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Tax Evasion and Economies in Transition: Lessons from Tax Theory

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Contents

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Abstract

This study considers the pervasive tax evasion of transition economies, with particular reference to Russia's tax system. Starting with a survey of theoretical literature on tax evasion and corruption, it argues that, although standard tax theory offers many insights, certain special features of transition economies deserve attention. These include the legacy of socialism resulting in a state willing to exercise discretionary power but possibly lacking credibility and public support, the 'disorganisation' phenomenon that hampers efficient tax administration, and the relationship of restructuring, speed of reform and the tax system. The paper also contains recommendations on reform of the tax system to achieve reasonable deterrence of evasion.

Keywords: Tax evasion, corruption, transition economies, Russia

1 Introduction

During the early years of transition, there was a strong fear that tax evasion and corruption would become severe problems in post-communist economies [see e.g. Tanzi (1993)]. Unfortunately, this is precisely what happened in many countries. In a recent study, Johnson, Kaufmann and Shleifer (1997) present evidence that in 1995 the shadow economies in countries of the Former Soviet Union amounted on average to 34 % of the economy, and 19 % in Central and Eastern Europe. Figures are no more encouraging when it comes to corruption. An EBRD survey (1997) on the extent of corruption among public official gave highest corruption scores for transitional countries among all country grouping.[1] All the Former Soviet Union countries of the study received high scores. The scores for Russia are also in line with those of Transparency International.

Mainstream economics sees corruption as harmful for growth [Bardhan (1997), Tanzi (1998)]. Likewise, it is straightforward to argue that tax evasion has very much the same effects as corruption. By definition, tax evasion hampers tax collection and undermines fiscal policy. This, in turn, detracts from state efforts to implement sound economic development [Burgess and Stern (1993), Budina and van Wijnbergen (1997)]. The Russian government's current problems in tax collection speak volumes in this respect. The IMF, the OECD and many independent observers repeatedly stress that the Russian tax system is complex, unfair and incapable of raising enough revenue to meet its needs. This has lead to the situation where tax evasion is pervasive on the one hand, and the path of government debt unsustainable, on the other. Perhaps establishing a good tax system in a transition economy is difficult, but it is nevertheless necessary.

In the following, we survey the theoretical literature on tax evasion and assess it from a viewpoint of an economy in transition. The paper also contains recommendations for possible reforms of the tax system that achieve reasonable deterrence of evasion. The extensive body of tax theory literature, well presented in e.g. Cowell (1990) and Myles (1995), helps identify the issues important for transitional countries. The role of social norms, attitudes towards the state and inequality are all factors that explain some of the evasion behaviour in transition economies. With deference to some recent insightful papers on optimal taxation under tax evasion, the paper argues the need to fight evasion is likely to be most acute in transition economies. Poor tax administration further complicates the task, as the administrators probably do not wield many of the most powerful tools suggested by tax theory. Therefore, a trade-off between efficiency and administrative shortcomings is a most important concern in policy analysis in these countries. Another area that deserves special attention is the need for a fair and credible tax system that guarantees public support for government action. Here, the perceived effectiveness of public policy and honesty of government officials are important. Although the word ‘corruption’ does not appear in the title of this study, we subscribe to the view that tax evasion and corruption are closely related. Fighting corruption may in fact be one of the most important measures in reducing tax evasion in transition countries. The circumstances in transition countries often coincide with factors that according to theory promote the threat of corruption. We relate discussion on the lessons from tax theory with observations of Russia and its tax system.

We also consider the proper role of tax theory in transition countries. We ask whether tax recommendations based on Western experience and, possibly, standard tax theory developed for industrial countries, are directly applicable to transition economies. Indeed, is there a need for a theory of transition taxation? Newbery and Stern (1988) and Burgess and Stern (1993) discuss such issues in the context of tax reform in developing countries. They broadly conclude that the overall aims in taxation (efficiency, equity) remain the same across countries, and even shorter-term objectives, such as fostering growth by tax incentives, may be deduced from the uniform long-term aims. As opposed to industrial countries, the crucial differences in tax analysis in developing countries are in the constraints on government, e.g. administrative and informational restrictions. Eventually however, Burgess and Stern argue, the tax system should proceed towards the style now prevalent in developed countries.

The present paper takes the view by Burgess and Stern as its starting point for the case of transitional countries as well and discusses in some detail the importance of tax administration as a constraint for tax design. Blanchard and Kremer (1997) observe that economic behaviour under transitional periods is characterised by ‘disorganisation’. The same phenomenon is distinctly present in the public sector in transition countries. Transition requires a thorough re-orientation in the way the government functions. This paper describes some of its implications on tax administration and suggests that disorganisation within the public sector might be more difficult to tackle than in the private sector due to incentive problems.

We further argue there may be features of taxation in transition countries that amount to more than just constraints. One feature is the mixed role of the state inherited from the socialist era. While transition implicitly requires the separation of many economic activities from state control, many traces of an interventionist state attitude towards the economy persist (especially in countries of the former Soviet Union).[2] Meanwhile, the credibility and public support of the government may be very low. Both phenomena tend to increase the willingness to evade taxes and to rely on shadow economy activities. Thus, taxation in transition countries may be based on principles other than welfare maximisation. Like corruption, credibility and fairness deserve special attention in transition countries. The paper discusses instances where an 'ultra-fair' tax reform can reduce traditional efficiency of taxation, thereby complicating tax design in transitional countries. Simple and fair taxation might be necessary, but it is also costly.

A possibly more interesting interaction between transition and taxation is the role of tax instruments in influencing the restructuring of an economy. Subsidies from state to firms are often associated with the problem of soft budget constraint, but as Schaffer (1995) argues, imposing only low level of taxation or tolerating tax arrears and evasion may behave in a same way. This paper sets up a simple example to illustrate how a preference for a slow speed of reform leads to a tax system that allows (to some extent) loss-making firms to operate by enforcing only low levels of taxation and lax tax collection. Similarly, the entire tax systems of transition countries are dependent on the path of restructuring. This refers to the relative shares of various tax forms in total tax collection. These tentative conclusions seem to be consistent with the experiences of Central and Eastern European Countries (whereby restructuring is fast and tax systems quite similar to the Western ones) and from the former Soviet Union (where earlier socialistic style of taxation is more visible and tax evasion higher).

Tax issues in transitional countries have in general received rather limited attention in the earlier literature. The articles in the book edited by Tanzi (1992) provide a good overview of various tax policy issues in these countries. Some of the arguments are highlighted in Tanzi (1993) as well. As cited above, he warns about tax evasion problems in these countries and argues against interventionist policy involving the state squeezing revenues from the firms. He also stresses that simply immediately adopting the Western style of taxation may lead to severe problems in transition countries, as information and administrative capabilities are not sufficiently developed. McLure (1992) concentrates on taxation of firms and suggests that many of the conditions of transition countries argue for cash-flow based profit taxation.[3] Newbery (1997) applies the tools of standard optimal tax analysis, initiated by Diamond and Mirrlees (1971), to discuss how optimal linear income and commodity taxes respond in a transitional period. He analyses a situation where before-tax wage-income dispersion increases and at the same time inequality aversion in the society decreases. Lopez–Claros and Alexashenko (1998) discuss at a general level the changes needed to Russian tax and expenditure policy. None of the studies mentioned above, however, concentrates specifically on tax evasion issues. The exceptions are rare. Johnson et al (1997) develop a model to explain the impact of tax and public spending policies on the size of the shadow economy in a country. They test the predictions of the model on data from CEE and CIS countries. Gaddy and Ickes (1998) provide an intriguing treatment of the reasons for the bifurcation of the Russian economy into official and unofficial sectors, which emphasises the weaknesses of the present tax structure. Yakovlev (1998) describes various cases of 'black money' tax evasion by Russian firms. The present paper therefore differs from much of the literature mentioned above. It draws extensively on the standard optimal taxation literature and assesses tax evasion in transitional countries in terms of features that are arguably transition-specific.

