Reducing the fiscal deficits analyzed in the previous chapter will require some combination of lower public spending and higher public revenue. The following chapters discuss lowering and redirecting public spending. This chapter examines the scope for increasing and restructuring public revenues.

Ultimately public spending is limited by the ability of the public sector to transfer resources from the private sector through taxes or charges on current economic activities, or to issue public debt secured by taxes or charges on future economic activities. Other sources of finance are either temporary or corrosive, as in the case of money creation in excess of real economic growth, or of minor importance, as is income from public property, licenses and fines, and other nontax revenues (see Figure 4.1). This Report focuses, therefore, on taxes and user charges (or public prices) as the primary means of financing public spending.

Taxes are unrequited, compulsory payments collected primarily by the central government. In contrast, user charges are payments in exchange for specific publicly provided goods and services and are collected primarily by state-owned enterprises and local governments. The relative importance of these two sources of public revenue is difficult to establish because the financial accounts of state-owned enterprises or local governments are rarely available on an aggregate, nationwide basis. Rough estimates exist for a few countries, however. In Thailand during 1977–83 the gross revenue of state-owned enterprises was estimated to be of the same order of magnitude as the central government’s tax revenue. In Bangladesh gross revenue from state-owned enterprises in fiscal 1985–86 was estimated to be almost double central government tax revenue. The importance of user charges varies from country to country and depends on the number of publicly provided goods and services outside the budget. Nevertheless, user charges are an important component of public revenue—even though only a fraction of the funds they generate is passed to the central government as income tax or as a transfer of the operating surplus of state-owned enterprises.

In principle the criterion for choosing between taxes and user charges is straightforward. Charges should be used wherever a publicly produced good or service can be sold and should reflect some measure of the cost—preferably the incremental cost—of production (see Box 6.1). This is an efficient way to fund necessary public expenditures. Tax financing should be reserved for cases where user charges are not appropriate: to pay for public goods whose costs or benefits cannot be assigned to individuals, to compensate for market failures (such as externalities), or to achieve a distributional goal (such as alleviating poverty).

User charges can provide substantial revenue. A recent study on Sub-Saharan Africa put the proceeds from modest increases in charges at roughly 20 to 30 percent of central government revenue or 4 to 6 percent of GDP (see Box 4.1). In practice, though, taxes remain the principal source of income for central governments. Tax reform has therefore become an increasingly important aspect of structural adjustment and stabilization. Indeed,
to be successful, tax reform must serve both these goals at once. However, this may not always be the case: lower international trade taxes in pursuit of structural adjustment can run afoul of revenue and other constraints; higher taxes aimed at reducing budget deficits can hinder the efficient allocation of resources or make the poor worse off.

This chapter examines the scope for reforming the main central government taxes. User charges are discussed in more detail in Chapters 6, 7, and 8. Price ceilings, quantity restrictions, and other devices analogous in some ways to taxes are not covered; nor are taxes that generate little revenue (poll taxes and stamp duties, for instance). Taxes on property, which are often important at the local level, are discussed in Chapter 7.

Patterns of taxation

Patterns of taxation differ from country to country both in level and composition. These are considered in turn.

Tax levels

On average, taxes have risen slightly as a proportion of GDP since 1975 in all broad country groups (see Figure 4.2, top). However, this disguises wide variation from country to country. The tax-GDP ratios for Botswana, Italy, and Yemen Arab Republic grew much faster than the average of their groups, while the ratios for Sri Lanka, Venezuela, and Zimbabwe fluctuated sharply from year to year, and those for Brazil, Canada, and Turkey were lower in 1985 than in 1975.

Tax-GDP ratios appear to rise with per capita income, but the wide variation across countries suggests that income growth is only a partial explanation. For example, the average tax-GDP ratio for countries in Sub-Saharan Africa, which are primarily low-income, is similar to that for countries in Latin America and East Asia, which are primarily middle-income—and higher, than the average ratio of South Asia’s low-income countries (see Figure 4.2, bottom).

Tax composition

Tax revenue is usually considered under two headings: direct taxes on individuals and firms, and indirect (commodity) taxes on goods and services. Direct taxes include taxes on personal and company income as well as other direct taxes, consisting mainly of social security contributions, payroll taxes, and taxes on property and wealth. Indirect or commodity taxes include domestic taxes, such as broadly based taxes on turnover, value added, and sales, as well as excises on specific goods; and taxes on international trade, namely import duties, export taxes, and cesses.

