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Taxation Policy in Low-Income Countries

Christopher Heady*

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Abstract

This paper discusses the design of tax systems in developing countries, with particular emphasis on low-income countries. It outlines the directions of reform that many low-income countries have followed, often on the advice of the IMF or the World Bank, and considers whether they are justified in terms of theory and the practical constraints in low-income countries. Discussion of tax theory shows that there are sound reasons for much of the tax reform advice that is given, but it provides rather little support for the policy of full tax neutrality that is frequently recommended for developing countries. However, there are also serious political economy arguments against tax non-uniformity. The paper therefore concludes that the design of tax policy must also consider the strength of institutions and the rule of law.

Keywords: taxation, fiscal policy

JEL classification: O23, H20

* Fiscal Affairs Division, OECD, 2, rue André-Pascal, 75775 Paris Cedex 16, France.
Email: christopher.heady@oecd.org, fax: +33 (0)1 44 30 63 51

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1 Introduction

The purpose of this paper is to discuss the design of tax systems in developing countries, with particular emphasis on low-income countries. It outlines the directions of reform that many low-income countries have followed, often on the advice of the IMF or the World Bank, and considers whether they are justified in terms of theory and the practical constraints in low-income countries. These issues are important because, as discussed below, low-income countries are having great difficulties in raising money to finance important development expenditure. In addition, Chu, Davoodi and Gupta (2000) suggest that developing countries have not been as successful as developed countries in designing progressive tax structures, which would place a smaller burden on the poorest inhabitants.

The relevant tax theory has not changed significantly since the comprehensive survey of Burgess and Stern (1993). In view of this, the contribution of this paper lies in applying the theory to the particular features of low-income countries. In particular, it pays greater attention to conclusions that can be drawn from optimal tax models that incorporate some of the features that Burgess and Stern identify as characteristic of many developing countries. This paper is also more theoretically oriented than the recent paper by Tanzi and Zee (2000), which lays out a number of useful tax policy recommendations for developing countries, based on IMF country experience.

The emphasis in the paper is on the choice of tax rates and bases, without much regard to the nature of the institutions involved. It therefore does not address the growing view that many poor countries need to improve the quality of their tax administrations, and the legitimacy of government institutions more generally, if taxes are to be levied effectively (see DFID (2001)). It also does not consider the level of government that sets tax rates, collects taxes or ultimately receives the revenue. It therefore does not discuss fiscal federalism, which is of considerable importance for many developing countries and has been the subject of an extensive literature (see, for example, Bird and Vaillancourt (1998)). Nonetheless, there is some discussion of taxes that are mainly used by sub-central levels of government, such as property taxes.

Section 2 briefly describes the main features of tax systems in low-income countries and compares them to tax systems in developed countries. Section 3 describes the directions of reforms, which have frequently been undertaken in the context of structural adjustment programmes. Section 4 looks in more depth at the theoretical basis for these reforms and other features that are particularly important for low-income countries. Section 5 presents some conclusions.

2 Revenue patterns

Table 1 presents the latest available data for the revenue position and tax mix for a selection of low-income countries (as defined by the World Bank). The selection is based purely on the availability of recent data in the World Bank database, which originally came from the IMF's *Government Finance Statistics Yearbook.*

The first two columns of table 1 report the share of revenue in GDP and the budget deficit for 1998. The share of revenue in GDP shows a very wide variation, from 5.3% in the Democratic Republic of Congo to 44.7% in Lesotho. It is only in Lesotho that the share of revenue in GDP exceeds that for the OECD, and most low-income countries have a revenue share that is less than half that in the industrialised world. However, it should be noted that the figures for low-income countries relate only to central government revenues, while those for the OECD include revenues for sub-central levels of government (which make up about 20% of total revenues). The budget deficits also show a wide range, from 0.9% in Kenya and Myanmar to 10.8% in Mongolia, but it is striking that none of them show a budget surplus.[1] These figures show the need for low-income countries to raise more revenue, to both reduce their budget deficits and increase the resources that they can use to fight poverty. This means that tax policy is of fundamental importance in order to raise additional revenues in a way that does not worsen poverty or slow economic growth.

The remaining columns of table 1 report the composition of government revenue in 1997. In comparison with the OECD countries, the most striking differences are the low usage of social security taxes (where the largest values are from previously centrally planned economies), the high revenue from trade taxes (which are so small in industrialised countries that the OECD does not compute an average) and the high levels of non-tax revenues. There is also a generally lower share of income tax in total revenue. Tanzi and Zee (2000) show that developing countries tend to collect a substantially higher share of their income tax revenue from companies than individuals, and so it is likely that it is personal income tax that is mainly responsible for this low share.

These general differences in revenue shares in comparison with industrialised countries should not mask the substantial differences between low-income countries. There is a particularly wide range in non-tax revenue, in part because of the large differences in the value of mineral deposits between countries.