The paper proceeds by reviewing first, in section 2, the standard literature on tax evasion. Section 3 examines the interaction between evasion and corruption, while those taxation issues that are arguably specific to transitional countries are discussed in section 4. A modelling exercise illustrating some of the discussion of section 4 is allocated to the appendix. Section 5 provides concluding remarks.

2 Theory on tax evasion and transitional countries

This section offers an overview on the standard approach to tax evasion in economic theory. Obviously, a short introduction can not do justice to the issues involved. Our aim here is rather to point out the implications of theory for current practice in transition countries. For this purpose, we first review how tax evasion has been addressed in the literature. We then proceed to discuss the role of social norms for evasion behaviour. Finally, we touch upon optimal taxation in the presence of evasion. In passing, we also discuss some of the implications of the theory on Russian taxation system. While preparing this study, Russia's tax system has been subject to many changes, as almost all of the old tax laws should be replaced by a new comprehensive tax code. In addition, it not clear to what extent the government change in autumn 1998 affects the tax reform plan. Our discussion of the Russian case draws on Popova and Tekoniemi (1998), Lopez–Claros and Alexashenko (1998) and Economist Intelligence Unit (1998), and therefore remains at a general level. It should also be noted that a number of conceptual difficulties attach to tax evasion. One common distinction is tax avoidance, which is legal but sometimes quite similar to evasion. In what follows, this paper abstracts from these and discusses evasion, loosely speaking, as the illegal concealment of tax liability.[4]

2.1 The basic framework

The basic setting describes the tax evasion decision by an individual taxpayer as a rational choice under uncertainty.[5] Taking into account the basic parameters of the economy (tax rate, detection probability, fines imposed on the evader when caught), the taxpayer has to decide how much of his exogenous income to report to the tax authorities. The decision to evade taxes hence depends on the maximisation of expected utility with respect to the amount of reported income; honesty and social norms do not affect this decision in the basic framework. Comparative statics results show how the extent of evasion (the share of income not reported) reacts to changes in the parameters of the model. It can be demonstrated that evasion increases with increasing income and decreases if the penalty rate or the probability to get caught increase. The influence of a change in the tax rate on evasion is however ambiguous in general. Intuition would suggest that evasion increases with the tax rate (as this reduces the relative price of evaded income). In the basic model, this result only holds under specific assumptions. In an extended framework, whereby the tax payer can also decide the amount of his labour supply in the official or in the unofficial sector of the economy, increasing tax rate encourages evasion under milder conditions [see Cowell, (1981)]. This result has also received some, though not clear-cut, support in the empirical literature attempting to measure how different parameters affect tax evasion (Myles 1995).

Examination of the choice between the detection probability and the fine imposed on detected tax evaders gives an interesting result. If the government objective is to minimise evasion, and if detection is costly, an optimal policy could be to impose a huge penalty on evaders, but only make modest efforts at detection (as efficient detection activities are expensive). There are several caveats here. The tax authorities likely are not free to choose the general structure of penalties on evaders. It is much more plausible that any penalties meted out will have to be in line with those for other crimes [Tanzi and Shome (1993)]. Extremely high penalties are also inconsistent with many notions of fairness. If evasion is a general practice among taxpayers, but only a tiny fraction of evaders are detected, punishing them severely probably violates horizontal equity. In addition, tax authorities can themselves make mistakes, or if the tax structure is very complicated, even honest taxpayers may under-report income because they are not aware of all the fine points of the tax system. Moreover, it is not even clear that the objective of the government should be to minimise evasion. Much of the literature chooses in fact to use a general type of a utilitarian welfare function that also incorporates tax evaders' welfare. In a more sophisticated analysis, the choice between various instruments becomes much more complicated, so that all optimally evasion is not eradicated altogether.

The observations above offer some implications for the Russian tax system. At present, the tax system is very complicated and consists of many different taxes and exemptions (the new tax system is hoped to help in this respect). The government has tried to impose better tax compliance by threatening evaders with heavy penalties. In practice, this approach has backfired. People (and firms) are unwilling to file returns, as they fear that they would be punished by not fulfilling all the requirements of the tax system. The discussion above suggests that under these circumstances, tax enforcement should rely more on increasing the detection rate, as opposed to strict penalties and high fines. This suggestion is reinforced by the observation (discussed in more detail below) that the tax system as a whole suffers from low credibility and perceived unfairness. A need to create a more effective fiscal policy deserving public support can not be supported by strict and sometimes arbitrary punishments.

2.2 Some extensions

One of the most important extensions to the basic set-up regarding the present study is the incorporation of social norms and honesty to the evasion decision. Empirical evidence (reviewed by Cowell 1990) suggests that there are considerable differences among countries and groups of people in evasion behaviour. Individuals may be motivated by non-utilitarian virtues, such as honesty, or they make their taxpaying decisions based on their perception of the fair amount of taxes they need to pay. The perception depends, e.g. on the inequality of the tax system and the fairness of the expenditure structure of the government. An obvious puzzle for economic analysis is how to formalise such behaviour and how to apply it to rational, self-interested economic agents. Gordon (1989) assumes that honesty appears as a separate argument in individuals' utility function reducing the utility obtained from evasion. Such a setting divides taxpayers into two groups. For some parameter values of the economy, some taxpayers will opt for evading and others will value honesty over the benefits of evasion.

An interesting possibility here is that the evasion decision depends on the behaviour of other agents in the economy. In other words, evasion imposes an externality on others. Cowell (1990) describes how three possible equilibria may arise from such an externality. In circumstances where evasion is very rare, tax evaders can be detected easily and evasion may carry a considerable social stigma. In another equilibrium, tax evasion can be part of the culture of the country, separating an individual evader is difficult and not necessarily sensible. Even the initially honest taxpayers choose to evade taxes. Somewhere in between, there exists a third equilibrium where the benefits of evasion and honesty are in balance. Cowell argues that this intermediate equilibrium is unstable; certain exogenous shocks affecting the overall level of evasion in the economy tend to shift the economy from corner-solution to another and cause evasion epidemics. Johnson et al (1997) present a similar model that interprets a situation with high tax compliance and efficient government as a 'good' equilibrium and the situation with a large unofficial sector, corruption and Mafia enforcers as a 'bad' equilibrium.

Both the notions of social norms and evasion epidemics have some explanatory power in the Russian situation. Public opinion towards the state has been formed by the repression the communist governments sustained – even in the new circumstances, the role of the state is in a way not fully legitimised. In the words of Kornai (1990, p. 118–19):

‘People in general consider it a laudable act, rather than something to be ashamed of, if someone defrauds the state, appropriates its wealth, or shuns its obligations. Those who refrain from this kind of behaviour are seen as dupes… Consequently, when we contemplate budget revenues we should be prepared to face the fact that many citizens will try hard to dodge taxes.’

Modern tax systems in the Western countries rely largely on voluntary compliance of the taxpayer. The behaviour described by Kornai severely threatens the underpinnings of that kind of system. Unfortunately, the phenomenon seems to fit rather well to some experiences in transition economies. Some may not feel entirely comfortable with explaining the new, post-reform, situation with experiences from the past, but it is possible to elaborate this argument. The willingness to contribute to the exchequer’s chambers can depend on the benefits the taxpayer obtains from the public policy pursued by the government. If the government fails to meet the needs of its citizens in providing basic public goods, such as law and order, education and basic social security, it is quite understandable that the willingness to support the state will suffer.[6] In such a situation, it is probable that the citizens will rely on private activities in providing these goods. This argument compares to Johnson et al (1997), who also provide empirical evidence that such a substitution has actually taken place in many transition economies, most notably those of the former Soviet Union.