Difficulties over definitions and lack of data make it hard to compare tax patterns across countries. Nonetheless two important points seem clear. First, trade taxation is insignificant in industrial countries; second, developing countries rely very heavily on commodity taxes (see Figure 4.3). Low-income countries collect almost three-fourths of their tax revenue, and middle-income countries almost one-half, through commodity taxes. Excises and import taxes account for approximately two-thirds of this.
Box 4.1 Revenue and user charges

The growing experience with user charges in developing countries suggests that their benefits have been understated and their costs exaggerated (see Chapter 6). The main advantages are efficiency, equity, and revenue, as discussed below.

Efficiency

Unlike taxes, most user charges do not involve a trade-off between revenue and efficiency. Setting the price of a publicly produced good or service equal to marginal cost is often efficient (for some qualifications see Box 6.1). Charging less than marginal cost leads to excess demand and the need to generate funds from other activities, which can create distortions elsewhere in the economy. These economic costs must be added to the efficiency loss associated with expanding underpriced public services. Setting prices correctly generates revenue while ensuring an efficient allocation of resources.

Equity

The tradeoff between efficiency and equity may be overstated for user charges. At present there are many subsidized services in developing countries that disproportionately benefit the better-off. Rationing is required when production of subsidized goods is curtailed by the lack of financial resources. In these circumstances the poor often do not gain access to rationed public goods and services. By charging marginal cost prices to most users or beneficiaries while targeting limited subsidies to poor consumers (for example, through lifeline or multiblock pricing arrangements for water and power services, as described in Box 6.1), it is possible to improve efficiency and relieve poverty at the same time.

Revenue

User charges are also a potentially important source of revenue. The public revenue aspect of user charges is not readily apparent in standard fiscal statistics because this revenue is not transferred to the central budget directly. At best, net not gross, revenue is transferred to the revenue account of the budget or subject to profit taxes. More often the services concerned fail to generate a surplus. In such cases higher user charges will reduce the need for borrowing or transfers from the budget to pay for such expenditures.

A recent study on Sub-Saharan Africa has linked the limited use of user charges for infrastructure services, such as electricity, water, roads, and telecommunications, to revenue shortfalls that worsen the central government's budget deficit, undermine the quality of service, and restrict the provision of services to low-income groups and regions. The study estimates gross investments in infrastructure (water, electricity, telecommunications, and roads) at $6 billion in 1987 in the region's oil-importing countries. Suppose the value of these assets is twelve times current investment, then a 5 to 6 percentage point increase in the financial rates of return on the capital stock could generate more than $3.6 billion, or approximately 20 to 30 percent of current central government revenue.

Raising prices and user charges to levels closer to marginal supply costs could generate additional revenue to reduce, and possibly eliminate, deficits in the consolidated enterprise accounts—the primary source of budget deficits in many Sub-Saharan African countries. Greater reliance on user charges might also reduce instability in public revenue, because demand for services is much less volatile than revenue from trade taxes—particularly on primary commodities—a major source of current revenue. Finally, revenue from user charges could finance an expansion of services. In this case the reduction in net deficits may be small, but welfare would increase.

In spite of qualifications and limitations to the estimates above, the revenue potential is large enough to suggest that user charges are worth exploring in other developing countries as well.

In industrial countries income and other direct taxes account for 69 percent of total tax revenue. The weight placed on personal income (27 percent) and social security taxes (31 percent) in industrial countries is feasible because the necessary administrative apparatus exists. (Even so, other factors are evidently at work; among this sample of industrial countries the revenue share of personal income taxes ranges from Norway's low of 9 percent to Australia's high of 56 percent.)

Personal taxes are hard to collect in predominantly rural, agricultural economies, where people are widely dispersed. Taxes on company income—including taxes levied on the profits of commodity exporting firms, especially mining and agricultural estate operations—present fewer administrative difficulties. Company taxes are therefore relatively more important in the revenue structure of developing countries.

Cultural and historical factors also influence tax composition in developing countries. On average low- and middle-income countries raise roughly 10 percent of their tax revenue through personal income taxes. Surprisingly, however, the richer Latin
American countries raise a smaller share of revenue from personal income taxes than do the poorer countries of Sub-Saharan Africa, where the personal tax base is limited to public employees and employees of large firms, particularly multinational firms. In contrast, Latin American countries are the dominant users, within developing countries, of social security taxes, which fall primarily on wage income (see Figure 4.4).

