornai, 1986 and 1992; and Owens, 1991). The legacy of customized taxes and negotiated payments has continued to limit the efficacy of tax reform and tax administration efforts in many CITs. State enterprises, and probably, to a lesser extent, newly established and privatized enterprises have continued to lobby the state for individual tax relief, and often they have chosen to accrue tax arrears as a negotiating instrument.

(iii) *Taxes Hidden from the Population and Lack of Tradition with Voluntary Compliance*: In CPEs, the tax system lacked transparency and often enterprises did not know what other enterprises in similar circumstances paid. The population at large were neither aware of taxes nor had any perceptions of tax burdens, since very few individuals actually filed tax returns, paid taxes during transactions, or were aware of turnover taxes or profit taxes (Kodrzycki, 1993; Tanzi, 1994). Implicit taxation in CPEs was almost as common as explicit taxation.⁴ This legacy raised the odds against successful tax reform during

⁴ Enterprises were often allowed to mark up prices and the state, as owner of the enterprise and resources, was able to capture part or all of this surplus (Gandhi and Milhaljek, 1992). Administratively set wages could also be considered as the equivalent of income taxes implicitly set at highly progressive rates (Kopits, 1991).

the transition as the average citizen was explicitly taxed for the first time, creating a propitiatory culture for tax evasion.

(iv) *Absence of Conventional Excess Burdens*: Planned economies for the most part had an absence of conventional tax distortions or excess burdens (McLure, 1991a, b).⁵ Resources and most investments were allocated according to a state-devised plan, and because they were restricted to activities outlined in their founding charter, enterprises were unable to react despite the non-uniform taxation of different economic sectors. In short, taxes in CPEs typically had no distortionary effects because taxpayers could make very few or no decisions affecting them. This legacy made it more difficult than usual for decisionmakers in CITs to understand the excess burden losses or distortions introduced by the tax system in the economy and created the wrong attitude toward tax design.

(v) *Taxes and Income Redistribution*: Although equality in the distribution of income was, at least nominally, a fundamental objective of CPEs, this objective did not figure prominently in CPE tax policies. Planners had more direct ways to affect wages and income, while private ownership of wealth was practically non-existent. However, real incomes were far from being equally distributed. It was *access* to goods and services, not nominal income, that determined an individual's consumption possibilities, and access was always easier for Party members and the Nomenklatura. This legacy appears to have been translated into official pronouncements for the desirability of compressed wage and income structures but in fact little emphasis is being put on explicit distribution objectives for tax reform efforts in CITs.

⁵ The absence of conventional tax distortion in CPEs did not mean, of course, that these countries escaped economic inefficiencies. In addition to poor decisions in the allocation of resources, central planning eroded incentives to innovate, work, and save (Kopits 1991; and Kornai 1990).

(vi) *Undeveloped Tax Administration*: A conspicuous feature of tax systems in CPEs was an unsophisticated tax administration. The core of tax administration were local offices primarily engaged in cash management (Tanzi, 1991). Compliance was ensured because the tax inspector could track cash flows of economic agents through the state banking system. Administratively set prices and wages also facilitated audits and the centralization of economic activity allowed tax administrators to focus primarily on a small number of large enterprises. This tradition of unsophisticated tax administration left CITs dramatically unprepared to enforce tax collection in a market economy with a manifold increase in the number of taxpayers, the abolition of the official payments system, and other institutional changes.

(vii) *Public Distrust of Government Institutions*: The failure of CPEs to raise general living standards and the privileged status of those in power bred widespread cynicism among the population while at the same time the unofficial or underground economy was growing substantially.⁶ The legacy of corrupt governance and the significance of the underground economy left fertile ground for tax evasion in CITs (Ickes and Slemrod, 1991; Newcity, 1991).

4. The general direction for reform

The transition to a market economy raised the fundamental question of what type of tax structure should be adopted. The two basic choices were, first, the adoption of a modern tax system patterned after those in market economies in a “big-bang” move, and second, adoption of a tax system adaptable to

⁶ See Koryagina (1990).

transition economies in a more evolutionary approach that internalized administrative and institutional constraints.⁷

Early enthusiasm among CITs for adopting a modern tax system like those in western Europe or in North America was doused with warnings from international experts about the potential risks of adopting this strategy (for example, McLure, 1991b; and Tanzi, 1992, 1993). The risks often mentioned included the following: first, some western nations also have poor tax policies; second, western economies differed considerably from those in countries in transition; third, the institutional framework, such as accounting rules, of western countries were very different from those in CITs; fourth, western countries had much more developed tax administrations than CITs.

The economic environment at the early stages of the transition, characterized by rampant inflation and industrial decline was hardly conducive to radical reform. There were important institutional constraints, such as the necessary reduction of the role of the state and the decline in importance of more easily monitored state-owned enterprises. The most important constraint for CITs early on was a tax administration system riddled with institutional weaknesses and hardly capable of enforcing taxes in the free market setting. The weakness of tax administration systems was aggravated by understaffed and undeveloped custom services, and by the lack of modern business accounting standards and invoicing practices. The effectiveness in revenue collections was also affected by the allegiance of regional and local tax offices of the new national tax administrations to the local authorities who had an interest in protecting local enterprises, and to the collapse of CMEA. These constraints tipped the expert advice in favor of an

⁷ For a discussion of the strategies and problems related to transitioning fiscal and economic policy, see Shome and Escolano (1993), OECD (1991a, b), Tanzi (1992), and Go (1994).

evolutionary and country-specific tax reform strategy for transitional economies. Ignoring the transitional environment would have only exacerbated the anticipated problems in revenue performance. (Hussain and Stern, 1993; Kopits and Offerdal, 1994; McLure, 1991b; Owens, 1991; Tanzi and Shome, 1993; Shome and Escolano, 1993). On the other hand, there was not much pressure to harmonize tax systems across CITs, with the exception of the VAT in CIS countries,⁸ as discussed below. External advice actually emphasized the need to develop tax systems that adapted to meet the particular needs and peculiarities of *each* country in transition (Bird, 1992; Bogetic and Hillman, 1994; McLure 1995a, b).

Even though there was general consensus on the desirability of a more evolutionary approach to tax reform in CITs, this approach was not without risks. A slow, more evolutionary approach to tax reform could have made comprehensive tax reform more difficult to implement in the future as vested interests would have emerged with power to slow down or block fundamental reform. In addition, continuous tax reform would have deprived CITs of the stability and certainty needed to stimulate domestic entrepreneurship and to attract foreign investors. In reality, both of these risks materialized to different degrees in many CITs, as is discussed below.