Another possibility is the role of inequality in explaining tax evasion. The literature on tax evasion [e.g. Hindriks, Keen and Muthoo (1997)] usually suggests that high-income earners are more prone to evasion than low-income households, as they have more at stake and more resources to spend on concealment. A vast income dispersion, ceteris paribus, would hence imply a high level of tax evasion as well. On the other hand, if tax evasion increases with tax rates and the progressivity of the tax system, strong redistribution of income could offset the potential tax evasion benefits of an equal income distribution. One possibility is that large income inequality reduces the perceived fairness of the tax system among low-income households, thereby increasing their willingness for fraud in taxpaying. Casual evidence from Russia (where income inequality has radically risen during the 1990s) suggests that this is the case. The rich evade taxation easily, which in turn affects the willingness of other households to pay income taxes. Thus, exploring the interaction between equity and evasion may help in development of policy advice for transition countries.

Finally, claims of evasion epidemics fit the Russian case rather well. Because of unsuccessful policy in deterring evasion in the past, the economy has ended up in a situation where evasion and corruption are stable features of the economy. The evasion epidemics model predicts that as this kind of equilibrium tends to persist, and breaking the vicious circle is complicated.

2.3 Evasion and optimal taxation

The discussion above has mainly tried to pinpoint various factors affecting tax evasion. Public economics usually proceeds beyond this by considering optimal government tax and expenditure policies. This is the case in the literature on tax evasion as well. As opposed to the standard second-best tax analysis, optimal taxation exercises in the presence of evasion are complicated and often permit only tentative guidelines for policy. One set of difficulties arises from the determination of government objectives – under optimal taxation, this shows up in the choice of social welfare function.[7] One obvious candidate is a utilitarian social welfare function that measures the social welfare as a sum of the welfare of honest taxpayers and of tax evaders. A further question related to the utilitarian case is whether the government should use the same detection probabilities as the individual tax payers use. An argument against using other probabilities relies on the idea that the detection rates are actually policy variables, not exogenous constraints for the government. Others note that under rational expectations of the taxpayers, the government cannot use different detection rates than the taxpayers in its policy evaluation. As the question of giving appropriate weights to different consumers depends on the detection rate of tax evaders, it therefore remains open. Even so, it is easy to demonstrate [for details, see Cowell (1990)] that adopting a utilitarian welfare function advises the government to tolerate evasion up to the point where its benefits (e.g. welfare gain from the black markets or the role of evasion as a device correcting government failures) just balance with the marginal valuation of the tax revenue and other losses arising therefrom. This conclusion contrasts with the approach of making honesty as such a virtue and government objective, which naturally would involve abolishing all evasion in the economy. A third candidate, though not for welfare analysis, is that of a Leviathan government (that maximises tax revenues). It is interesting to note that maximising tax revenues in the presence of evasion is quite similar to aiming at honesty – tax evasion is in both cases strongly against government's goals.

While it is important to bear these caveats in mind, optimal evasion-augmented tax theory nonetheless provides many valuable insights for policy. Sandmo (1981) examines optimal linear income taxation when there are two distinct groups of households; those working (only) in the formal sector and those working in the informal sector. Sandmo adopts the utilitarian social welfare function and determines the optimal detection probabilities, fines and tax rates, given taxpayer behaviour. Specifically, Sandmo's aim was to analyse whether the presence of evasion gives rise for lower marginal tax rate (and lower progressivity) as it would be the case in the absence of evasion. In contrast with the common belief, his analysis does not support such conjecture. The optimal marginal tax rate might actually increase as a result of evasion. He notes this is what we should have expected. Given that the shadow economy is distorted by the presence of positive detection probability and fines, a higher marginal tax rate in the formal market increases, ceteris paribus, (compensated) labour supply at the shadow economy, and thereby mitigates distortions in that sector. This result illustrates the role of formal theory in this respect: although it cannot provide unambiguous answers, it warns against misleading impressions and provides a logically consistent basis on which to discuss policy.

Cremer and Gahvari (1994) extend Sandmo's work by allowing individuals to freely choose the amount of labour they will supply either market. They further examine the possibility that taxpayers can spend resources to conceal part of the evaded taxes from inspection. The marginal tax rate results they derive crucially depend on the form of 'concealment technology'. While they find stronger theoretical support for the argument that evasion lowers the optimal marginal tax rate, they show that the opposite may also be the case. Their explanation for a lower marginal tax rate is rather novel, i.e. if evasion makes the society poorer in a sense that tax revenues fall, it is plausible that the society's willingness for redistribution, and thereby for the marginal tax rate, decrease.

Cremer and Gahvari (1996) explore the implications of tax evasion for optimal general (possibly non-linear) income taxation. Using the self-selection approach to tax analysis in a two-household framework, they discuss optimal marginal tax rates and audit strategies, which can be, due to non-linearity, different among the two groups. Optimal audit policy involves a positive audit probability for people who claim to be low-income earners, while high-income reporters are not audited. This may at first seem to be a regressive policy (allowing the rich to do whatever they want). Actually, the aim of the government here is to prevent rich people from reporting a low level of income, and this is why audits can be targeted to low-income reporters. Another interesting result they derive indicates that low-income earners that are audited but found innocent should pay a lower marginal tax rate than people not audited. In other words, honesty should be rewarded. Finally, despite the extension to evasion, qualitative characteristics of the standard income tax schedule remain valid. This may be seen as an indirect, though not airtight, argument against lower marginal tax rates in the presence of evasion.

The papers cited above concentrate on the evasion of income taxes. This reflects the common opinion of economists that income taxation is more prone to evasion as indirect taxes. Even if a person cheats in his income taxes, he must consume commodities and pay the taxes on them. Of course, this argument hinges on the assumption that firms truthfully declare and pay taxes. Boadway, Marchand and Pestieau (1994) demonstrate rigorously that if only income taxation can be evaded, it is welfare-improving to supplement even non-linear income taxation with uniform indirect taxation. As usually, uniform indirect taxation is however not optimal in their model in general. Evidence from transitional countries suggests that concentration only on the evasion of income taxation may be misleading, as firms tend to cheat (and leave unpaid) their taxes as well.[8] This is especially important for Russia, where the overall share of personal income tax from total tax revenues is very low, and most of the tax arrears result from the taxation of firms.

Cremer and Gahvari (1993) analyse tax evasion by firms by examining optimal commodity tax rules in the presence of indirect tax evasion. They note that there is a trade-off between tax rates for each industry and the audit probability. Both positive audit probability and tax rate raise revenues, and as the government has to collect some given amount of revenues, it has to balance its policy between the two instruments. Another interesting result is that the optimal tax rate in the presence of evasion is lower for goods, to which the distortion from evasion is high – in the sense that the expected tax rate (that encompassing evasion possibility) is much lower than the nominal tax rate. This suggests that in the presence of evasion, there are actually more reasons to rely on differentiated indirect taxes than otherwise would be the case. Note however that this result crucially depends on the ability of the government to distinguish perfectly among industries. In reality (and especially in the realm of transition) it is much more plausible that firms also cheat by misreporting the characteristics of their production, thereby seeking a lower nominal tax rate for their products. This argument becomes especially important where administrative capabilities are low.