The differences in revenue patterns between low-income countries and the industrialised world are easy to explain in terms of administrative convenience. The high proportion of the workforce employed by well-established companies facilitates the heavy reliance placed on social security taxes in industrialised countries and personal income taxes. In contrast, the low-income countries' reliance on international trade taxes reflects the relative ease of observing and valuing goods as they cross international frontiers, while the greater reliance on company income tax reflects the greater ease of collecting taxes from companies than individuals. However, there are other, non-administrative forces at work. The high non-tax revenue in some countries results from mineral deposits, while trade taxes were often introduced as part of a strategy of import substitution. Also, the use of export taxes in addition to import duties by some developing countries reflects in part their export of agricultural products in which they have some monopoly power, although this has fallen recently for most countries as explained in the next section.

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1 If countries are aiming to achieve (near) budget balance over the medium-term, it should be expected that they would run budget surpluses in some years.

Table 1

Revenue position and tax mix for selected low income countries (1997/8)

Country	Revenue as % of GDP	Deficit as % of GDP	*Income Taxes as % of revenue*	*Social Security Taxes as % of revenue*	*Sales Taxes as % of revenue*	*Trade Taxes as % of revenue*	*Other Taxes as % of revenue*	*Nontax Revenue as % of revenue*
Azerbaijan	19.3	3.9	20	23	41	8	2	5
Burundi	13.7	5.5	22	8	45	16	2	7
Cameroon	n.a.	n.a.	17	0	25	28	3	27
Congo, Dem. Rep.	5.3	6.5	25	0	18	28	9	20
Congo, Rep.	29.4	8.6	9	0	5	9	0	77
Côte d'Ivoire	21.6	1.3	20	6	17	50	3	4
Georgia	5.6	2.5	9	0	55	13	0	22
India	11.6	5.2	27	0	27	22	0	25
Indonesia	16.8	2.4	57	3	28	3	1	9
Kenya	26.2	0.9	34	0	37	15	1	14
Lesotho	44.7	3.7	15	0	12	52	0	21
Madagascar	8.7	1.3	18	0	24	53	2	2
Mongolia	19.5	10.8	26	19	28	5	1	20
Myanmar	7.8	0.9	18	0	30	10	0	42
Nepal	10.6	4.7	13	0	37	28	4	16
Nicaragua	n.a.	n.a.	11	13	43	21	6	6
Pakistan	15.9	6.3	21	0	29	22	8	19
Sierra Leone	10.2	5.8	17	0	33	46	0	3
Vietnam	18.2	1.1	22	0	33	22	10	14
Yemen, Rep.	36.8	2.3	16	0	7	9	2	66
Zimbabwe	29.4	5.0	43	0	24	20	2	10
OECD Average	43.5	n.a.	31	22	28	n.a.	6	13

Source: World Bank, *World Development Indicators*, OECD *Revenue Statistics*, and author's calculations.

Note: First two columns contain data for 1998 (1997 for the OECD), and the remaining columns for 1997.

3 Directions of reforms

Structural adjustment programmes have been widespread since the IMF introduced its Extended Fund Facility (EFF) in 1974, followed by its Structural Adjustment Facility (SAF) in 1986 and its Enhanced Structural Adjustment Facility (ESAF) in 1987 and have been a major force in determining the direction of tax reforms in low-income countries. Since 1987, the IMF has approved an average of approximately ten new programmes per year under these facilities, and there is no sign of this rate declining. In 1999, the IMF replaced the ESAF with the Poverty Reduction and Growth Facility

(PRGF) for low-income countries.[2] As the name suggests, this facility puts a greater emphasis on poverty reduction. It also provides for greater flexibility of in its fiscal targets and greater national 'ownership' of policy (see Adam and Bevan (2001)).

For many countries, the structural adjustment programmes have arisen out of economic crises, normally involving substantial government budget deficits and balance of payments difficulties. In these circumstances, the government will approach the IMF and possibly the World Bank to request loans. The loans that are granted are subject to the government following particular economic policies that are expected to correct the major imbalances in the economy. It is this set of economic policies that constitutes the structural adjustment programme. ESAF conditionality was widely regarded as excessively rigid and showing insufficient concern for the poor. The recent moves to greater flexibility and concern for poverty should permit countries to have greater freedom in the taxes that they choose provided that they meet the agreed target for the fiscal deficit.

Most programmes involve two distinct components. The first is the stabilisation phase, in which the imbalances are reduced. This is usually achieved by reductions in government expenditure and controls on credit creation. However, increases in tax revenue can also play a role in achieving macroeconomic stability. Table 2 shows that many low-income countries have reduced their budget deficits during the 1990s, although table 1 shows that some remain high. It is interesting to note that this did not always involve an increase in the revenue share of GDP, implying that expenditures must have been cut. As such expenditure cuts probably reduced services to the poor and/or infrastructure investments that are necessary for growth, it is arguable that stabilisation should have concentrated more on raising revenue than cutting expenditure. The dangers of cutting expenditures through measures such as cash budgeting are discussed in Adam and Bevan (2001).