Concerning the substance of a transition or interim tax structure, foreign expert advice generally internalized the constraints and limitations present in the transition. Emphasis was placed on the adoption of taxes that could be enforced (Ickes and Slemrod, 1991) and those with breadth to reduce the volatility of tax revenues (Cnossen, 1991; Hussain and Stern, 1993; Kornai, 1990; McClure, 1991a; McKinnon, 1991; Shome and Escolano, 1993). The unpreparedness of tax administration systems in CITs also called

⁸ CIS stands for Commonwealth of Independent States which comprises all former Soviet Union republics with the exception of the Baltic counties.

for particularly cautious approaches to those areas where tax policy and tax administration overlapped and for elevating the status of some tax administration issues by addressing them in the tax law (Cnossen, 1991; Ickes and Slemrod, 1991; McLure, 1995a; and Tanzi, 1993). The policy advice coincided, to a large extent, on the early introduction of a VAT and excises, the elimination of export taxes and the lowering of import taxes, and the delayed introduction of a modern western-style global income tax on individuals.⁹ For individual income taxation, the advice was to continue using schedular taxes. There was less consensus on what form of corporate income taxation should have been introduced and how much CITs should have relied on levies on international transactions. In addition, little attention was paid to how to deal with the effects of inflation in the measurement of income from capital (McLure 1991c).

Did CITs opt for interim tax systems better adapted to their constraints rather than putting into place some carbon-copy of a model western tax system? Although a variety of approaches were used (some of which at times came close to transplanting western tax systems), for the most part, CITs embarked on a reform process that explicitly recognized at least some of the constraints they were facing. However, even though tax experts were unanimous in giving priority to the modernization of the tax administration and to the introduction of modern accounting practices, in reality, most CITs focused on tax policy reform, and gave low priority to the reforms of the accounting system and the modernization of tax administration.

⁹ This advice on the substance of tax reform reflected lessons learned in the widespread reform process in both western and developing countries over the last two decades. See Martinez-Vazquez and McNab (1997).

5. Current systems of taxation

The process of tax reform, which is different in every country, tends to impact the choice of tax system. CITs are not an exception in this respect. In this section we review some of the peculiarities of the process of tax reform in CITs, describe the general features of the tax structures adopted so far in CITs, and examine the current status of tax administration and enforcement issues.

(i) *The Process of Tax Reform*: Besides the legacy of planned socialism, several additional factors have complicated the process of tax reform in CITs. Tax reform in CITs was initially hampered by finance ministries' difficulty in asserting their views (Tait, 1988). This problem was solved slowly as the ministries of finance became more dominant protagonists of fiscal policy. In addition, tax reform in CITs necessarily involved an increase in perceived (if not effective) tax effort, since in CPEs, as we saw, most taxes were not visible in any way to taxpayers. This made it harder for governments to win political and popular support for tax reform. Last, passing new legislation and enforcing it was made more difficult because of the newfound confrontation between government and state enterprises, who earlier had acted as partners, and the uncertainty among state institutions regarding who had the rights or legal ownership of particular revenue sources and assets such as natural resources.

(ii) *Direct Taxation*: At the present time, all CITs have the three pillars of a modern system of direct taxation: an enterprise profit tax, an individual income tax, and a payroll or social security tax.

Enterprise Profit Tax. Hungary and Poland were the first two countries to reform the Soviet-inspired enterprise profit tax in 1989. The process of reform for this tax in CITs has been slow and

tortuous and often has not produced desirable results as judged by standard principles of tax policy.¹⁰ To be fair, the outcomes also reflect the fact that the taxation of enterprise profits raises an array of complex issues for which there are no best practice or standard answers. Within a diversity of approaches, the most important difference with current western tax systems has been the CITs' predisposition early in the transition to use the tax code to promote or guide certain types of investment activities either through tax incentives and holidays or through differential tax rates, although this trend has moderated in more recent times (OECD, 1995b).

The general rates of the enterprise profit tax are moderate and often below those in western tax systems. Out of 25 CITs, five have a rate of 25 percent and five others have a rate of 30 percent. The maximum rate is 50 percent in Tajikistan, while Russia's current general rate is 35 percent. These represent significant changes from the enterprise profit taxes in CPEs which had a variety of multiple rates as high as 85 percent. The trend over the past several years in most CITs has been toward lower tax rates.

The calculation of the tax base of the enterprise profit tax in CITs has undergone profound transformations. Early in that transition, it was common in many CITs to limit all kinds of deductions from enterprise revenues including wages, capital depreciation and interest. For these reasons the tax was known in countries, such as Russia, as the *enterprise income* (rather than profit) *tax*. Most CITs currently allow the deduction of costs incurred in the generation of taxable income. However, some CITs still disallow or limit the deduction of conventional expenses in western tax systems such as interest on long-term loans,

¹⁰ See, for example, McLure (1995b) for a critical look at the enterprise profit taxes of Poland, Hungary, and the Czech Republic.

certain labor costs, expenses in research and development, expenses in environmental protection, or advertising.

The norm among CITs is to allow the carry-forward of losses for a period of 3 to 5 years but none of the CIT enterprise profit taxes provides for the carry-back of losses.¹¹ The most common methods of depreciation allowed in CITs are straight-line and declining balance methods at historic costs with no adjustments for inflation.¹²

Many of the enterprise profit taxes in CITs remain saddled with tax incentives and holidays and special treatment provisions which tend to be more generous for foreign enterprises. The wide range of incentives granted to all enterprises includes reinvestment allowances as a share of profits (at times up to 100 percent¹³), investments in particular sectors (most often agricultural production, but also construction and mineral extraction), and investments in particular geographic areas. Often these incentives are negotiated and granted at the discretion of the tax and economic authorities.¹⁴ But, in fact, the worst may be over. During the past years in several CITs there has been a significant reduction in scope and level of

¹¹ In some countries, such as in the Central Asia group, carry-forward provisions are limited to joint foreign ventures, and out of 25 countries, five have no carry-forward provision.

¹² See Shome and Escolano (1993) for a discussion of early depreciation measures, at times rather unconventional, in the Central Asian CITs. McLure (1995a) reports that Kazakhstan adopted a pooled asset account system for depreciation.

¹³ Countries with this type of provision include Estonia, Georgia, Russia, Serbia, Slovenia, Kyrgyzstan, Tajikistan, and Uzbekistan.

¹⁴ Up to 1995, presidential decrees were often used in the Russian Federation to grant tax benefits to entire sectors (e.g., the energy sector) and specific individual enterprises (e.g., the Zil automobile company in Moscow) (OECD, 1995a).

tax incentives granted through the enterprise profit tax¹⁵ and some CITs have eliminated all special incentives exclusively designed for foreign investors.¹⁶

Excess Wage Taxes: Excess wage taxes (EWTs) of various forms have been common levies peculiar to CITs.¹⁷ These EWTs were introduced for a variety of reasons, such as preventing managers from decapitalizing the firm by paying excessive wages, or limiting wage disparities.

On the whole, EWTs have been poor solutions to the core structural problems of eliminating labor management and imposing stricter budget constraints on enterprises (McLure, 1991a), and they also tend to discourage innovation and productivity growth (Shome and Escolano, 1993 and Jackman, 1994). On the plus side, EWTs are relatively easy to administer and can generate significant revenues by widening the base of the standard enterprise profits tax.¹⁸ Countries that still continue to use an EWT have been generally less advanced in the privatization of the state enterprise sector.