Some interesting lessons for tax policy emerge from the theory on optimal taxation in the presence of evasion. One is that evasion does not give strong support for lowering the income tax rates – this is especially valid if the utilitarian point of view is adopted. Combined to the observation that high inequality may increase evasion, this suggests that a low of income taxation with little, if any, progressivity is not necessarily supported by evasion considerations. Of course, maintaining income taxation calls for adequate auditing policy, and it seems that some of the transitional countries (e.g. Russia) might benefit from streamlining their tax administration in this respect. To restore confidence on the tax system, it is of vital interest to proceed towards a system of voluntary compliance, supported by audits that are partially random and partially dependent on characteristics of the tax payers. Considering the overall tax structure in Russia, the present situation with a considerable emphasis on indirect taxation (which, as the theory has taught us may also be evaded) and profit taxation have not worked very well in deterring evasion. Therefore, it is not clear why a stronger reliance on income taxation, backed with strong commitment to really implement it through control, would perform worse in terms of evasion.

We will get to the question of administrative feasibility of various tax structures below, but here it is important to note that administrative complications can have broad implications on tax instruments. Tanzi (1993) explores these in detail and concludes that simplicity and clarity should be the guiding norms in tax design in transition countries. No doubt, these are important objectives for any tax system in general, and as evidenced by Russia's present inability to employ an overly complicated, discretionary tax system, even more so for economies in transition. Many of the complications of the tax system of these transition countries are clearly harmful, such as exemptions that are there just because of some political influence. Nevertheless, it is also important to acknowledge that complications can also be welfare-improving. Therefore, there are also costs involved in an approach aiming at simplicity. Many of the devices developed in the optimal tax literature to deter evasion imply diverging from simple policies and hence require adequate tax administration. If it is not available, or if these devices cannot be implemented because of lack of clarity, tax system fails to utilise all of its power to promote efficiency and hamper evasion. The clarity-efficiency trade-off is clearly of vital importance for transition countries and deserves more attention.[9]

For various reasons that were also touched upon above, Cowell (1990) concludes that tax theory in general does not warrant a terribly strong case to minimise evasion. It seems however that in transitional countries this case is stronger than in other countries. If evasion is common, it begins to hamper the development of the economy, the simple need to get things done calls for a serious approach to improve tax collection. This is further reinforced if the government is in such a difficult fiscal situation that it has no other choice than to implement a Leviathan-type approach just to survive. In these circumstances, good lessons to deter evasion are certainly valuable. The discussion in this section may indicate that such lessons could be sought from tax theory as well.

3 The role of corruption in tax evasion

Corruption, which is commonly defined as abuse of public power for private benefit (Tanzi 1998),[10] is of course a different phenomenon than tax evasion. In the context of taxation, however, the two notions have some important interactions. This is because tax authorities may be dishonest as well, as opposed to the above assumption that only the taxpayers cheat. Allowing for possible corrupt tax officials influences both the willingness of the taxpayers to evasion and the role of tax administration in fighting evasion. Because of this interaction, this section explores some of the general discussion on corruption and looks at the joint analysis of evasion and corruption.

3.1 General theory on corruption

A minority of economists maintain that corruption may actually be harmless, or even beneficial. Tanzi (1998) and Bardhan (1997) discuss a number of those pro-corruption arguments. One, in particular, claims that bribes are like other transfers; they influence distribution, but not the efficiency of the economy. Another possibility is that corruption eases some of the distortions and rigidities arising from government failure. In this ‘corruption oils the system’ theory, corruption is seen as a second-best device to restore efficiency to an economy suffering from e.g. decisions made by a slow and ineffective bureaucracy. Closely connected to this is the idea about bribes as ‘speed money’: if some people have a high time preference, they may obtain faster service within the public sector (for example, when applying for licences) if they bribe a few authorities. An important argument, and quite plausible for the case of transitional countries, is the possibility that if the government fails to maintain elementary security and a level playing field, corruption and decentralised rules and law-enforcement procedures (Mafia enforcement) may be substituted for a weak government. It would therefore not be clear at the outset whether a Mafia or a central government would be more effective in providing law and order in the economy. Johnson et al (1997) find some empirical support that such a substitution has actually taken place in certain transition countries.

Despite these elaborate arguments, empirical evidence generally argues that corruption is harmful for growth [see e.g. the recent paper by Gupta, Davoodi and Alonso-Terme (1998)]. This implies that the more traditional arguments referring to disadvantages of corruption are justified. One of the most important detrimental impacts of corruption is its influence on incentives. Corruption encourages rent-seeking, instead of socially beneficial, productive behaviour. It has implications for the real economy. This is why the view that bribes only affect distribution is clearly wrong. Corruption also seriously undermines the prospects of the government to pursue its goals, because imposing necessary controls and inspections, as well as providing law and order is hindered by a corrupt civil service. Widespread corruption blurs the role of the government in the economy, as it no longer can efficiently correct market failures, redistribute income or produce market supporting institutions. When it comes to ‘speeding up’ bureaucratic processes, Bardhan (1997) notes that while some people benefit from such a practice, its general equilibrium impacts are ambiguous. Officials may begin to charge for service that they should provide for free, even if customers actually get faster service. Non-bribers may find the time span of their service lengthened.

In an insightful paper, Bliss (1998) argues that it is not sensible to compare fully efficient corruption to distorted, second-best, behaviour of government. Many of the distortions involved in the functions of the public sector are not exogenous. Nothing guarantees therefore that ‘privatising’ some of the functions of the state by resorting to corruption would produce a more efficient outcome. In many instances for example, asymmetric information between the government and agents is an inherent feature of the setting and would not be resolved under private sector activities. Therefore, corruption, as a substitute for public sector activities, can normally only be at most second best. The impacts of bribes on economic behaviour are often compared to those of taxation, as both create distortions in second-best circumstances. Therefore, the correct benchmark for an honest second-best public sector is a corrupted second-best public sector. However, it is also plausible (and indeed supported by the data) that corruption creates a larger dead-weight burden as taxation. Shleifer and Vishny (1993) explain that corruption is inherently more costly as taxation since it requires secrecy and consumes resources. Thus, it would seem that resorting to private activities (such as Mafia enforcement) or using corruption to grease the apparatus of government is costly and creates larger distortions overall than a honest public sector. A most important final point to note is the one developed by Bliss (1998). The mere threat of corruption, according to him, requires that the functions and policies of the state have to be designed with the controlling of corruption in mind. An administration designed to deter corruption most likely loses some of its power to pursue other roles. Because of corruption, the government can only perform worse than if it were honest.

Tanzi (1998) explores factors that contribute to the extent of corruption. He emphasises that both factors affecting the demand and supply of corruption should be taken into account. One of the most important factors affecting the demand for corruption are the nature of government rules and regulations. If these are very strict, rigid and complicated in letter and, perhaps more importantly, are implemented arbitrarily because of authorities’ discretion, economic agents are tempted to resort to corruption. They may even bribe officials to streamline the implementation of regulations related to them. The legislation and implementation concerning taxation is often one of the underlying reasons for corruption. If tax laws are complicated and arbitrary, taxpayers need assistance in complying with them. This opens possibilities for dishonest tax authorities to require payments from taxpayers for their assistance. Lack of transparency, complicated tax exemptions and incentives, frequent contacts between tax auditors and taxpayers, and discretionary power of tax officials all promote the environment for corruption. On the supply side, the quality of administration, public sector wages and the penalties from corruption are essential determinants. Low public sector wages encourage administrators to corruption for at least two reasons. First, the authorities may actually need extra income to obtain decent living standards. Second low wages decrease the costs of a potentially lost position if they are caught for fraud.[11]

Tanzi (1994) and Bardhan (1997) discuss the importance of social norms for the extent of corruption in a country. Based on empirical observation, Tanzi concludes that corruption is more likely to occur in cultures that rely largely on connections and relationships in economic activities. In those circumstances, transactions require a large amount what is called 'social capital'. Interestingly, the role of norms here is very similar to their influence on tax evasion. This raises several nagging questions for economic analysis based on purely rational individuals. At least some of these questions can be resolved by applying the idea of multiple equilibria for corruption.[12] Hence, a corruption equilibrium that is seemingly culture-dependent may also be compatible with purely rational behaviour. Tirole (1996) finds that, within an overlapping generations model, corruption is path-dependent. He argues that the persistence of corruption may be explained by bad reputation of past generations. This would explain why shifting away from corruption equilibrium may fail if the measures are only applied over the short term.