The revenue shares of general commodity taxes (that is, taxes on sales, value added, and turnover) are similar across three of the four developing country groupings. Again this masks important differences. General commodity taxes in Latin America are usually value added taxes (VATs); in Africa, Asia, and the Middle East they are usually taxes on turnover or manufacturer’s sales. (In industrial countries general commodity taxes are typically retail sales or comprehensive VATs.) Governments in Asia and Latin America collect excises on a wide variety of goods and services; in Africa and the Middle East excises apply to comparatively few products. Reliance on import taxes also varies by region. Sub-Saharan Africa depends on them
most, followed by the Middle East, Asia (particularly South Asia), and Latin America. Export taxes matter more in Sub-Saharan Africa, Asia, and Latin America than in the Middle East; overall, however, their role is small and declining (see Figure 4.4).

In summary, there is a clear difference in the composition of taxes between industrial and developing countries and to a lesser extent between groups of developing countries. The differences between industrial and developing countries mainly reflect the difficulties of taxing informal sectors (such as subsistence agriculture, and informal production and distribution) with the limited administrative capacity available in the developing world. The differences between groups of developing countries are partly a matter of varying stages of development and partly a reflection of historical and cultural factors.

Objectives and constraints in tax reform

Governments attempt to use tax systems to achieve many goals; raising revenue is only one of them. To facilitate compliance and collection, however, a tax system must be administratively feasible. For the same reason, but also as an end in itself, it must spread its burden equitably. To avoid misallocating resources, it must not upset the patterns of production, trade, consumption, saving, and investment. All these aims can rarely be satisfied simultaneously, so tax reform is a matter of tradeoffs.

The need for revenue

Over the long term, revenue cannot lag behind expenditure. So unless public spending is expected to grow at the same rate as national income, the government should ideally choose tax bases that will expand in tandem with spending, not GDP. Since spending plans can change, tax revenue should be generated by a few broadly based instruments. Changes in a few tax rates will then be all that is required to adjust the revenue total.

It makes little sense to seek a norm for tax-GDP ratios. The opportunity cost of raising more revenue, the benefits to be derived from extra public spending, and the cost of servicing public sector debt all change over time and differ across countries. Decisions on public spending, borrowing, and revenue are highly interrelated; if they are to be set, they must be set jointly.

Higher tax-GDP ratios may be necessary in some countries where public deficits are high and unsustainable and where feasible public spending cuts cannot reduce the deficit as required. What matters is how any such increase is brought about. Experi-
ence suggests that increases in tax-GDP ratios should be gradual. During the late 1970s and early 1980s some countries (Kenya, Malawi, and Senegal, for example) increased their tax-GDP ratios by 3 to 4 percentage points in the short span of five or six years. The increases were soon eroded. Even if tax-GDP ratios can be increased, domestic saving may fall if public saving rises by less than private saving falls, as happened in Senegal.

In the short run the urgency of deficit reduction will generally necessitate the use of easily activated taxes. In developing countries this has often meant increasing international trade taxes, as in Argentina, Kenya, the Philippines, and Thailand in the early or mid-1980s (see also Chapter 3). However, these taxes are among the most damaging for the efficient allocation of resources. Since quick fixes have a tendency to become permanent, the cumulative effect of repeated short-term measures can seriously distort the system of taxation. In such circumstances there is a strong case for fundamental reform. Jamaica, Malawi, and the Philippines implemented such reforms in the mid-1980s.

The concern for efficiency and growth

Any intentional change in tax revenue will require a change in the base or rate of some tax. Firms and households will then shift resources from heavily taxed activities to lightly taxed ones. When market prices reasonably reflect social costs and benefits, this poses a tradeoff between revenue and efficiency. Sometimes market prices may not reflect social costs and benefits. Taxes can then improve the allocation of resources, but only if the market imperfections can be quantified so as to guide the design of the tax structure. Such cases are rare. A safer course is to aim for a tax structure that is relatively neutral: one that generates the necessary revenue with the least effect on the allocation of resources.

As a rule the economic cost of taxation increases more than proportionately with the rate of taxation. In other words, the economic cost of a tax levied at 15 percent is likely to be substantially more than three times those of a tax levied at 5 percent. The narrower the base, the higher the tax rate will have to be to generate a given amount of revenue. This is one of the strongest arguments in favor of broadly based taxes.