The second component is the structural adjustment phase, in which the basic structure of the economy is altered in an attempt to improve the long-term performance of the economy. This second phase, the real structural adjustment, can itself often be divided into two parts: (i) policies to increase the supply of tradable goods (both exports and import substitutes) and (ii) policies to reduce government intervention and improve efficiency in the economy as a whole. The tax element of these policies has generally involved a movement towards "neutrality", so that the tax system has a smaller effect on the allocation of resources in the economy.

As taxes on international trade are seen as having a major distortionary effect, countries are frequently advised to reduce the rates of import duties and to make them more uniform. There is also advice to reduce and often eliminate export taxes because they discourage exports. These policy recommendations often encounter considerable opposition. It can be argued that export taxes exploit monopoly power in primary export markets, but this should be viewed with some suspicion because of the threat of new entrants into the market if world prices rise too high. The reduction of import duties often runs into serious political opposition, with the domestic producers of protected goods using the threat of large-scale unemployment as a consequence of trade liberalisation. However, trade liberalisation normally increases export potential and

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2 The information in the paragraph is taken from IMF (2001).

opens up new job opportunities, so a well-phased reduction in protection can improve social welfare considerably. Reductions in trade taxes can also lead to improvements in tax compliance, and so not reduce revenue by as much as might be expected. Table 2 shows that many low-income countries have, indeed, succeeded in reducing their dependence on trade taxes, although the absolute amounts of revenues from these sources may have increased as a result of growth, improved compliance or improved administration.

Any lost revenue from reducing trade taxes must be balanced by increases in tax revenue elsewhere. A common recommendation is to increase the revenue from domestic commodity taxes, which are less distortionary than trade taxes. Indeed, the replacement of an import duty on a consumer good by a domestic sales tax at the same rate will yield at least as much revenue as before without raising prices. This is because the base of the tax is broadened to include domestic production as well as imports without increasing marginal cost. More generally, a good deal of additional revenue can be obtained by broadening the base of domestic sales taxes, which often have large numbers of special exemptions. This broadening of the sales tax base is, in itself, a move towards tax neutrality because it is subjecting a wider range of goods to the same rate of tax. The distributional arguments for and against such exemptions, or reduced rates, are discussed in the next section. Table 2 shows that several low-income countries have increased the revenue share of sales taxes (including both general sales taxes and domestic excise duties). However, several have reduced the revenue share of such taxes, increasing instead the share of income taxes and/or the share of non-tax revenue.

VAT is often recommended as a replacement for existing commodity taxes for three reasons: it broadens the tax base by including services, which have usually not been taxed before; it eliminates the cascading involved in turnover taxes and some manufacturers' sales tax systems; and its self-enforcing mechanism means that compliance is higher. However, VAT does have problems if introduced into some low-income countries. It is a difficult tax to administer, for both the taxpayer and the tax authorities. This has ruled it out as a possibility in some countries, and a wish to reduce its administrative complexity has usually led to advice that only a single rate of VAT should be used, the only exception being zero-rating for exports. Such a single rate VAT does not distort consumer choice between alternative goods, and so is consistent with the idea of tax neutrality. The only non-uniformity in domestic commodity taxes would then be the excises on alcohol, tobacco and petrol and the exemptions from VAT that are granted to some traders mainly for reasons of administrative convenience. The excises on alcohol, tobacco and petrol are seen as justified non-neutralities, either because of the external costs imposed by their consumption, or because their low price elasticity enables large amounts of revenue to be collected with little distortionary cost. However, governments should also be concerned about the distributional impact of these taxes, especially on petrol as high taxation can increase the cost of rural transport and so harm the poor.

Table 2

Changes in Revenue Position and Tax Mix for Selected Low Income Countries

Country	Revenue as % of GDP	Deficit as % of GDP	*Income Taxes as % of revenue*	*Social Security Taxes as % of revenue*	*Sales Taxes as % of revenue*	*Trade Taxes as % of revenue*	*Other Taxes as % of revenue*	*Nontax Revenue as % of revenue*
Burundi	-4.5	2.2	3	7	20	-24	-6	1
Cameroon	n.a.	n.a.	-5	-8	7	-10	-2	19
Congo, Dem. Rep.	-4.8	-5.7	-5	-2	6	-10	4	8
Congo, Rep.	6.9	-5.5	-40	-4	-3	-4	-3	53
Côte d'Ivoire	-0.4	-1.6	7	0	-8	7	-3	-4
India	-0.7	-2.3	9	0	-15	0	-1	8
Indonesia	-2.0	2.8	-21	3	19	-4	0	4
Kenya	3.8	-2.9	5	0	-2	-4	0	1
Lesotho	5.7	2.7	2	0	2	-9	-2	7
Madagascar	-2.8	0.4	1	-11	-15	25	-1	0
Myanmar	-2.7	-4.2	15	0	-12	-5	0	2
Nepal	2.2	-2.1	7	0	0	-5	-4	0
Nicaragua	n.a.	n.a.	3	4	6	-4	-2	-4
Pakistan	-3.2	0.9	7	0	-5	-12	8	1
Sierra Leone	6.1	4.0	-5	0	17	-4	-2	-7
Zimbabwe	5.3	-0.3	-3	0	-4	16	1	-10