3.2 Corruption and evasion

Although tax collection is a prominent instance of corruption, tax evasion literature usually parallels discussions of corruption. Hindriks, Keen and Muthoo (1998) provide an exception. They analyse optimal non-linear taxation schemes under very general assumptions involving taxpayers earning different incomes, but all potentially willing to evade taxes and bribe tax auditors. The corrupt tax auditors may also extort the taxpayers by overstating their tax liability – the taxpayers can verify their true income only through costly appeals to the court. The government in such a setting may employ a set of different objectives, including revenue maximisation, evasion and corruption minimisation, inequality aversion and a combination of all of them. The paper contains many interesting findings that may be relevant for tax design in transition countries. One is that the threat of extortion and the possibility for evasion and corruption result in a tax system that is less egalitarian than it would be in the absence of these factors. The reasoning is quite intuitive, i.e. the rich have more incentives for evasion, and the threat of income over-reporting is bigger to the poor because their income level is low in the first place. In addition, if the government wishes to implement a progressive, non-linear tax schedule (evasion- and corruption-proof), it must pay commissions to tax auditors for high income reports. This finding gives rigorous verification for the need to increase the remuneration of tax officials if they are possibly corrupt. However, it also implies that in optimal tax design, the government faces a novel trade-off between equity and efficiency. Financing the commission to auditors increases the aggregate tax burden and hence decreases the after-tax income level of the taxpayers. Establishing a fair tax system with distributional equity thus involves a cost quite distinct from the usual distortion in labour supply.

Another issue worth observing is the potential interaction between equity, corruption and the willingness to evade taxation. The previous section suggested that unequal income distribution probably promotes evasion because the rich are more prone to evasion and the inequality might decrease the support to the tax system among low-income earners. Gupta et al (1998) find that high levels of corruption are associated with high income inequality and poverty. Income inequality may increase the corruption level of the society as in the case of tax evasion. Perhaps more to the point, Cowell (1990) notes that corruption reduces honesty in taxpaying because it reduces the perceived fairness and effectiveness of the public sector among the citizens. Fighting corruption may thus be a necessary and important step to reducing tax evasion. This conclusion is probably more powerful for transition economies, where citizens are often reluctant to support the state.

3.3 Influence on transition economies

Although at this point precise evidence regarding corruption in the tax system is lacking, there are good reasons to believe that if the government as a whole is corrupt, tax authorities may be dishonest as well. Therefore, it makes sense to examine at least what the risk of corruption implies for transition economies. In their study of the Russian public sector, Lopez–Claros and Alexashenko (1998) explore the problems of Russian tax system and emphasise that its complex nature with numerous possibilities for tax incentives and exemptions provide a fertile ground for tax avoidance. Such tax benefits are often obtained through consultation with and lobbying of tax authorities in circumstances that share some properties with corrupt behaviour (although no bribes would take place). It is important to note that the circumstances now prevalent in Russia, as documented in Lopez–Claros and Alexashenko (1998), coincide well with the factors promoting corruption mentioned by Tanzi (1998). Therefore, policies taken to reduce the regulatory role of tax officials are certainly welcome with respect to the aim of preventing corruption. Frye and Shleifer (1996), who examine the attitude among local authorities in Moscow and Warsaw towards the private sector, come to the same conclusion that administration in Russia tends to impose a high regulatory burden on enterprises. On the supply side of corruption, the fact that public sector salaries are relatively low in transition countries may lead to larger willingness to accept bribery among the authorities.

Cultural factors as well as the possibility for multiple equilibria are clearly relevant for transitional countries. Many observations suggest that Russia in particular is a country where relations are quite important for economic behaviour. Gaddy and Ickes (1998) argue that many firms have opted for developing their ‘relationship’ capital (e.g. influence on authorities) to survive without a need for major restructuring. This comes close to the analysis of social capital, which, according to Tanzi (1994), provides fertile ground for corruption. It is in addition quite plausible that the Russian system may now be closer to the decentralised equilibrium of law enforcement than some other countries. Thus, the multiple equilibrium analysis in Bardhan (1997) and the persistence issue highlighted by Tirole (1996) may explain some of the difficulties faced by the Russian government when attempting to increase the efficiency of its public sector. Surely not a negligible factor is the role of inequality. Casual evidence from Russia suggests that many people regard the government as corrupt and having failed in creating a fair society. They rationalise tax evasion as a vote of dissent for government activities. The point raised by Cowell (1990) that reducing corruption is a key to the reform of tax system as well is a possibility that must be carefully examined in the Russian case. The discussion in section 4.2 attempts to direct the analysis along these lines.

We should also mention the important observation by Shleifer and Vishny (1993) on the implications of the degree of centralisation in corruption. They note that Russian-style corruption, with many decentralised corrupt authorities, is actually among the most harmful forms of practice. It does not internalise the influence of requiring bribes by one official on the bribe-obtaining possibilities of another civil servant. A centralised version of corruption would be less damaging, but of course, still not as efficient as an honest civil service.

In previous section, we argued that the reasons for hampering tax evasion are likely more powerful in transition countries than in industrialised countries. Based on the discussion in this section, it seems that although fighting corruption is well indicated for any countries, it may be even more important in transition economies. This follows from at least three observations. First, if evasion is an important concern in these countries, reducing corruption is one of the most important measures to achieve it. Second, cultural factors imply that the need to build credibility for the public sector is of high importance in transition countries. Finally, the style of tax administration and enterprise regulation are still largely based on detailed instructions and discretionary power.

4 Tax theory for transition economies

The sections above were intended to illustrate how standard tax theory might help in designing tax policy in transitional countries. The question that remains open from the preceding analysis is whether standard theory is directly applicable for economies in transition. Should one adopt different interpretation, or even distinct theories for such countries? In this section, we discuss this issue. The starting point in the discussion is the ideas developed by Burgess and Stern (1993) for tax design in developing counties. Their ideas will then be complemented by some additional features that seem specific to tax evasion problems in transition countries.

4.1 Administration as a constraint

The survey by Burgess and Stern (1993) provides an excellent representation of the reconciliation of development and public economics. They argue that the role of the government is in many respects more pronounced in developing countries, as opposed to industrial countries (for which most economic theory is written). Many of the needs of development, such as building institutions and basic infrastructure, providing adequate education and social security and alleviating poverty are formidable objectives that require public resources. To obtain these resources, there is no sustainable alternative to taxation. At the same time, Burgess and Stern warn, the instances for government failure (e.g. corruption, rent-seeking, distorting policies) are a major concern for developing countries. The potential gains from government policy in developing countries seem however so important that the caveats, though they must be acknowledged, should not be taken as prohibitive for developing the tax system. Burgess and Stern also emphasise that, as the evidence from these countries suggests, healthy fiscal policy is a key precondition for successful stabilisation and, in the longer term, for economic growth.