Personal Income Tax: First in line for the reform of this tax were Hungary in 1988 and Poland in 1992. Most of the other CITs reformed theirs in 1993 and 1994.¹⁹ As in the case of most income taxes

¹⁵ Examples are Estonia, Romania, and, to a lesser extent, Slovenia.

¹⁶ This has been the case in Ukraine, Latvia, Slovak Republic, Bulgaria, Czech Republic and for the most part Kazakhstan.

¹⁷ See Tait and Erbas (1995) and Flanagan (1992). Many CITs have experimented with other forms of tax-based income policies to control the internal wage bill of state enterprises.

¹⁸ An EWT in combination with the standard profit tax can approximate the base of the VAT levied upon the full income of the enterprise. Tanzi (1991) makes this observation with respect to the Russian EWT, which was repealed in 1996.

¹⁹ The inspiration for the new legislation came from multiple sources, not the least of which is the *Basic World Tax Code* by Hussey and Lubick (1992).

in western and developing countries, CITs have adopted neither a full income tax base nor a consumption base, but rather a hybrid base (McLure and Zodrow, 1996; McLure, 1992).²⁰ The goal of most CITs has been to adopt a global personal income tax similar to that existing in most OECD countries. However, CITs' lack of well developed tax administrations calls for relying instead on a schedular structure of income taxes.²¹

The typical base of the individual income tax in CITs includes all types of labor and employment income, and there is an almost universal attempt to include in the base fringe benefits, bonuses, allowances and other forms of non-cash income. These latter forms of income tend to be more common in transition economies than in market economies.²² Practically all CITs exempt income from pensions,²³ many exempt interest income, and fewer of them exempt dividends and capital gains from the sale of private property. Most CITs allow personal and dependent deductions in the individual income tax.

²⁰ To the extent that a consumption-based income tax provides more incentives to savings and investment, the choice of a consumption base would be more desirable in CITs because of their much higher needs for national savings and capital accumulation.

²¹ This has been a repeated prescription for income tax reform in CITs. See, for example McLure (1991a) and Tanzi (1991). On the other hand, many CITs also use schedular final withholding taxes for salaried employees who have no other sources of income and schedular final withholding taxes for several forms of capital income, when these are not exempt.

²² There has been an incentive during the transition to switch compensation from money wages to fringe benefits because of the high burdens on labor income implied by "excess wage taxes" and rather steep payroll and social security taxes. These forms of compensation are notoriously hard to tax. One way to ensure wider taxation of fringe benefits, to tax them at the company level, has been tried only by Hungary.

²³ However, it is common not to allow as a deduction the contributions to pensions or the payroll taxes paid by employees.

Most CITs have a progressive tax rate schedule. However, there is a wide variety of rate structures ranging from 15 brackets in Romania and 8 in Bulgaria to a single rate in Estonia and two in Croatia and Latvia. The most common top marginal rate in CITs is 40 percent, but it is as high as 60 percent in Romania. The need to maintain a close relationship between the top individual rate and the company rate is not respected in many CITs.²⁴ None of the CITs has explicit adjustments for inflation in the individual income tax, although about one-third of them define tax brackets in terms of minimum salaries or personal allowances which may be adjusted for inflation.

Payroll and Social Security Taxes: Payroll taxes or social security contributions are invariably high in CITs, even when compared to those prevalent in OECD countries (Tanzi, 1994). These high rates may be introducing anti-labor biases in the choice of technology and may be hurting CITs' international competitiveness. Current reform efforts for the pension, disability, health insurance, and unemployment compensation systems strive to reduce contribution rates.

Currently, all CIS countries, and the Baltics, still have social security systems that are 100 percent, or near that, employer financed. Most Central European CITs have also introduced employee contributions. This latter approach provides more transparency, may get employees more interested in the overall management of the social security funds, and also offers the possibility of tailoring contributions and benefits to individual circumstances.

²⁴ The issue of integration of enterprise and individual income taxes to avoid the double taxation of enterprise income receives in CITs a variety of approaches not different from those used in western countries including the "classical system" and relief by lower rates or exemption of dividends.

(iii) *VAT and Other Indirect Taxes*: The most immediate task in the area of indirect taxation was to replace the complex turnover taxes prevalent in the previous regime. The basic choice was between a single stage retail sales tax and a conventional invoice-credit value-added tax.²⁵ Many CITs opted for the adoption of VAT early in the transition. However, several CITs used an intermediate strategy of simplifying and refining their existing turnover taxes for a number of years, in preparation for the introduction of a VAT. Hungary, Russia and the rest of the CIS countries went cold turkey from turnover taxes to a VAT. All CITs have also introduced excises and taxes on international trade.

Value-added Tax (VAT): By now all CITs except four (Croatia, Serbia, Slovenia, and Albania) have introduced a VAT. Two basic models were originally followed. The first is the Soviet model, introduced December 6, 1991, which was adopted in all CIS countries.²⁶ The second is the European or the EU model which was adopted, with variations, by the rest of the Central and Eastern Europe CITs. In more recent times many CIS countries have been converting to the EU model.²⁷

On the plus side, the Soviet model VAT had a single rate, albeit high at 28 percent, and it had a fairly broad base covering most goods and services.²⁸ On the minus side, the Soviet model VAT presented several significant problems. First, the accounting of tax liabilities from sales was on a cash basis, which

²⁵ These issues are extensively discussed in Shome and Escolano (1993) and Summers and Sunley (1995).

²⁶ The VAT systems originally adopted in Russia and the rest of the CIS are reviewed in Summers and Sunley (1995) and Shome and Escolano (1993).

²⁷ See International Bureau for Fiscal Documentation (1996).

²⁸ The choice of this high rate of 28 percent was driven by the short-term objective of matching the revenues collected with the old turnover tax.

is incompatible with the effective application of the invoice-credit system. Second, the credit-invoice method was only used for calculating tax liabilities at the manufacturing level. Liabilities at the wholesale and retail levels, and in most service sectors, were calculated using a subtraction method VAT, on the basis of taxpayers' gross margins.²⁹ Third, the original Soviet model VAT denied credits for the VAT paid on capital inputs which destroyed the consumption basis of the VAT. Fourth, the original Soviet model VAT was not applied to imports. Finally, all CIS countries applied the origin method for trade among themselves. Exports within the CIS were treated as domestic sales so they were subject to tax, while imports were exempt from tax.³⁰

Most of these features have been slowly reformed. The only exception is the application of the origin method for trade among CIS countries, but here also some countries (e.g., Kazakstan) are breaking ranks. However, the process of reform has been uneven. Recent reforms have seen a significant increase in the number exemptions and special treatments across most of the CIS countries, leading to a significant narrowing of the tax base. However, all CITs in this group have kept a single rate for the VAT, except for Russia which applies a lower rate of 10 percent to medicines and basic foods. All these countries, but two, also have the same VAT rate of 20 percent.³¹

The rest of CITs (other than CIS countries) adopted a European model VAT. The desire to join the EU, it appears, played an important role in Hungary's decision to introduce a VAT in 1988. Next in

²⁹ Belarus used a subtraction method VAT at all levels (Bird, 1995).