Source: World Bank, *World Development Indicators* and author's calculations.

Note: First two columns contain changes from 1990 to 1998, remaining columns report changes from 1980 to 1997.

The traditional argument against such a single rate VAT is its regressivity. In some developed countries, such as the U.K., this is offset by applying a lower rate or even a zero rate to such items as food and children's clothing. However, this is typically not advised for developing countries because of administrative problems, especially if VAT refunds have to be made to a large number of traders. Instead, an exemption of small-scale agriculture can be used to give favourable treatment to the food consumed mainly by the poor, as has been done in Uganda and Zambia (DFID, 2001). This has the added benefit of eliminating the administrative costs of assessing large numbers of small farmers for VAT.

The reforms to direct taxes are usually less far-reaching. There is a lack of scope for a mass system of personal income taxes in many low-income countries because such a high proportion of the population is extremely poor. However, in those countries at a sufficiently high level of development to operate a significant personal income tax system there is often scope for reducing exemptions (broadening the base and promoting neutrality again) and simplifying the rate structure in much the same way as has been happening in industrialised countries. This can often improve equality as the exemptions usually relate to items that are not relevant to the poor. Similar modifications, together with improvements in accounting practices, have also often been

recommended for company taxation. There has been a general tendency to encourage lowering the rates of both personal and corporate income taxes, because of concerns over tax evasion and disincentives. However, there is little evidence on the effects of rate reductions on both of these concerns, and it is important to remember that personal income taxes are usually the only part of the tax system that is significantly redistributive. Thus the choice of income tax rates is difficult with the current lack of information.

A final aspect of tax reforms that is worth mentioning here has not been the result of domestic political pressure rather than the conditionality imposed by the IMF or the World Bank. The unpopularity of property taxes has prompted local governments in many countries to look for other sources of revenue,[3] and these have frequently been in the form of service charges. The attraction of service charges is that the public sees them as directly related to the service they receive, and so are less likely to complain about them. For example, if the local government makes charges for collecting unusually large quantities of garbage, it is seen as quite reasonable that they should charge a fee. In many countries, charges had been made for services for a long time but were not sufficient to cover the costs. The move towards service charges has then simply been a matter of raising the fees to cover the full cost. Obviously, service charges cannot be levied on all services. In many countries, basic education is provided free of charge. Also, some services are true public goods, such as street lighting, and cannot be charged for.

The setting or raising of service charges for local government services can be criticized for several reasons. First, many of the services provided, such as adult education or recreational facilities, are seen as "merit goods" whose use is beneficial to society. The setting or raising of charges for these services discourages their use, and this can be seen as harmful. Second, the setting or raising of charges makes it very difficult for poor people to make use of these services, and adds to the exclusion of such people from society. Third, even if poorer households use little of the service, the sharp and sudden increases in prices that sometimes accompany stabilization can cause considerable distress. Finally, it is important that the charging of service fees should not take place in an institutional setting that pressures each sector to cover its costs. Funding from taxation should be accompanied by reasonable service charges, not replaced by excessive charges.

Closely related to the idea of service charges is the idea of benefit taxation: to directly tax the people who benefit from local government expenditure. For example, many publicly provided services in urban areas, such as the provision of roads and drainage, increase the value of private land. Benefit taxation involves taxing some of that increased value to pay for the services. The design of these taxes requires detailed knowledge of each individual project and involves considerable skill. An example of a system of benefit taxation that has worked well is provided by the "valorization" tax in Colombia (described in Bird, 1992), which has been used to finance a considerable part of public investment in the city of Medellin. A valorization tax is a tax on the increase in the value of land and buildings that results from improved public services.

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3 Kelly (1999) comments on the political difficulties of collecting revenues through property taxes and reports that the ratio of property tax revenue to GDP in Kenya fell from 0.37 percent in 1990/1 to 0.30 percent in 1994/5.

Properly designed benefit taxation does not suffer from the disadvantages of service charges. It is generally levied on landowners, who cannot usually be considered as part of the poor. Also, because it is designed to still leave the landowners with an overall benefit from the project, it does not discourage their participation. This suggests that benefit taxation could be applied more widely to the financing of urban infrastructure projects.