Having stated the (relatively firm) position for the need to raise substantial revenues through taxation, Burgess and Stern discuss how taxation should be designed and organised. They argue that in general, standard tax theory is valid for all countries. The long-term objectives in taxation, efficiency and distributive equity, should remain the same, and even shorter-term objectives, such as fostering growth by tax policies, can be deducted from the uniform long-term aims. As opposed to industrial countries, the crucial difference in tax analysis in developing countries is in the constraints facing the government. These include the lack of reliable data, weak administration, non-competitive economic structures, strong reliance on some particular parts of the economy (agriculture, exports of raw materials), severe political constraints caused by low living standards and knowledge. Eventually, however, the tax system should proceed towards the Western style; in passing, standard theory should be applied with care acknowledging the constraints. A straightforward application of the Burgess and Stern view is, of course, that the same applies for transitional economies.

One of the most important constraints hindering efficient tax policy stressed by Burgess and Stern (1993) is the role of tax administration. Its importance is substantial in the circumstances of transitional economies as well. Soviet-style taxation was based extensively on direct extraction of resources from state-owned enterprises. In the terminology of tax theory, direct payments imposed on state-owned firms represent ‘non-tax’ revenue. For the tax administration of a post-socialist government, transition essentially implied shifting from collecting non-tax revenues to raising tax revenues. In the socialist era, the bulk of revenue was collected from a small number of enterprises, the beginning of transition required collecting it from a large number of taxpayers, both from firms and individuals. This created a major challenge for tax administration in these countries. Although the behavioural effects (e.g. incidence) of those payments bears close resemblance to taxes, they are different from taxes in terms of revenue collection. This implies that the mere change of regime triggered evasion.[13]

In the transition economics literature, state go through a period following the collapse of the planning system characterised as 'disorganisation'. Blanchard and Kremer (1997) show how disorganisation in production structures may explain the output loss observed in the transition countries following the break-up of socialism. We argue that a similar phenomenon must be present within the (tax) administration as well. As the tax system has to be built up from scratch, there is considerable uncertainty concerning the aims and means of taxation. In a sense, we talk about learning progress within the tax administration. One crucial difference in the learning process in the public sector, as opposed to that of in private enterprises, is that its incentive schemes are not clear-cut. In the market, rapid learning is rewarded in terms of higher profit, whereas the public sector lacks such incentives. The disorganisation phase is therefore likely to be more difficult and take much more time within the public sector than in (efficiently behaving) private firms.

This raises questions common in transition economics literature. One regards the optimal speed of reform - disorganisation resulting from disruption in the overall tax system might in principle be mitigated by a slowing down of reforms and by maintaining some essential parts of the old revenue-raising system. Empirical evidence from transitional economies, most notably Russia, suggests that even though many remains of the old tax system has actually been preserved, tax revenues have nonetheless collapsed. Casual observations do not seem to support the virtues of gradualism in this respect. This raises further questions. Can the choice of the tax regime be genuinely free, or can it be driven some initial conditions (that imply that the chosen path may have been the best feasible one)? If so, it casts doubt about the reliability of the casual evidence cited above. One has to remember that poor performance by the tax administration may also result from corruption and rent-seeking by the authorities. Uncertainty and disorganisation probably create fertile circumstances for such behaviour to flourish.

Lopez–Claros and Alexashenko (1998) explore at a more concrete level the challenges faced by the Russian tax authorities. They share the view by Burgess and Stern (1993) that the move towards a more western style of tax system, which is based on self-compliance by the tax payers and supported by random audits by the authorities, is a key measure in building a tax system which is more capable in fighting evasion. At present, a large share of the staff's work in tax administration is devoted to routine tasks that in the

West are demanded from the tax payers themselves. The information provided by the World Bank (1995, p. 37) reveals that the tax administration is not understaffed compared to Western countries. This suggests that there could be quite much scope for improvements in efficiency, such as stronger reliance on computers and education of the staff. An additional feature is the numerous exemptions and tax incentives contained in the present tax legislation. Thus, tax exemptions not only undermine the revenue-collection capability of the tax system, but they also exacerbate the administrative costs involved. Furthermore, as the salaries within the Russian State Tax Service are relatively low, one option to improve productivity within the tax administration would be to consider remuneration schemes that would provide proper incentives [along the lines of Hindriks et al (1998)]. Despite all the difficulties listed above, Burgess and Stern emphasise strongly that many of the administrative problems can be overcome with proper policy design. Therefore, their importance should not be exaggerated, and they should not be regarded as goals that definitively override other aims in taxation (efficiency and equity). Their discussion comes therefore close to the observation in section 3 that stressed the threats associated with tax systems that do not take advantage of beneficial complexity.

4.2 The role of the state

As mentioned above, there are some features in transitional economies that can be regarded as more than constraints. These arise from various implications of the heritage from the socialist era, which is quite distinct to the circumstances of many of the developing countries.[14] The mixed role of the state in the economy is one important characteristic. On the one hand, economic decisions are still very much dependent on state action and on the use of discretionary power. This role of the state, which clearly exceeds that of a state securing the institutional framework only, blurs the relations between the government and the economy.[15] One of the striking consequences from this for taxation is the extremely complex structure of tax legislation and constant changes imposed on it. On the other hand, experiences from the Soviet era also influence public opinion on the proper role of the government. Anecdotal evidence suggests that one of the reasons people do not pay their taxes is the belief that the government only wastes the money instead of producing the public goods and services they would need. Evasion can perhaps be seen as a rational response to a poorly performing state. Many authors, including Lopez–Claros and Alexashenko (1998), stress that successful reforms require not only improving the tax system, but also reforming the expenditure side of the budget. Moreover, it could also be given rigorous theoretical support. If voters are highly suspicious of the government's motives, the tax system must probably be built differently than it would be under a more reliable government. It could be interesting to examine which kind of safeguards this kind of 'nihilistically fair' tax system should employ. Intuition, and the ideas highlighted by Brett and Keen (1997), suggest that at best it can only be second-best: credibility requires structures that reduce pure efficiency, e.g. earmarking of tax revenues. The fear of evasion could perhaps create tax systems that employ tax instruments in a different way to the western practice.[16]

It is also not always evident that the government pursues the role of a welfare maximiser. Recent theoretical tax literature has examined the implications of Leviathan-type governments (those maximising tax revenue) on tax structure. Leviathan-type behaviour can in reality be the only option for a government seeking to balance its budget in circumstances such as those of nowadays Russia. However, such an approach also implies that efforts to evade taxes are also likely to rise. Another interesting case regarding Russia could be the idea examined by Rosefielde (1998) in which the government is very much dependent on the support from various interest groups. If one believes that the government has these objectives, it sets new limits to normative tax theory, i.e. tax systems that are efficient in raising revenue are actually harmful to the economy. The aim for a moral person should rather be in recommending structures that limit the power of the government. In this light, tax evasion could have positive aspects as well, although a system Leviathan-type government with high evasion would be welfare-inferior to a low-evasion equilibrium with a benevolent state.[17] Such ideas along these lines deserve closer examination within the context of transition economies. However, even the simple observation mentioned here supports the view that the role of government in transition economies, and people's response to it, complicate tax analysis.

4.3 Tax policy, transition strategies and restructuring

Restructuring of old state-owned enterprises (SOEs) is one of the big challenges in transition. According to Blanchard (1997), the notion involves reorganisation of the ownership structure and the production processes. Usually its aim is to improve efficiency within the former SOEs. Although a bulk of restructuring takes place within the firms, the government can influence the process through its policies. Here, we argue that setting the level of taxation and deciding over tax enforcement is one such measure. Government subsidies to SOEs are usually associated with the notion of 'soft budget constraint', but tax arrears and tax evasion may serve the same purpose. Schaffer (1995) demonstrates that tax arrears have been much more widely used as a device to implement soft budget constraints in many transitional economies. A central focus within transition economy literature concerns the choice between a fast reform strategy ('big bang') and a go-slow approach (gradualism). One issue emerging from the joint analysis of tax policy and restructuring is the possibility that firms may behave in manner inconsistent with the aims of the government. In other words, governments may attempt to use tax policy to accomplish restructuring objectives.