³⁰ A destination method was used for trade outside the CIS.

³¹ The exceptions at the present time are Georgia with a rate of 10 percent and Uzbekistan with a rate of 17 percent.

line were Poland and Romania which introduced similar VATs in the summer of 1993. Most of the countries in this group have adopted two rates for the VAT (Czech Republic, Hungary, Romania, Slovak Republic and Lithuania) or a single rate (Bulgaria, Estonia and Latvia). The exception is Poland which has three rates. The top tax rates for the VAT in this group of CITs tend to be higher than those in western VATs. Because many of the Central Europe CITs have a lower VAT tax rate for certain commodities, such as food and medicines, the list of full exemptions is generally smaller than for the VAT in CIS countries. The trend in Central Europe CITs has been toward expanding the tax base by reducing exemptions, especially for services. All CITs in this group use a zero-rate for exports and have extended the coverage of the VAT to the retail level using the invoice method. Unlike CITs in the CIS group, all VATs in Central European CITs have a well defined limit (an absolute money amount) for the threshold or minimum level of business activity under which businesses are not required to register under the VAT.

Excise taxes: Most CITs have introduced separate western-type excise taxes on tobacco, alcoholic beverages, and petroleum products. In some CITs the list of excisable commodities is augmented by several “luxury goods.” This category, not surprisingly, varies across countries. There is also a variety of rates, and contraband also appears, not surprisingly, to be on the rise.

Customs duties: Customs duties were not an important part of the revenue systems of planned socialist economies if they existed at all. At the present time, all CITs have adopted import duties. The trend in Central and Eastern Europe CITs has been to introduce modestly protective tariffs with low rate dispersion. The norm among CITs that are part of the CIS has been to put into place higher tariff rates with wider dispersion, in response to both pressures for protecting domestic activities and for finding additional sources of tax revenue.

(iv) *The Modernization and Reform of Tax Administration*: Most CIT governments have adopted western-style tax structures with relative ease, yet have struggled with low rates of revenue mobilization and increasing rates of tax evasion. It has slowly become clear that whether or not the tax reform effort ultimately succeeds in CITs will depend upon the upgrading of the tax administration system. Poor tax administration can be partly blamed for the poor revenue performances by CITs. Tax revenues in Central and Eastern Europe CITs plunged in years immediately following early reforms (Go, 1994). The Baltic countries, Russia, and the rest of the CIS also experienced a significant deterioration of tax revenues in real terms and for most of them also as a percent of GDP since 1991 (Citrin and Lahiri, 1995 and Hemming et al., 1995).

However, the decline in revenue performance can also be explained by economic factors, mainly by the collapse of economic activity in the traditional sectors of the economy, and by changes in the tax structure itself. Specific economic features of transition economies, high rates of inflation and the relatively greater importance in the economy of traditionally exempt commodities, may have also played a role in the poor revenue performance.

The practice of tax policy reform has also had a negative impact on performance. A commonly aired criticism of tax policy in CITs has been its rapid change and instability (McLure et al., 1997; Khankevich 1996; Bahl and Wallich, 1995; Bogetic and Hillman, 1994). The scope and frequency of changes to the tax system cannot be accurately measured by main reforms. Frequently, decrees, administrative orders and instructions are used to modify the tax code.³² Rapid policy changes have

³² Khankevich (1996) reports 10 major structural changes and over 100 modifications to the Belarusian tax system between 1992 and 1996.

confused administrators and taxpayers alike, have led to either perceived or real opportunities for tax evasion and avoidance, and probably have discouraged investment, especially by foreign companies (Riordan and McLure, 1993). The practice of tax policy reform has also been at fault in CITs for introducing substantial tax changes, such as a new VAT, with little or no preparation and education of tax administrators and taxpayers. A different type of policy in CITs impinging on the effectiveness of tax administration is the emerging use of “tax offsets” by which government agencies pay for their purchases with tax exemptions, which enterprises may then submit in lieu of cash in the settlement of their tax liability.³³

The overall performance of tax systems in CITs has been undermined by growing tax evasion. No formal studies, to our knowledge, exist on the extent and level of evasion in CITs. However, an increasing number of informal estimates seem to confirm that it is considerable.³⁴ The existence of widespread tax evasion is also confirmed in a number of taxpayer surveys.³⁵ Several other factors appear to be contributing to tax evasion. Compliance costs tend to be much higher in CITs than in western countries. These higher compliance costs take a variety of forms: taxpayers having to wait in line for a long time to pay their taxes, forms or instructions routinely not being available, or laws being complex and vague and

³³ In Russia during early 1996 a sharp increase in the fiscal deficit occurred as over 50 percent of enterprises used tax offsets to settle the tax accounts in June and July (Ministry of Finance of the Russian Federation, 1996).

³⁴ The Russian Federation Ministry of Finance report estimated that the compliance rates for the VAT and enterprise profit tax fluctuated between 50 and 60 percent in 1995-96. In Latvia it has been estimated that the informal economy outside the tax net represents between 30 and 50 percent of all economic activity (Karnite and Dovladbekova, 1995).

³⁵ See McLure (1995b) for surveys in Poland, Hungary, and the Czech Republic, and de Melo and Ofer (1994) for Russia.

continuously changing. Corruption and bribery of tax officials, made easier by low wages, is widely believed to be a growing source of evasion in some CITs. Corrupt practices are adding to the distrust of the state and the lack of a tradition of voluntary compliance in CITs (Kornai, 1990; Tanzi, 1994; Bogetic and Hillman, 1994; Summers and Sunley 1995; McLure, 1995b).

The problems of tax administration are also technical. Despite considerable international technical assistance to modernize tax administration, significant problems do remain in most CITs. These problems cover the entire spectrum but their seriousness varies among CITs. In Russia and the rest of the CIS countries, the central tax administrations remain weak and the organizational structure is by type of taxpayer (e.g. individuals and enterprises) or by type of tax (e.g., VAT), rather than by functions (e.g., registration, collection and audit).

Several tax administration problems have taken prominence over the past six years. First, tax arrears represent a constant or increasing problem in many CITs. There are multiple causes for these arrears, including the existence of governmental arrears with enterprises and the bankrupt state of many enterprises. Second, most tax administrations have no ability to conduct full field audits or use third-party information, while audit plans and audit selection programs are rare. Third, taxpayer services remain incipient or non-existent. Fourth, most tax administrations have inadequate resources, which translates into the inability to retain skilled personnel and build adequate information systems.