4 The theoretical basis of reforms

The purpose of this section is to examine the theoretical basis of the reforms discussed above. While all the main issues are covered here, the analysis of several issues involves questioning whether the assumptions that lie behind the policy recommendations are appropriate to developing countries.

A large part of tax theory for developed countries rests on two fundamental assumptions. First, it is generally assumed that the economy would produce an efficient (Pareto optimal) allocation of resources in the absence of distortionary taxes. Second, it is typically assumed that there is a large variety of tax instruments available to the government: specifically, taxes on all transactions and direct payments to households (which can be combined to produce the equivalent of progressive income taxes). Under these assumptions, the standard tax reform recommendations are straightforward to justify. The idea that the pre-tax economy is efficient leads naturally to the goal of tax neutrality. The avoidance of taxes on international trade follows from the desirability of production efficiency. Also, the assumed availability of direct payments to households means that one does not have to worry about the distributional consequences of uniform sales taxes. Strictly speaking, even these assumptions do not lead automatically to the desirability of uniform commodity taxes. Differences in the degree of complementarity between individual goods and leisure lead to non-uniform optimal commodity taxes. However, the welfare loss of neglecting such optimal non-uniformities is very small, provided that the direct payments are set at optimal levels. The basis of these arguments for developed countries is explained more fully in Heady (1993) and will not be repeated here. Instead, the analysis will concentrate on the extent to which these results apply to low-income countries.

The issue of whether the tax neutrality recommendations are appropriate to developing countries depends crucially on whether the assumptions of developed country tax theory are appropriate to developing countries. In some respects they are clearly inappropriate. Some countries are unable to administer direct payments to households. Many countries have even greater restrictions on their tax powers: the nature of peasant agriculture frequently makes it impossible to tax many agricultural transactions. It is therefore necessary to use a theory of restricted taxation in evaluating tax policy for developing countries. Tax restrictions are not the only special feature of developing countries. The prevalence of market failures, particularly in labour and capital markets, is much greater than in developed countries. These market failures mean that the pre-tax economy is not efficient, that resources need to be re-allocated and that tax neutrality is not necessarily a desirable aim.

However, the mere recital of false assumptions is not sufficient to discredit policy advice. The critics must show that altered assumptions lead to altered conclusions, and ones that are sufficiently different to justify the additional administrative costs that would frequently be implied. We shall therefore look in turn at the consequences for policy of allowing for difficulties in administering direct payments, tax restrictions and market failures. Issues related to income taxation are then discussed. Finally, land taxation is considered as a way of raising revenue in the face of these difficulties.

4.1 The inability to administer direct payments

The possible inability of governments in low-income countries to make optimal direct payments to households has important implications for the desirability of uniform sales taxes. The standard argument for sales tax uniformity is based partly on its efficiency properties of not distorting consumer choice and partly on the observation that direct payments to households are usually superior on distributional grounds to consumer price subsidies (or lower rates of tax). The intuition behind this result is that richer people will consume more of the subsidised (or lightly taxed) goods and therefore benefit more from the policy than poorer people. The direct payment is better because it will at least give everybody the same benefit, and can sometimes be tailored to target particularly vulnerable demographic groups.

This argument is analysed in the practical context of tax reform in the Czech Republic by Heady and Smith (1995). They show that the distributional benefits of applying a lower rate of VAT (5% instead of the standard 23%) could have been achieved by imposing the standard rate on all goods and services, and using the resulting extra revenue to increase personal income tax allowances and three state benefits: pensions, child benefit and unemployment benefit. However, this alternative approach did result in an increase in the overall marginal tax rate (income tax, social security contributions, sales taxes and benefit withdrawals) of between 1 and 3 percentage points, depending on household income. Such an increase could discourage labour supply. This contrasts with the theoretical result of Deaton and Stern (1986), who show that direct payments can be designed to achieve the distributional goals without increasing the distortion of labour supply. The difference between theory and practice probably arises because of the limited range of direct subsidies in use in the Czech Republic.

The applicability of the uniformity result clearly depends on the government's ability to administer direct payments, and it can be argued that many countries lack the administrative capacity to identify the recipients and prevent fraud. Thus, this is an example of a case where the specific circumstances of a low-income country may prevent a standard public finance result from being directly applicable. However, this does not mean that the theoretical result has no significance for low-income countries. Some countries may be able to administer direct payments or operate anti-poverty programmes such as food-for-work. For those that cannot, the result points to the need to target consumer subsidies as well as possible. Subsidies should be applied to specific goods with a low, or even negative, income elasticity of demand. More general subsidies or low VAT rates, such as those applied to food, may fail to achieve much redistribution because of limited differences in consumption patterns between the rich and the poor across broad categories of goods.