Evidence on the efficiency losses resulting from taxation in developing countries is sparse. Studies of the tax structure in India, Kenya, and Pakistan in the early 1980s suggest, however, that the effi-
ciency or economic cost of increasing trade taxes is higher than that of increasing domestic taxes and that the economic cost of taxes on all sales (that is, turnover taxes) is higher than that on the sale of final goods only (that is, retail sales taxes and VATs). A recent study on the Philippines focused on the economic cost of trade taxes versus domestic commodity taxes; its results are shown in Figure 4.5. The study found that the marginal (incremental) economic cost of trade taxes is higher than that of domestic taxes and that this cost rises with the rate of the tax. While the magnitudes are case-specific and reflect the prevailing structure of taxes and assumptions about their interactions, the direction and pattern of these findings are consistent with those of other studies.

The pursuit of equity

Tax reform raises questions of equity. This has many dimensions. Equity in the distribution of household expenditure may matter more than in the distribution of personal income. Attention has traditionally focused on income distribution, however, and on the distinction between horizontal and vertical equity. Horizontal equity asks how those with similar incomes are treated: it is concerned, in other words, with fairness. Vertical equity refers to the scope for reducing income inequality by taxing the rich more heavily than the poor.

Taxes in developing countries often fail badly in terms of horizontal equity because the coverage of tax instruments is spotty and arbitrarily enforced. The tax net may capture income in some formal activities, but not its equivalent in informal or hard-to-tax formal activities, such as professional services. This undermines the system’s credibility and the average taxpayer’s willingness to pay. Even in terms of vertical equity, tax systems in developing countries are not notably successful, despite the fact that they would generally be highly progressive if their rate structures were fully applied. But that is rarely so. A 1978 study of income tax in Argentina found that 80 percent of gross income was not reported and that only 30 percent of 1.6 million people eligible to pay taxes on nonwage income did so.

In practice it seems that taxes do little to change the overall distribution of income. Their important role in the pursuit of equity is to raise the revenue needed to pay for distributive spending, particularly to alleviate poverty. So it is public finance broadly defined—taxes and spending together—that matters for equity, not the structure of taxation alone.

Consistency with administrative capacity

Lack of trained administrative personnel and the accounting sophistication of taxpayers prevent many developing countries from applying broadly based income or consumption taxes. Instead they have to rely on taxes on trade, production, and company income. These can be collected from relatively few sources. Given the staffing and resource limitations in developing countries, tax reform must give preference to taxes that are simple and enforceable. But this preference is not unlimited. Sometimes simplicity can conflict with fairness because it means that taxes pay no heed to the varying circumstances of the taxpayers. Sometimes it can lead to inefficiency, too.

For example, the administrative costs of trade and excise taxes normally range from 1 to 3 percent of revenue collected. The corresponding figure for VATs can be as high as 5 percent; for personal income taxes it can reach 10 percent. However, the
economic costs of trade and excise taxes are often higher than those for income taxes and VATs. Reform of the tax structure must try to weigh these two types of cost. The resulting tradeoff may suggest different systems for different countries according to the existing tax structure, the effectiveness of the administrative apparatus, and the structure of the economy. In Papua New Guinea trade taxes are low, and the administration of an income tax or VAT would be extremely difficult, so the government has been advised to increase revenue from trade taxation. In Thailand, by contrast, trade taxes are high and have created serious distortions; the government has been advised to shift toward a simple VAT.

The next two sections examine the options for improving the design of commodity and income taxes. However, ultimately it is the interaction of the different taxes that determines revenue and influences economic behavior. For example, increasing domestic or trade taxes on inputs used in production may reduce the revenue collected from taxes on company profits. It is important that tax reforms also take account of these interactions.

**Commodity taxation**

Commodity taxes are taxes on the transaction of goods and nonfactor services. They include the array of taxes on domestic production and consumption, as well as those on international trade. Reducing the distortionary effects of commodity taxes can be important for two reasons. First, they currently account for 50 to 70 percent of all tax revenue in most developing countries (see Figure 4.3). Second, in the early stages of development governments often rely heavily on the least desirable sort of commodity taxes, namely turnover taxes on domestic production and taxes on international trade. These latter taxes are often used because they generate revenue with limited administrative costs. As economic and administrative conditions change, however, it is useful to reassess the tradeoff between the administrative and economic costs of these tax instruments.

**Taxes on domestic production and consumption**

Production taxes are levied on goods before they enter the distribution chain. Often they fall on transactions between producers, such as the sale of an intermediate good. As such they affect production decisions and feed through the system of production to affect consumption decisions also. In contrast, taxes on the sale of final goods only—consumption taxes—do not generally affect the efficiency of domestic production. They are therefore a better way to raise revenue. Commodity taxes, whether on domestic production or consumption, can be general or selective.