The transition to market economies and the reform of other areas of the public sector have presented tax administrations in CITs with several additional dilemmas. The first is whether or not to create separate regional and local government tax administrations. Tax administration used to be a local and regional function in most CPEs. Early in the transition, most CITs nationalized and centralized tax services,

although in practice, if not *de jure*, the system of dual subordination, where tax administrators answered to central or federal authorities *and* to local authorities, has remained in many CITs.³⁶ This has created problems for the central authorities in some cases, when local governments are able to pressure tax administrators to ensure that local governments are the first to receive shared revenues,³⁷ or to go easy on enterprises deemed important by the local authorities. A different view, and often a complaint of local and regional officials, is that the national tax service has much less of an incentive to allocate scarce resources to the collection of local taxes.³⁸

Second, it has been quite common in CITs to create a tax police as an organization parallel to the tax administration, charged with the investigation of tax fraud but also of other illegal activities such as illicit hard currency dealings.³⁹ Although there is a strong need for improved tax enforcement, the tax police is duplicating many of the regular tax administration functions and it has contributed to the perception of arbitrary and harsh enforcement. The concern is that this heavy-handed approach may actually reduce voluntary compliance given the traditional lack of trust in government institutions. The third dilemma is whether or not to entrust the regular tax administration with the collection of social security contributions.

³⁶ There are several reasons for this, including the fact that local authorities may provide housing and other services to local tax administrators.

³⁷ In Russia and other CIS countries, taxpayers still write separate checks to each level of government sharing revenues of a particular tax. The practice endures because subnational governments mistrust the central government's willingness and ability to hand over funds once it has them.

³⁸ These issues have been discussed frequently in the literature on intergovernmental fiscal relations in CITs. See Bird, 1995; McLure et al., 1997; and Wallich 1994.

³⁹ In some CITs this organization has been staffed by the former secret police as part of an entirely separate organization or attached to the tax administration but with separate status and rules and regulations (Bird and Tsiopolous, 1994 and Martinez-Vazquez, 1995).

This issue has gained relevance because many CITs are also struggling with decreasing compliance rates for social security contributions or payroll taxes. The self-enforcement element for social security contributions expected from the link between contributions and benefits is weak in many CITs. Benefits may not be related to contributions or, when they are, the link involves only the last years of employment. The argument for the consolidation of the two tax administrations is the potential savings in the resources needed for training in modern collection and audit techniques and the fact that both administrations deal with the same taxpayers. The argument against consolidation is that the tax administration may not always have the same incentives to collect social security contributions as to collect taxes.

6. Tax reform strategy and economic performance

The theory of public finance and past experience from developed and developing countries show that the choices of tax structure and tax reform strategy can have significant effects on the overall economic performance of a country. For example, too rapid changes in the tax laws, high rates, and limits on the deduction of normal costs of production will tend to discourage domestic and foreign investment. Given the diversity in tax reform strategies and resulting tax structures among CITs, this section explores whether or not it is possible at this time to determine an empirical link between CITs' fiscal policies and general measures of economic performance.

To investigate this question, we construct an index of tax reform effectiveness for 24 CITs covering the transitional period from 1989 through 1996. The goal is to explore whether this index of tax reform is systematically related to a variety of measures of economic performance. The index, while subjective, can provide some insight into the impact of tax reform on the process of economic transition. Because of both

data limitations and the subjectivity of the index, all findings in this section should be interpreted with caution and only as suggestive of general trends and patterns.

The overall tax reform index is comprised of six measures of tax reform effectiveness which are given scores ranging from zero, for most effective to 3, for least effective. The six areas are the following:

- C *Timing of Tax Reform* - the period of time from the start of the transitional process of the implementation of a tax reform program that included a modern VAT
- C *Preparation for Tax Reform* - the average period of time allotted for preparation of legislation and preparation for implementation.
- C *Stability of the Tax System* - frequency of changes in the tax laws since the initial reform program.
- C *High Tax Rates* - positive deviation of the maximum rates for the primary revenue sources from the average maximum rate for the primary revenue sources of all CITs.
- C *Prevalence of Tax Holidays* - significance of tax holidays and special treatments.
- C *Complexity* - number of Enterprise Profit Tax brackets.

The scores from the six areas are used to construct first a “cumulative reform index” (CRI) which is the sum of all six scores, and second, an “overall reform index” (ORI) which assigns a single score from 0 to 3 to each country based on the CRI total score. The ORI is used to group CITs in four categories from “advanced tax reformers” to “slow tax reformers”, as shown in Table 1.

The simple correlation coefficients between our index of tax reform effectiveness (CRI), and the set of other indices of economic reform in CITs are presented in Table 2. These indices appear in de Melo, Denizer, and Gelb (1996) and EBRD (1996), and cover a wide spectrum of economic reform issues other than tax reform. The high statistical significance and the right sign of the correlation coefficients provide justification for our own index. But more importantly, the correlation coefficients show that CITs that have

adopted more effective tax reform strategies have not done that in isolation of other important pieces of economic reform. Effective tax reform in CITs appears to have been accompanied by overall liberalization, privatization, more competition and effectiveness of legislation fostering investment.

The possible empirical linkage in CITs between tax reform strategy and economic performance is explored in Table 1, where we list several economic indicators side by side with the tax reform indices. The general observation is that with minor exceptions “advanced” and “high intermediate” tax reform CITs appear to have performed significantly better than the “low intermediate” and “slow” tax reform in CITS. However, this observation should be considered only as tentative given that it is only based, as discussed below, on averages of groups and on partial correlation coefficients. After all, tax reform is only one among many determinants of the economic performance indices included in Table 1, and our conclusions could be different in the context of multivariate tests. The latter are beyond the scope of this paper, but we believe that the partial analysis is can still provide some useful information on the impact of tax reform in CITs.

Foreign direct investment as percent of GDP generally is significantly higher in the advanced and high intermediate reformers relative to the low intermediate and slow tax reform CITs. The correlation coefficient between the tax reform index (CRI) and foreign direct investment as percent of GDP in 1995 takes the expected sign and is statistically significant at the 10 percent level. Note, however, that some exceptions to the general pattern exist. For example, Croatia has been a fast tax reformer but little foreign direct investment has come in, probably due to the armed conflict during the past years. On the other hand, Azerbaijan has been a slow tax reformer but it has experienced foreign direct investment flows higher than some advanced reformers. This is not a surprise as there are other, perhaps more

important, determinants of foreign direct investment besides taxes. A strong pattern also seems to exist between the index for tax reform and the share of government expenditures in GDP. Advanced and high intermediate tax reform CITs have been quicker to reduce the size of the public sector. Low intermediate and slow tax reform CITs have maintained a larger public sector presence in the economy. The correlation coefficient between the index of tax reform and the share of government expenditures in GDP takes the right sign and is statistically significant at least at the 5 percent level. The overall performance of CIT economies as measured by average annual inflation and growth in GDP also appear to be on average better among advanced and high intermediate tax reformers. The average rate of fall in output and the inflation is higher for low intermediate and slow tax reformers. However, the correlation coefficients of the tax reform index with average inflation and average GDP change are not statistically significant.

The final measure of economic performance in Table 1 is the overall public sector fiscal balance as percent of GDP for 1994, the most recent year for which data were available on a consistent basis. There is a marked pattern of smaller deficits among advanced tax reform CITs and large deficit among slow tax reformers. The correlation coefficient between the overall public sector fiscal balance and the index for tax reform takes the right sign and is statistically significant.