The importance of direct payments is illustrated by Siqueira's (1995) results from calculating optimal sales tax rates for Brazil. She contrasts the case where there is a uniform direct payment to all households with the case where such a payment is not possible. Even the uniform payment to all households does not produce uniform sales taxes, because the rural population has different consumption patterns from urban inhabitants. As the rural population is poorer, and the direct payment is not differentiated between sectors, differential sales taxation still has redistributive power.[4] However, without the direct payment, sales tax rates become much more differentiated, and the optimal tax on food is negative, and very large if there is any serious aversion income inequality. If it had been possible to disaggregate the food category within the model, it is certain that this subsidy would be focussed on a small number of food items of particular importance to the poor.

Thus an inability to implement direct payments to households means that reduced rates of tax, or even subsidies, on particular goods can be justified by concern for the poor. This is recognised to some extent by the common practice of exempting some foods from commodity taxation. However, it is possible that better targeting could be achieved by special treatment of particular foods or other items consumed heavily by the poor. The possibilities will vary from country to country, depending on the differences in patterns of expenditure by income class.

4.2 Other restrictions on taxation

The consequences of further restrictions on taxation have been the subject of considerable study. In the context of many developing countries, the most important tax restriction is the difficulty in taxing trades within agriculture. Such a tax restriction destroys the logic behind the standard production efficiency result, because producer prices can no longer be manipulated to ensure production efficiency without a direct effect on consumer prices and hence welfare. Stiglitz and Dasgupta (1971) and Heady and Mitra (1982) show that commodity tax restrictions result in a divergence between domestic market prices and shadow prices (the prices at which public sector activities should be valued). However, shadow prices should still equal international prices for traded goods in which the country has no monopoly power. These two results imply that domestic market prices and international prices should diverge: there should be trade taxes or subsidies on agricultural inputs and outputs. In other words, an inability to tax agricultural transactions directly leads to the desirability of taxing agriculture through its trades with the rest of the world.

The next question is whether these theoretically optimal trade taxes are of any significant size. Heady and Mitra (1987) have used numerical models based on data from Turkey to investigate this issue. It was found that modest but significant trade taxes were optimal for a range of plausible parameter values. However, this did not mean that the high rates of trade taxes that are often observed can be justified by these arguments.

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4 This does not contradict the Deaton-Stern result, as the optimal direct payments in this case would have different for rural and urban households. Instead, it illustrates the consequences of an inability to set the direct payments at their optimal levels.

Of course, the effect of tax restrictions is not limited to the agricultural sector or trade taxes. The informal sector is always hard to tax, as discussed in DFID (2001). Also, tax restrictions can affect other domestic taxes. Siqueira (1995) demonstrates the effects of being unable to tax or subsidise food in Brazil. This restriction could arise as a result of the inability to tax trades within the agricultural sector, combined with the difficulty of maintaining different food prices in rural and urban areas. The effect of this restriction is to lower sales taxes generally, because revenue is no longer needed to finance the food subsidy. However, there is an increase in the differences in the tax rates on different goods, as this is the only way that the government can now redistribute income.

4.3 Market failures

Turning to the recognition of market failures, the labour market has often been cited as a significantly distorted market in developing countries and its relevance to tax design is analysed by Heady (1987) and Heady and Mitra (1987). There are two types of distortion that can be considered: (i) the fact that, in some countries, migrants from rural areas are unable to sell the land they occupied restricts the movement of labour from agriculture to industry, and (ii) the fact that, in many countries, the urban wage in "modern" manufacturing is set above market clearing levels produces an incentive for people to leave agriculture to seek urban jobs despite the existence of urban unemployment and underemployment. Some countries may be affected by both problems. Although the two distortions have opposite effects on migration out of rural areas, they both lead to the conclusion that too few people are employed in the modern manufacturing sector. This leads to the conclusion that modern sector employment should be subsidised. The problem for tax theory is then to design taxes that will raise the money to finance the subsidies.

In the case of distortion (i), the obvious target for taxation is agriculture because that will encourage the movement into manufacturing. However, the difficulties of direct taxation of agriculture have already been discussed. It therefore has to be taxed indirectly, through taxes on its trades with other sectors, something that is not consistent with uniform taxation and may involve the taxation of international trade. In the case of distortion (ii), agriculture should not be taxed more than other sectors because there are already too many people in urban areas. Indeed, it can be shown that the per capita tax burden in agriculture should equal the average per capita tax burden in urban areas (averaging over the formal and informal sectors, and subtracting the value of any employment subsidy). It is therefore the people in the "informal" urban sector that should be taxed in order to discourage further migration and subsidise formal employment. The very nature of informal employment means that income taxes cannot be used. The only way of taxing the informal sector is by placing particularly heavy taxes on the sort of goods that are consumed by informal sector workers. This clearly rules out the use of uniform sales taxes. A policy of taxing informal sector workers may seem very inequitable, but Heady (1987) uses a numerical model to show that it can be desirable, even for a government that is concerned about inequality. The real difficulty is identifying the goods to tax and enforcing them.