**General commodity taxes.** The most common general tax on production is the turnover tax. Its base is every sale—whether between firms or between firms and consumers. As such it is a multi-stage tax, activated at every stage of the production-distribution chain. Turnover taxes are relatively easy to administer because they do not require tax authorities to differentiate between different kinds of transactions. This simplicity is bought at the expense of distorting transactions between producers. In addition this tax "cascades": tax liabilities accumulate as each succeeding transaction adds tax to that already paid at previous stages of production and distribution. This increases the price of outputs that use taxed inputs, as in exports, and it generates differential taxation of consumption even when the turnover tax is applied at a single rate.

Under a pure consumption tax all domestically consumed goods, whether imported or produced locally, would be taxed at the retail stage. Rates may vary for different consumer goods, but similar goods would be subject to the same tax rate independent of origin. All inputs into production—intermediate products, raw materials, and capital goods—and all exports would not be taxed. As a result consumption taxes have some general advantages over other broadly based taxes. Unlike production taxes they do not interfere with producers' choices between intermediate inputs, or between the latter and factors of production (capital, land, and labor). Consumption taxes also do not cascade through the production process and do not create incentives for firms to avoid tax liabilities through vertical integration. In contrast to taxes on international trade, they do not favor production of import-substitutes or reduce incentives to produce for export.

Commodity taxes on consumption are of two types. The first is a general sales tax on final goods imposed at the retail level. This ensures that all consumed goods are taxed, but leaves other goods tax free. The second is a value added tax (VAT). In its most popular version the VAT is a tax on consumption. Applied to all transactions in the production-distribution chain up to and including
the retail stage, it has the same final tax base as a retail sales tax. Each intermediate purchaser in the chain is able to credit taxes paid on purchases against taxes due on sales. All inputs are therefore, in effect, tax free. The final purchaser—the consumer—has no means of crediting, and thus all sales at this stage are taxed. The rate is set to zero for exports. Thus, both general sales taxes and comprehensive VATs have the economically desirable properties of commodity taxes on consumption.

Retail sales taxes are rare in developing countries because of the prominence of informal distribution networks. Instead, single stage manufacturer’s sales taxes are commonly used, as in the Philippines (before 1986) and Kenya. In some developing countries the pattern of sales taxes and excises resembles a turnover tax—the sales taxes in Zambia and Tanzania, for example, or the excises in the Republic of Korea (before 1976) and India (before 1986).

The VAT has made consumption-type taxes more accessible to developing countries (see Box 4.2). Some distortions between sectors will remain because the VAT, although a high yield tax, can be costly to administer for producers in agriculture and services and for small enterprises generally. However, a movement toward a VAT is likely to promote efficiency while also generating a substantial amount of tax revenue.

India is a case in point. Until 1986 its extended system of excise taxes covered a wide range of goods, including intermediates. It thus resembled a turnover tax. Because of cascading, export prices included a 5 to 7 percent tax. This was only partly offset by rebates. In addition the prices of goods such as cereals and edible oils—especially important to the poor—contained a 5-to-10-percent tax, although they were nominally exempt. India sharply reduced excises on intermediate goods in 1986 by implementing a modified VAT through the manufacturing stage. A higher rate is required to raise the same revenue as before, because the tax base shrinks from gross output to net output. However, the new tax will interfere less with production and trade decisions.

Selective commodity taxes. Some taxes, by their nature, cannot be broadly based. Taxes to correct for specific market failures, such as externalities, are best restricted to a few goods only, because a great deal of information is needed to determine the appropriate rate structure. Taxes to cover specific spending programs—fuel taxes to re-cover road use costs, for instance—are sometimes necessary, but the rates cannot deviate significantly from taxes on close substitutes. Studies on the Philippines, Thailand, and Tunisia found that petroleum taxes led producers and consumers to switch to other fuels. Other selective taxes include traditional excises on demerit goods such as alcohol and tobacco, and luxury excises on goods such as cars or jewelry.

Governments generally set the base and rates for these selective taxes for ease of collection; thus the taxes are often not well integrated with the broadly based taxes. This is of greatest concern for excise taxes, which are an important source of revenue in most developing countries. In contrast to broadly based taxes, many excise rates are specified per unit of quantity rather than as a proportion of the price. Therefore excises can be regressive and not insulate revenues against inflation. Where inflation proofing is desired, the tax rates should be set relative to prices rather than quantities. For excises on goods such as tobacco and alcohol, it is also possible to retain specific rates, provided there is periodic adjustment for inflation and the rate structure is differentiated to reflect distributional considerations.