7. Lessons from the transition

The past six years of fiscal reform in CITs have provided a remarkable laboratory in tax policy design and practice. The diversity of countries involved makes it hard to extract general lessons from this experiment. The strategies and profiles of fiscal reform in CITs differ considerably. These profiles range from the case of Estonia, for example, which adopted a clean modern tax structure in 1993, with wide

bases and single rates and has barely changed since then, to the case of Belarus, for example, which has not changed the substance of the tax system it inherited from the Soviet Union and yet has undertaken a myriad of continuous changes in the tax laws.

Despite the caveat on the diversity of experiences, several general lessons emerge from CIT experiences with fiscal reform. First, history and background, or the initial departing point matters significantly. The legacy of the philosophy and practices of tax systems under centralized planning has played a significant role in all CITs. There can be no good understanding of the current problems of tax systems in CITs without deep knowledge of the institutional and behavioral legacies inherited from the previous regimes. This reconfirms the proposition well known to tax practitioners that tax reform never takes place on a clean slate. The traditional attachment of tax administrators to regional and local authorities makes many of the new CIT national tax administrations very different institutions from the centralized tax administrations in western countries. National interests or a national perspective in many CIT tax administrations are still secondary to local ones. Tax systems in centrally planned economies had markedly different functions from those in market economies; they simply focused on cash management and balancing demand with available supply. These tax systems dealt with a relatively small number of state enterprises with a focus on heavy industry, and used customized, discriminatory and at times retroactive measures to promote priority areas in the central plan and to penalize economic activity that was viewed as socially unproductive. There was much less focus on revenue adequacy since governments had the ability to syphon out profits from state enterprises in a variety of ways other than taxes and they were free to set wages. Tax administration in centrally planned economies was made easy by the pervasive presence of the state in the economy. Tax administrators could use the state banking system to track all sorts of

payments so that tax enforcement was only a question of applying proper accounting procedures. At the same time, tax administrators had extraordinary powers to negotiate tax liabilities and even to adjust tax rates retroactively. In sum, centrally planned economies had few reasons to develop tax administrations with many of the features existing in western countries. These legacies have shaped many developments over the past six years and have been hard to shake off.

Second, tax systems are as good as their enforcement. Effective tax reform cannot be accomplished in isolation from the current capabilities of the tax administration systems and taxpayers' culture. In retrospect, the most serious mistake CITs collectively made was to focus primarily on modernizing tax policies and relegating tax administration and taxpayer issues to a remote second place. This happened despite the almost universal recommendation from international advisors of giving first priority to the restructuring and modernization of the tax administration systems in CITs. The advice for the most part was not heeded. Because the time required for these efforts to take effect was measured in years, the focus shifted to tax policy reform, albeit in many cases without considering the limited capacity of the tax administration. The results have been in many cases lagging collections and increased tax evasion.

Of late, there has been wide explicit recognition in CITs of the need to improve tax administration systems, but still no priority is generally given to the allocation of resources devoted to this effort. Fundamental problems still remain. Tax administrations in many CITs are still not functionally organized and they lack adequate programs for registration, collection, and auditing. Also lacking are human and physical capital resources to handle the increased number of taxpayers.

Third, tax policy reform needs to assess carefully different options against explicit economic objectives, to be comprehensive, and to be swiftly enacted and left unchanged for some time. In practice,

the experience of most CITs did not meet these standards. A good portion of the tax reform process in CITs has been carried out without an explicit evaluation of how well the different proposals would perform against standard objectives including revenue performance, economic neutrality, tax burden distribution, simplicity, and administrative feasibility. Short-changing the preparation stage led inevitably to ad hoc continuous patching of the system, creating confusion among tax administrators and taxpayers alike and creating uncertainty for domestic and national investors.

Fourth, the right tax design requires a difficult balance between adopting a tax system that, while modern, still takes into account the realities of the transitional environment. In practice, it has proved difficult to strike the right balance of modern institutions adapted to the particular country institutional realities. Those countries that immediately adopted western designed taxes often encountered significant problems because of the incompatibility of these taxes with accounting practices or because of the lack of familiarity of tax administrators and taxpayers with the new taxes.⁴⁰ On the other hand, those countries that tried to adapt the tax system to their unique transitional structures often ran into the problem of continued change under different pressures, bringing more instability and uncertainty into the transition process.

Fifth, it cannot be taken for granted that the lessons on fiscal policy from the past will be internalized. Many CITs appear not to have learned the lessons from their own past or those from western countries on the need for simplicity and economic neutrality. Many CITs have continued their interventionist legacies. Special treatment have led to distortions, abuses, increased compliance and administrative costs, and taxpayer inequities and resentment. CIT tax systems, for the most part, have not

⁴⁰ The adoption of a VAT in Bulgaria is an example.

provided the desired level of stability in tax institutions either. Continuous changes in the tax structure have contributed to increased administrative and compliance costs, facilitated tax evasion and discouraged economic activity, in particular foreign investment. CITs also need to lower compliance costs for taxpayers, by keeping the tax laws simple, and eliminating unnecessary requirements, such as filing balance sheets and income statements every quarter or physically queuing for a long time to pay taxes. On the other hand, early fears on aggressive use of the tax system to accomplish income redistribution objectives have not materialized. Despite their cultural legacy, or perhaps in reaction to it, CIT policies in this area have been moderate.

Sixth, effective and successful tax reform needs to be accompanied by institutional and structural reform throughout the economy. The evidence seems to indicate that CITs which moved quickly to restructure their economies have fared better over the past five years than countries that have been slow to implement reform. Too often, CITs that have been less successful in the tax reform arena adopted a strategy of slow or no reform in other areas of economic policy. These countries also have been slower in modernizing their accounting systems, strengthening and enforcing bankruptcy laws and reforming their entire legal systems. The evidence so far shows significant linkages between tax reform effectiveness and broad measures of economic performance in CITs, and high complementarity between tax reform and other economic policy reforms.

TABLE 1

Tax Reform, Investment, Inflation, and Growth in Countries in Transition

Country	CRI	ORI	Foreign Direct Investment as Percent of 1995 GDP	Average Annual Growth in GDP Deflator 1990-1995	Average Annual Growth in GDP 1989-1994	Government Expenditure as Percent of GDP	Fiscal Balance as Percent of GDP
Advanced Tax Reformers							
Czech Republic	3	0	5.70	18	-2.60	27.6	-0.4
Estonia	3	0	5.00	151	-9.20	50.7	0.5
Latvia	4	0	3.00	149	-13.70	35.0	0.0
Croatia	3	0	0.40	328 ^a	-0.70 ^b	38.7	-2.0
Average	3.25	0.00	3.50	162	-6.60	38.0	-0.5
High Intermediate							
Slovak Republic	5	1	1.10	16	-2.8	53.0	-2.5
Hungary	7	1	10.30	22	-1.0	58.8	-6.5
Lithuania	7	1	1.00	241	-9.7	30.4	-5.3
Poland	7	1	3.10	9	2.4	50.4	-2.5
Kazakstan	8	1	1.30	806	-11.9	23.5	-4.5
Slovenia	8	1	0.90	62 ^a	3.0 ^b	47.5	-0.9
Average	7.00	1.00	3.00	239	-3.3	43.9	-3.7
Low Intermediate							
Bulgaria	10	2	1.10	81	-4.3	44.1	-6.1
Kyrgyz Republic	11	2	0.50	337	-14.7	32.7	-8.4
Turkmenistan	11	2	0.00	1167	-10.6	7.3	-1.1
Ukraine	11	2	0.30	1041	-14.3	51.4	-9.1
Albania	12	2	3.20	76	1.4	41.0	-13.3
Romania	13	2	1.20	158	-1.4	35.6	-3.0
Russia Federation	13	2	0.60	517	-9.8	45.1	-8.8
Tajikistan	13	2	0.80	399	-18.1	38.1	-2.7
Average	11.75	2.00	1.00	472	-9.0	36.9	-6.6

TABLE 1 (cont.)