4.4 Income taxation

The policy direction of moving to broad bases and lower tax rates for income taxes on both individuals and companies has already been mentioned in section 3, and there is no research that suggests this is not suitable for developing countries, provided the changes are designed in such a way as to avoid revenue loss. If anything, the large opportunities for tax evasion in developing countries suggests that income tax rates should be lower than in the developed world.[5] Also, many developing countries have very narrow tax bases, with large numbers of exemptions, many of which have been designed to protect the interests of powerful groups. In these circumstances, base broadening can have the triple advantages of raising revenue, improving economic efficiency and achieving greater redistribution. As with developed countries, administrative ease and theory point in the same direction as far as the rate structure of personal income tax is concerned: a single rate of income tax with a high exemption level will be administratively feasible (by reducing the number of tax payers and allowing withholding at source) and achieve even more redistribution than an income tax system with sharply increasing marginal rates.

Many developing countries have different rates of corporate income tax for different sectors.[6] These are typically a legacy from a period when the government's role in the allocation of resources was more significant. They distort the market mechanism and increase administrative and compliance costs without producing any improvement in revenue collection or income distribution. Their removal is a prime example of a situation where tax simplification can do nothing but good.

Many countries also apply different rates of corporate income tax to companies of different size. These have more justification than sectoral differences as they are often designed to compensate for disadvantages that small businesses suffer, in terms of tax compliance costs and poorer access to capital markets. However, they can distort competition between large and small firms and provide incentives for firms to split into smaller units in order to benefit from the lower taxes. It would therefore be better if simplified tax procedures and moves to improve capital markets tackled these disadvantages more directly.

Despite these widely accepted advantages of broad tax bases and low tax rates, there is still the argument that income taxes need to be adapted to take account of the market imperfections in low-income countries. Perhaps the most powerful argument is that company taxation should be designed to provide incentives for inward foreign direct investment (FDI). Such FDI could contribute to the increase in productivity by introducing modern machinery and providing skills to a currently poorly trained workforce.

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5 This does not imply that the governments should not take other actions to improve tax compliance, such as the strengthening of tax administrations and improvements in government performance that increase its legitimacy and convince the taxpayer that they will receive something in return.

6 Tanzi and Zee (2000) report such differential rates in Egypt, Paraguay, Vietnam and Zambia.

The issues here are complex and cannot be discussed in full in the confines of this paper, but an outline of the relevant considerations can be sketched. A more detailed analysis of the case for granting tax incentives to FDI, and the advantages and disadvantages of alternative incentive mechanisms, is provided in OECD (2001). The first point to bear in mind is that tax is only one of a large number of factors that multinational firms take into account in deciding where to invest. What is more, as many of the tax incentives relate to company income tax, tax only becomes an issue if the other factors are sufficiently positive for the firm to expect the project to be profitable. As a result of this complex of considerations, it has often been argued that tax incentives for FDI are relatively ineffective. However, recent evidence suggests that tax incentives can have a noticeable effect on the location of investment, especially between locations that are similar in other respects.

There is, therefore, growing support for the idea that tax incentives can be effective in attracting FDI. However, there is also recognition of the fact that neighbouring countries, which may often offer similar non-tax attractions, could compete against each other in offering tax incentives in a way which provided a benefit to the investor without increasing the total amount of FDI allocated to the region. Despite this risk, many countries do offer tax incentives to FDI in such forms as tax holidays, accelerated depreciation or investment tax credits. The question that countries have to answer is whether the additional investment created by such incentives is really worth the revenue forgone from investments that would have been made without the incentives. This is often very difficult to judge, and the answers are likely to vary from country to country.

4.5 Taxation of land

Given the difficulty of taxing trades in agriculture, taxation of land could be seen as a natural alternative. Indeed, land taxation is particularly attractive in many developing countries because ownership is often strongly concentrated amongst the rich, especially in 'settler economies' such as Zimbabwe. In addition, from a theoretical point of view, land is in fixed supply and so the incidence of the tax will be on the landowner and the tax will not generate an excess burden. Against this, there is the argument that land taxes increase the risk of landowners, as the tax is certain while the revenue is not. This suggests that an output tax might be preferable, or at least should be used in conjunction with a land tax. This is certainly a good idea if output taxation is feasible, but the discussion above suggests that it may often not be.

Despite these theoretical advantages, there are technical and political difficulties in taxing land. The technical difficulties arise from variations in land quality and from making sure that the right person pays the tax. For a land tax to be horizontally equitable, the tax should be paid by the landowner and depend not only on the land area but also on its value. The first issue can arise when land is rented on long leases. In such cases, the levying of tax on the occupier of land (which is usually administratively easiest) will result in the tax being borne by a (possibly poor) tenant rather than the landowner until the lease can be renegotiated. The second issue can cause serious measurement problems, especially when there is not a well-developed land market. However, some countries do have yield data for agricultural land that is used in tax assessments.