This analysis considers the role of tax arrears among the broad area of issues concerning restructuring. We argue that tolerating tax arrears and lax tax collection are consistent implications of a slow transition strategy. In Appendix 1, we perform a simple modelling exercise to show this. In the example, we illustrate a situation where a firm allocates a fixed amount of resources, R, to two different production processes: an old process, denoted by R_o, (which employs labour proportionally with the input, but with a cost that is modelled with a simple convex, quadratic cost function); and a new process, R_n, which does not (for simplicity) use labour at all. The restructuring aspect is captured by assuming the payoff arising from the new project is always greater than for the old project. Hence, restructuring involves shifting the production process from type o to n. Note that a fully-efficient (first-best) regime within this model would utilise only the process n, which yields a larger payoff and does not incur the cost of labour. The efficient amount of labour is therefore equal to zero. In order to make the problem of restructuring non-trivial, one has to assume inefficiency in the behaviour of the firm. The option followed here is the case of an insider-controlled firm, which maximises the use of labour (or the wage bill), given the feasibility constraint that profits must be non-negative. Admittedly, this framework describes an extreme case, but it is nonetheless plausible in circumstances observed in firms that oppose restructuring. Supposing that the non-negativity constraint of the profit level binds, the firm ends up employing a positive amount of labour (depending on the costs), as opposed to the first-best level of no labour.

The government imposes lump-sum taxes on the activity of the firm. Given the lump-sum assumption, the overall level of invested resources, R, remains unchanged.[18] The government can therefore affect post-tax profits by varying the level of taxation. We concentrate on the most plausible case, whereby an increase in the tax rate decreases the share of old process in the production, i.e. $dR_o / dt < 0$. The intuition is that as the tax liability of the firm increases, the feasibility constraint associated with profits is tightened and the firm cannot hire as much labour as it would otherwise. Thus, the firm has to be restructured by shifting towards a more efficient production process. The government is assumed to have preferences over a fast (f) or slow (s) transition and restructuring strategy. As the fully efficient level of labour in the simple partial equilibrium model discussed here is zero, the reason why the government would prefer slow restructuring implying a positive amount of labour used must come outside of the model. Conceivably, the government might attempt to avoid high unemployment, or be restricted by political constraints. In a fast reform, the efficiency benefits of the new production process dominate, and the government sets a (high) tax to ensure that R_n approaches the overall level of resources, R (implying that $R_o \to 0$). Now consider that the government for some reason begins the put a positive value on labour used (i.e. prefers slow restructuring). This can be accomplished by lowering the tax rate so that R_o, and thereby the use of labour, increases. Thus, if we denote the tax levels associated with fast and slow restructuring as t_f and t_s, at the social optimum we have the property that $t_f > t_s$. Note that the government may implement the slow restructuring program either by directly imposing a tax level equal to t_s, or it may impose a formal tax liability of t_f, but at the same time tolerate tax evasion or permanent arrears equal to $t_f - t_s$, implying an effective tax rate of t_s.[19]

The presentation of this simple example attempts to highlight the possibility that tax evasion or toleration of arrears may be compatible with a slow restructuring scenario, and therefore a rational approach in theory. The reason for the slow scenario was of course fully exogenous in the set-up above. Even in an elaborated setting, however, go-slow may prove welfare-inferior to a fast approach. Governments thus end up resorting to the slow option as a contingency e.g. attitudes among voters or unfavourable initial conditions. As is well-known, however, many transition economists argue that a slow (gradual) reform might actually be welfare-improving. One such suggestion, and quite plausible within our framework here, is the one highlighted by Blanchard (1997). He shows that if restructuring results in extremely high unemployment, the opposition of insider-owners towards restructuring increases as the fear of unemployment increases. Roland and his co-authors [see e.g. Dewatripont and Roland (1995)] show that under conditions of uncertainty and irreversible investment, a slow reform can be welfare-improving through the option value of waiting. In either case, the main point here is that restructuring and tax policy are interrelated. The present situation in Russia seems somehow consistent with this observation. Gaddy and Ickes (1998) argue that the restructuring of Russian firms is in many cases delayed. It may be the case that many tax exemptions and incentives included in the present tax legislation, as well as large scale tax evasion possibilities, soften the budget constraints for the firms and thereby open up the possibility of not restructuring. In other words, while Western tax experts may regard the Russian tax system as incomprehensible, and even irrational, the system may well reflect an overall slow reform policy within the administration. We do not suggest that the present tax system in Russia is efficient, only that it may be consistent.

Tax policy and reform strategies may also be interrelated through decisions on the overall levels of various taxes. As discussed earlier, the inherited structure of taxation from socialism is characterised by a strong reliance on enterprise taxation; income taxation barely existed. Moreover, the enterprise tax system involves profit extraction or subsidies, depending on the profitability of the SOE. Due to soft-budget constraints, many unprofitable firms ended up refraining from restructuring and over-employed workforce. If these circumstances prevail after the collapse of socialism, it is quite plausible that a tax system consistent with gradual reform would still rely largely on the taxation of the firm. Income taxes would be kept at a low level (perhaps because the wage level of the population is low as unprofitable firms cannot afford proper wages). This observation can be connected to the previous analysis in that the policy mix would also encompass lax tax collection. In the opposite case with a fast speed of reform, the tax system would proceed rapidly towards a more western style of tax system, employing mainly income and value-added taxes. This idea seems consistent with the empirical facts for countries of the former Soviet Union (where, on the average, reform has been relatively slow and tax systems still have many features common with the earlier tax structures), as well as for Central European countries (where restructuring has been fast and the tax systems are closer to Western standards). It is important to note that in many of the CEEC, the eagerness for EU-membership might have served as a commitment to implement fast restructuring and a Western style tax system. Further analysis of the relation between the tax system and the overall development of the economy and reform strategies would certainly be important for policy analysis in the transitional countries.

5 Conclusions

Tax evasion and corruption are serious problems in many transition countries, hampering growth and endangering the sustainability of fiscal policies. We have surveyed theoretical literature on tax evasion and corruption to understand these issues in transition economies and to provide some guidelines for reforming such tax systems. The study also considered certain aspects of taxation and tax evasion not often dealt with in public economics. These aspects seem to be transition-specific. The paper noted the following lessons that may be useful in policy development:

- In the standard tax evasion framework, evasion can be deterred by imposing heavy penalties or implementing a strict auditing policy. In transition economies, strict auditing seems to be the preferred policy as it leads to equitable treatment of tax evaders.

- Externalities among taxpayers, reputation and social norms may give rise to the existence of multiple equilibria (low/high evasion in the economy). Once an economy ends up in a ‘bad’ equilibrium (as some of the transitional economies), improving the situation is difficult and calls for a comprehensive reform of the tax system.

- High inequality and the failure of the government to provide adequate public goods undermine public support for the tax system and increase the incentives for tax evasion. Tax policy should therefore be considered in conjunction with expenditure policy.

- Optimal taxation exercises are complicated in the presence of evasion. These results would indicate that tax evasion does not necessarily create a need to decrease marginal tax rates. This conclusion can be interpreted as a caveat against overly straightforward policies.

- Tax evasion generally seems more intractable in transitional countries than developed countries. Thus, policies to deter evasion play a more important role in transitional economies.

- Corruption is linked to tax evasion either directly (in the relations between taxpayers and tax officials) or indirectly (through the efficiency and support of the public sector). Reducing corruption is often a necessary condition for deterring tax evasion.