Country	CRI	ORI	Foreign Direct Investment as Percent of 1995 GDP	Average Annual Growth in GDP Deflator 1990-1995	Average Annual Growth in GDP 1989-1994	Government Expenditure as Percent of GDP	Fiscal Balance as Percent of GDP
Slow Tax Reformers							
Georgia	13	3	0.00	2280	-26.90	24.00	-9.00
Azerbaijan	14	3	3.20	748	-20.20	49.00	-13.00
Armenia	14	3	0.40	897	-21.20	61.00	-24.00
Uzbekistan	14	3	0.50	628	-4.40	45.00	-2.00
Moldova	15	3	1.80	558 ^a	-17.00 ^c	25.90	-8.80
Belarus	17	3	0.10	879	-9.30	38.10	-1.50
Average	14.5	3.00	1.00	998	-16.50	40.50	-9.70
Correlation with ORI (Probability * <i>D</i> * = 0 in Parentheses)			-0.35 (0.08)	0.02 (0.92)	-0.19 (0.35)	-0.41 (0.04)	-0.39 (0.05)

^aIn those cases where the average annual GDP Implicit Deflator growth rate is not available, the average annual CPI growth rate is used.

^bIn those cases where average annual GDP growth 1990-1995 is not available, average annual GDP growth 1993-1994 is used.

^cAverage annual growth in inflation 1993-1994.

SOURCE: *World Development Indicators 1996*, the World Bank.

TABLE 2

Correlation of Cumulative Tax Reform Index With Other Indices of Reform

Stabilization Policy	0.45 ^a (0.02)	Exchange Rate Policy	0.59 ^a (0.01)
Private Sector Share of GDP as of Mid 1996	-0.52 ^a (0.01)	Large Enterprise Privatization	-0.50 ^a (0.01)
Small Enterprise Privatization	-0.57 ^a (0.01)	Competition Policy	-0.65 ^a (0.01)
Enterprise Restructuring	-0.61 ^a (0.01)	Trade and Foreign Exchange System	-0.43 ^a (0.05)
Banking Reform and Interest Rate Liberalization	-0.52 ^a (0.02)	Overall Effectiveness of Laws Fostering Investment	-0.40 ^a (0.05)
Cumulative Liberalization Index	-0.38 ^b (0.07)	Average Liberalization 1993-1994	-0.41 ^b (0.05)

(The probability that $D^* = 0$ is in parentheses.)

^aEBRD (1996). Note that the indices for stabilization policy and exchange rate policy decrease as reform progresses, otherwise all other indices increase as reform progresses.

^bde Melo, Denizer, and Gelb (1996). Note that a higher liberalization index represents a more advanced reform program relative to a lower liberalization index, therefore, a negative correlation is expected.

SOURCE: Author's calculations.

REFERENCES

- Bahl, R. and C. Wallich. 1995. "Intergovernmental Fiscal Relations in the Russian Federation." In R. M. Bird, R. D. Ebel and C. I. Wallich, (eds.), *Decentralization of the Socialist State*. Washington D.C.: The World Bank.
- Bakes, M. 1991. "Tax Reform in Central and Eastern Europe." *Australian Tax Forum* 8(1): 117-128.
- Balcerowicz, L. and A. Gelb. 1995. "Macropolicies in Transition to a Market Economy: A Three-Year Perspective." In M. Bruno and B. Pleskovic (eds.), *Proceedings of the World Bank Annual Conference on Development Economics, 1994*. Washington, D.C.: World Bank.
- Barbone, L., and H. Polackova. 1996. "Public Finances and Economic Transition." *MOCT/MOST* 6:35-61.
- Bird, R. M. 1992. *Tax Policy and Economic Development*. Baltimore and London: The Johns Hopkins University Press.
- _____. 1995. "Indirect Taxes in Belarus: VAT by Subtraction." *Tax Notes International* 2 (9): 589-599.
- Bird, R. M. and T. Tsiopolous. 1994. "Taxation and the Development of Private Enterprise in Belarus." Mimeograph.
- Bogetic, Z. and Hillman, A. L. 1994. "The Tax Base in Transition: The Case of Bulgaria." *The World Bank Policy Research Working Paper* (March), 1267.
- Citrin, D. A. and A. K. Lahiri, eds. 1995. "Policy Experiences and Issues in the Baltics, Russia, and Other Countries of the Former Soviet Union." Occasional Paper #133 (December), International Monetary Fund, Washington D.C.
- Cnossen, S. 1991. "Design of the Value Added Tax: Lessons from Experience." In Javad Khalilzadeh-Shirazi and Anwar Shah (eds.), *Tax Policy in Developing Countries*. Washington D.C.: World Bank.
- de Melo, M., C. Denizer, and A. Gelb. 1996. "Patterns of Transition from Plan to Market." *The World Bank Economic Review* 10 (3):397-424.
- de Melo, M. and G. Ofer. 1994. *Private Service Firms in a Transitional Economy: Findings of a Survey in St. Petersburg*. Washington D.C.: The World Bank.

- EBRD. 1996. *Transition Report*. London: European Bank for Reconstruction and Development.
- Fisher, S., R. Sahay, and C. Vegh. 1996. "Stabilization and Growth in Transitional Economies: The Early Experience." International Monetary Fund Working Paper, WP 96/31. Washington D.C.
- Flanagan, R. J. 1992. "Wages and Wage Policies in Market Economies: Lessons for Central and Eastern Europe." *OECD Economic Studies* 0(18): 105-32.
- Gandhi, V. P. and D. Mihaljek. 1992. "Scope for Reform in Socialist Tax Systems." In V. Tanzi (ed.), *Fiscal Policies in Economies in Transition*. Washington D.C.: International Monetary Foundation.
- Go, D. S. 1994. "External Shocks, Adjustment Policies and Investment in a Developing Economy: Illustrations from a Forward-Looking CGE Model of the Philippines." *Journal of Development Economics* 44(2): 229-61.
- Gray, C. W. 1991. "Tax Systems in the Reforming Socialist Economies of Europe." *Communist Economies and Economic Transformation* 3(1): 63-79.
- Hemming, R., A. Cheasty and A. K. Lahiri. 1995. "The Revenue Decline." In Citrin and A. K. Lahiri (eds.), "Policy Experiences and Issues in the Baltics, Russia, and Other Countries of the Former Soviet Union." Occasional Paper #133 (December), International Monetary Fund, Washington D.C.
- Hussain, A. and N. Stern. 1993. "The Role of the State, Ownership, and Taxation in Transitional Economies." *Economics of Transition* 1(1): 61-87.
- Hussey, W. M. and D. C. Lubick. 1992. *Basic World Tax Code and Commentary: A Project Sponsored by the Harvard University International Tax Program*. Arlington Virginia: Tax Analysts.
- Ickes, B. W. and Slemrod, J. 1991. "Tax Implementation Issues in the Transition from a Planned Economy." Proceedings of the 47th Congress of the International Institute of Public Finance, St. Petersburg, Florida, pp. 384-399.
- International Bureau of Fiscal Documentation. 1996. *Central and East European Tax Directory*. Amsterdam.
- Jackman, R. 1994. "Economic Policy and Employment in the Transition Economies of Central and Eastern Europe: What Have We Learned?" *International Labour Review* 133(3): 327-345.