Nonetheless, problems can arise even in these countries. For example, the agricultural tax in China makes use of the records of grain yields from each plot of land. The difficulty

arises because some land near cities has been switched from grain production to market gardening. This has increased the profitability of the land, arising from a natural locational advantage (transport problems prevent farmers further from the cities from taking up the cultivation of these more perishable crops). In theory, this should lead to an increase in the tax on the land used for market gardening, but the use of grain yields as a measure of quality prevents this from happening and generates considerable horizontal inequality.

Another technical difficulty arises from the possibility of land improvement, resulting from investment by the landowner. As such improvements are not inelastically supplied, it can be argued that they should be excluded from the land tax in order to avoid discouraging an activity that contributes towards economic growth. If it were excluded, the base of the land tax would be "unimproved land". This, however, leads to three other problems. First, it is hard to be absolutely clear about the point at which land changes from being "unimproved" to being "improved". Second, the time at which some pieces of land became improved will be many years ago, and it can be difficult to obtain records on what its productivity then was. Third, rich people could invest in land that has been greatly improved, thus minimising their tax burden and creating apparent horizontal inequity.[7]

Political opposition that uses the technical problems, and the apparent inequities that they produce, to discredit the tax, compound these difficulties. This political opposition was mentioned in section 3, in relation to the use of service charges and benefit taxation to provide an alternative source of revenue for local governments. This is a particular problem with land taxes because they are a relatively visible form of taxation, and they are aimed to a large extent at the rich and powerful. These difficulties are not confined to low-income countries. The proportion of revenue raised by property taxes (including land taxes) in the OECD has fallen over recent years. Nonetheless, it still appears to be higher in OECD countries than in low-income countries.[8] Also, there is a considerable range of property tax revenues in developed countries, which shows that land tax can raise substantial revenues if it is well designed and if political opposition is well handled. Low-income countries, therefore, should give serious thought to raising more revenue in this way, especially in view of the difficulties of raising other tax revenues.

5 Conclusions

This discussion of tax theory shows that there are sound reasons for much of the tax reform advice that is given but it provides rather little support for the policy of full tax neutrality that is frequently recommended for developing countries. This is not to say that developing countries that ignore such recommendations are following optimal policies, or even that they are following policies that are better than the recommended tax neutrality. What it does imply is that countries might be able to do better than the tax neutrality policy with a carefully designed policy that included non-uniform sales taxes and modest trade taxes. Such a carefully designed policy needs accurate and up-to-date data for its formulation, and this is always a problem for developing countries. At a minimum, it requires data on

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7 However, this could encourage rich landowners to sell land they do not value so highly, thus increasing the amount of land available for the rest of society.

8 It is only possible to say "appears" because the data from low-income countries usually does not include revenue of local governments and so may miss some property tax revenue.

household income sources and consumption patterns in order to analyse the effects of policy changes on income distribution, and an input-output table in order to examine how price changes might spread across the economy. Many low-income countries do not have such data, but the costs of obtaining them may well be quite modest in comparison to the social benefits of a better tax system.

Meanwhile, it could be argued that with a lack of data, the sensible policy is to follow tax neutrality. The answer to this will clearly depend on the nature of data availability in each country. A sensible policy also needs to be administratively and politically feasible, and this point is often used as an argument for tax neutrality. For example, it would obviously be impractical to have a large number of different commodity tax rates, especially if VAT is being used. However, well-targeted non-uniformities in taxes could well be practicable. Also, there is no administrative argument against trade taxes: their ease of administration is the main explanation of their current widespread use (as well as their politically desirable, but usually economically costly, protective effect on domestic industries).

More serious, perhaps, are the political economy arguments against tax non-uniformity. While a limited number of uniformities might be possible to administer, they can give rise to considerable lobbying and litigation from firms that want their products to benefit from lower tax rates. In Pakistan, this has been a serious consequence of their differentiated sales tax regime.

A broader political economy argument relates to the freedom that governments can be given in setting tax rates. If governments really have the interests of their citizens at heart, giving them the power to set differentiated tax rates could result in improved growth and poverty alleviation. However, if the government is under the control of special interest groups, it could abuse the tax system to help its friends, rather than the country as a whole. In such a situation, it might be better to have a constitutional provision restricting the government's power to set differentiated taxes. More positively, the strengthening of democratic institutions, the rule of law and the reduction of corruption would all contribute to a situation where the tax system could be used to its fullest extent in the pursuit of economic growth and the reduction of poverty.

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UNU World Institute for Development Economics Research (UNU/WIDER)
Katajanokanlaituri 6 B, 00160 Helsinki, Finland

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