- The circumstances in the tax systems of transitional economies often provide fertile ground for corruption. Complicated tax systems and arbitrary implementation increase the demand for corruption, while low salaries within the public sector increase the supply of corruption.

- In addition, cultural factors (such a widespread use of ‘connections’) in some of the transitional countries explain the persistence of corruption.

- Weak administration is a major concern in tax policy in transitional economies. Tax recommendations in the presence of weak administration lose their relevance, because complicated tax schedules cannot be implemented. This gives rise to an efficiency-feasibility trade-off.

- The discretionary behaviour of authorities, inherited from the socialist era, still blurs the role of the state in transitional economies. This partly explains why tax systems in these countries remain different in comparison to western economies.

- Attitude towards tax evasion may depend on the country’s general transition strategy (e.g. the speed of restructuring of production structures). Choosing a slow speed of reform may imply tolerance of tax arrears and evasion as a way to soften the budget constraints of unproductive firms.

Appendix: Restructuring and tax arrears

This example illustrates the discussion in section 4 regarding the use of tax arrears as a means of restructuring. Consider a situation where a fixed amount of resources *R* may be split into the uses of R_0 (old production line) and R_n (new production line). R_0 utilises labour through a function of $l = l(R_o)$, which for simplicity is assumed to be linear so that $l = R_o$. The cost of using labour is assumed to be quadratic, $\frac{c}{2}l^2$. Assuming the price of products from the old line is a constant p_o, the payoff function may written as $\Pi_o = p_0 R_o - \frac{c}{2} R_o^{\,2} - t$, where *t* is a lump-sum tax imposed on the production. The payoff from the new production line is simply $\Pi_n = p_n R_n - t$, as it employs no labour.

The decision over *R* is made by insiders, who are assumed to maximise the wage bill (or the use of labour, if the wage rate is normalised to one). The decision is constrained by a feasibility constraint stating that profits must be non-negative. We further assume an interior solution with the profit constraint binding. The Lagrangian formulation of the insiders' optimisation problem and the first-order condition with respect to $l = R_o$ are given by

$$\text{(A.1)} \quad L = R_o + \lambda\left(p_0 R_o - \frac{c}{2} R_o^{\,2} - t + p_n (R - R_o) - t \right),$$

(A.2) $1+\lambda\left(p_0 - cR_o - p_n\right) = 0$.

To obtain the impact of taxation on the decision by the firm, substitute for p_o from the zero profit condition and differentiate (A.2) with respect to R_0 and *t*. This yields

(A.3) $$\frac{dR_o}{dt} = \frac{-2}{\frac{-cR_o}{2} + \frac{p_n R - 2t}{R_o}},$$

whose sign is ambiguous in general. The second term in the denominator captures the impact of larger profits if production is shifted towards R_n: it is always positive, when taxes are assumed to be smaller than the biggest possible profit level associated with $R = R_n$. The first term, which depicts the cost savings arising from the convex shape of the cost function when l decreases, is negative. Assuming that the profit impact dominates (as in the case discussed in the main text), (A.3) predicts that $\frac{dR_o}{dt} < 0$. Higher taxes lead to a need to increase profits, which can be accomplished with a higher R_n.

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Notes

* I am grateful to seminar participants at the Bank of Finland for useful comments. Note that views expressed herein are those of the author and do not necessarily represent those of the Bank of Finland.

[1] 3.35 on a scale of 0 (very low level of corruption) to 4 (very high).

[2] Frye and Shleifer (1997) present some interesting evidence on the attitude of government officials towards business in Warsaw (the invisible, helping hand case) vs. that of in Moscow (the grabbing hand case).

[3] In a comment to McLure, Tait (1992) however notes that diverging strongly from usual tax systems might endanger appropriate collection of tax revenues at a time when the need for revenues to finance various aspects of transition is high.

[4] Cowell (1990, ch. 2) discusses this issue in depth.

[5] Allingham and Sandmo (1972) is a seminal contribution in this field, on which much of the subsequent literature has built.

[6] It could actually be possible to formalise the idea. Suppose for instance a situation where the government has a choice over two forms of public goods: one (e.g. defence) that benefits mostly the policy-makers or their interest groups and another (e.g. social security) whose benefits accrue to the public. Under a repressive regime, the state was able to use its force to implement the public good bundle it wanted to, whereas in a decentralised system, tax payers may evade taxes more easily. It might be possible to show that if the state opts for a public good mix favouring defence, public goods would overall be under-provided because of wide-spread evasion. To restore the willingness to pay taxes, the government would choose more social security to be provided – but that would not necessarily be in the policy-makers interests.

[7] The discussion here is based on Cowell (1990, Ch 7).

[8] For the importance of tax evasion by firms in Russia, see Yakovlev (1998). Moreover, labour income tax evasion can result from employees agreeing to get part of their salary in black money.

[9] Estonia is an interesting example of a country that has opted for simple tax rules. For example, it has a flat labour income tax rate of 26 %. The Estonian shadow economy is much smaller than the FSU average, yet income disparity is among the highest. This is consistent with the probable outcomes of such tax policy.

[10] Not surprisingly, there is some dispute about the definition of corruption in the literature. Corruption may be encountered in the private sector as well; it is sometimes difficult to distinguish gifts from bribes, and corruption from rent-seeking. For discussion on some of these matters, see Bardhan (1997).

[11] The speed of restructuring in a state administration and the extent of corruption have a theoretically interesting relationship. If restructuring of the state administration is slow in a sense that excess civil servants are not shed, the government can only afford a low wages for its employees. This can lead to increasing willingness to accept bribes by the civil servants.

[12] Bardhan (1997) present a strikingly similar analysis to that of Johnson et al (1997). In his model, there are three equilibria, one with very high corruption, an unstable intermediate level, and a third with virtually no corruption. The outcome then depends on the realisation of some exogenous factors, such as initial conditions.

[13] These thoughts might be formalised as well. Consider a situation where government may either use tax or non-tax revenues to collect a fixed amount of revenues. Each form of revenue-raising is associated with its own measure of marginal cost of public funds (MCPF) (which encompasses the collection costs as well). It would probably be possible to illustrate that at the outset of a transitional period, the MCPF of tax revenue exceeds that of non-tax revenues, because of a large rise in the collection costs. Eventually, of course, the MCPF measures would converge and shift ordering, as the smaller efficiency losses from a tax (as opposed to non-tax) system begin to dominate.

[14] We touched upon the economic structure inherited from socialism earlier. This also has its implications for the overall structure of taxation: the share of corporate taxation is still very high and that of income taxation low, even though theoretical support for such a tax system is lacking.

[15] Shleifer (1997) provides some interesting evidence from such behaviour among the Russian authorities.

[16] As Tait (1992) points out, relying on the taxation of firms could be explained by the need to obtain resources from a large set of taxes (so that tax collection has more scope). Another illustration might concern some tax forms that imply losses in efficiency and equity (such as uniform indirect tax system in circumstances where redistribution through the income tax system is weak – see Burgess and Stern (1993)), but can be sustained by arguments referring to the need to fight evasion.

[17] A similar line of argument is applied by Boadway and Keen (1998), who show that enforcing only lax tax collection may serve as second-best way for the government to overcome time inconsistency problems in capital income taxation.

[18] A more realistic set-up would encompass distortionary taxation (e.g. in a sense that $R'(t) < 0$), but it seems that this extension does not affect the composition of investment.

[19] In the case where taxation creates distortions, there would be a trade-off in the decision over the tax rate. For a given *R*, a higher tax rate leads to faster restructuring, but if the higher tax rate discourages the aggregate level of investment in the economy in a sense that *R* falls, increasing taxation imposes a cost as well.

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