- Karnite, R. and Il Dovidbekova. 1995. "Institutions of Public Finance in Latvia." Institute of Economics, Latvian Academy of Sciences, Riga.
- Khankevich, L. 1996. "Report: Taxation System: The Republic of Belarus." Mimeograph.
- Kodrzycki, Y. K. 1993. "Tax Reform in Newly Emerging Market Economies." *New England Economic Review* (November/December): 3-17.
- Kodrzycki, Y. K. and E. M. Zolt. 1994. "Tax Issues Arising From Privatization in the Formerly Socialist Countries." *Law and Policy in International Business* 25 (2):609-33.
- Kopits, G. 1991. "Fiscal Reforms in the European Economies in Transition." In OECD, *The Transition to a Market Economy*, Paris.
- Kopits, G. and Offerdal, E. 1994. "Fiscal Policy in Transition Economies: A Major Challenge." *Finance & Development* 31(4): 10-13.
- Kornai J. 1986. "The Soft Budget Constraint." *Kyklos* 39: 3-30.
- _____. 1990. *The Road to a Free Economy: Shifting From a Socialist System, the Case of Hungary*. New York: W. W. Norton & Co.
- _____. 1992. "The Postsocialist Transition and the State: Reflections in the Light of Hungarian Fiscal Problems." *American Economics Review* 82(2): 1-21.
- Martinez-Vazquez, J. 1995. *Croatia: Tax Policy and Administration*. World Bank background report, Washington D.C.: World Bank.
- Martinez-Vazquez, J. and R. McNab. 1997. "Taxation Systems in Transition Economies." Working Paper, School of Policy Studies, Georgia State University, Atlanta GA.
- McKinnon, R. I. 1991. "Financial Control in the Transition from Classical Socialism to a Market Economy." *Journal of Economic Perspectives* 5: 107-122.
- McLure, C. E., Jr. 1990. "Taxation in Centrally Planned Economies and Private Market Economies." Mimeograph. Hoover Institution, Stanford University.
- _____. 1991a. "Tax Policy for Economies in Transition from Socialism." *Tax Notes International* 3 (March): 347-353.
- _____. 1991b. "Tax Policy in Bulgaria." *Bulletin for International Fiscal Documentation* 45(5): 235-247.

- McLure, C. E., Jr. 1991c. "Alternatives for the Taxation of Income from Capital in Reforming Socialist Economies." *Proceedings of the National Tax Association*, Williamsburg, Virginia.
- _____. 1992. "A Simpler Consumption-based Alternative to the Income Tax for Socialist Economies in Transition." *The World Bank Research Observer* 7(2): 221-237.
- _____. 1995a. "New Tax Code Streamlines Kazakh Tax System." *Tax Notes International* 11(2): 69-70.
- _____. 1995b. "Tax Impediments to Business in Three Countries in Transition from Socialism." In C. E. McLure, Jr, A. Senijen, T. Baczko, J. Fiszler and L. Venys (eds.), *Tax Policy in Central Europe*. San Francisco: Institute for Contemporary Studies.
- McLure, C. E., Jr., J. Martinez-Vazquez and Sally Wallace. 1997. "Fiscal Transition in Kazakstan." A Report to the Asian Development Bank.
- McLure, C. E., Jr. and G. R. Zodrow. 1996. "A Hybrid Approach to the Direct Taxation of Consumption." In M. Boskin (ed.), *Frontiers of Tax Reform*. Stanford: Hoover Institution Press, pp. 70-90.
- Ministry of Finance of the Russian Federation. 1996. "Report on Fiscal Policy." Mimeograph.
- Newcity, M. A. 1991. "Tax Considerations in Foreign Trade and Investment in the USSR." *Vanderbilt Journal of Transnational Law* 24(2): 235-267.
- OECD. 1991a. *The Role of Tax Reform in Central and Eastern European Economies* Paris: OECD.
- _____. 1991b. *The Transition to a Market Economy*, Volumes I and II. Paris: OECD.
- _____. 1995a. *OECD Economic Surveys: The Russian Federation 1995*. Paris: OECD.
- _____. 1995b. *Taxation and Foreign Direct Investment*. Paris: OECD.
- Owens, J. 1991. "Financing Public Expenditure: The Role of Tax Reform and the Designing of Tax Systems." In OECD, *The Transition to a Market Economy*, Vol II. Paris: OECD.
- Riordan, J. and C. E. McLure. 1993. "Russia: Tax Aspects of Improving the Investment Climate in Russia." *Bulletin for International Fiscal Documentation* 47 (1): 17-20.
- Shome, P. and Escolano, J. 1993. "The State of Tax Policy in the Central Asian and Transcaucasian Newly Independent States (NIS)." IMF Paper on Policy Analysis and Assessment #3 (July).

- Summers, V. P. and Sunley, E. M. 1995. "An Analysis of Value-added Taxes in Russia and Other Countries of the Former Soviet Union." IMF Working Paper, #95-1 (January).
- Tait, A. A. 1988. *Value Added Tax, International Practice and Problems*. Washington D. C.: International Monetary Fund.
- Tait, A. A. and Erbas, S. N. 1995. *Excess Wages Tax*. IMF Working Paper, #95-17 (February).
- Tanzi, V. 1991. "Tax Reform in Economies of Transition: A Brief Introduction to the Main Issues." IMF Working Paper #23 (March).
- _____. 1992. *Fiscal Policies in Economies of Transition*. Washington D.C.: International Monetary Fund.
- _____. 1993. *The Transition to Market: Studies in Fiscal Reform*. Washington D.C.: International Monetary Fund.
- _____. 1994. "Reforming Public Finances in Economies in Transition." *International Tax and Public Finance* 1: 149-163.
- Tanzi, V. and P. Shome. 1993. "A Primer on Tax Evasion." *International Monetary Fund Staff Papers* 40(4): 807-828.
- Wallich, C. I., ed. 1994. *Russia and the Challenge of Fiscal Federalism*. Washington D. C.: The World Bank.