The case for some progressivity in commodity taxes is strengthened by the limited coverage of personal income taxes and the scale of evasion by the highest income groups. So, for example, governments that collect the bulk of their domestic commodity tax revenue from a general tax, such as a single rate VAT, can supplement this with a selective luxury or excise tax with a few rates. The base of such a tax should be goods whose share in household expenditure increases with income—motor vehicles in Indonesia, for instance, or entertainment and recreational services in Korea. Such a tax can be outside the VAT crediting system if it is restricted to final consumer goods. This distinguishes the combination of the VAT plus a luxury excise tax used in Korea and Indonesia from the multirate VAT used in the EC. The latter attempts to promote equity within the rate structure of the VAT and therefore within the crediting system. This increases the administrative burden of the VAT and may be premature for many developing countries.

International trade taxes

International trade taxes generate about a third of the tax revenue in developing countries and are among the easiest taxes to administer.
Box 4.2 The value added tax in developing countries

In 1967 Brazil imposed the first comprehensive value added tax (VAT) extending to the retail stage and applying to all states of the federation. It was designed to ensure greater tax coordination among the states and to overcome the defects of the turnover tax. The Brazilian VAT is based on the destination principle, which focuses on the use of the product. As such it is a tax on consumption or final sales. It is this comprehensive form of the consumption-type VAT that the European Communities adopted in the late 1960s. An alternative type of VAT is based on the origin principle, which focuses on the income generated by an activity. It is used in Argentina and Peru, and some of its features are found in the VAT introduced in Turkey in 1985. The consumption-type VAT is easier to implement and has become by far the most popular version of the VAT in developing countries.

VATs generally replace a multitude of small taxes and can greatly simplify the system of commodity taxation. The consumption-based version has three main advantages. First, by not taxing inputs used in production (for example, through a system of credits), it simultaneously avoids the distortion of choices between inputs; the cascading of taxes, which can lead to inefficient vertical integration; and the presence of multiple effective tax rates in consumer prices. Second, it does not discriminate between imports and domestic production in domestic markets. Third, exports are not taxed. Together these provisions ensure that the tax does not interfere with production or trade.

VATs have become an important source of revenue in many countries. They yield more than 20 percent of tax revenue in about thirty industrial and developing countries. Some twenty developing countries, primarily in Latin America, now have comprehensive VATs through the retail stage. Many others, including some in Sub-Saharan Africa, have taxes with VAT-like characteristics through the manufacturer-importer stage.

VATs at the retail stage are more feasible in middle-income developing economies, such as the Republic of Korea, than in low-income ones, because the formal distribution network is more developed in the former. VATs through the manufacturer-importer stage are increasingly common in lower middle-income countries such as Côte d’Ivoire and Indonesia, since they are easier to implement. Even these VATs can cover large-scale distributors, agricultural estates, and other activities beyond manufacturing. Because of its relatively high administrative costs, a VAT is often implemented at a rate of at least 10 percent. Where the tax base is narrow, particularly when the tax does not go to the retail stage, it is likely that the VAT will have to be imposed at 15 percent or more to generate sufficient revenues. Despite initial skepticism about high rates, experience (in Brazil and Chile, for example) has shown that rates of about 17 to 20 percent can also be enforced, even for VATs that extend to the retail stage.

A valuable feature of the VAT is its potential for self-enforcement through a system of credits. However, an important requirement for successful VAT administration is to minimize problems of implementation. From an administrative point of view a single rate is preferable to a multirate VAT. To reduce regressivity, the VAT can be supplemented by a luxury tax with two to three rates. Exemptions complicate administration because the distinction between what is exempt and what is taxed is often tenuous or arbitrary. Nevertheless, distributional objectives have led many countries to exempt some basic commodities (such as some unprocessed foods and selected medical items). Zero-rating, a more complex form of exemption that requires refunds and therefore burdens the administration, has been limited to exports by most countries. The need to provide special treatment for small businesses under a VAT is much more pressing in developing than in industrial countries. Various methods for dealing with small taxpayers are used, but all methods present technical and practical problems.

Successful introduction of a VAT depends largely on whether the country has had previous experience with multistage taxes or general sales taxes, the nature of the taxes that the VAT will replace, the lead-in time, and the structure of rates and exemptions, including provisions for small taxpayers. Indonesia and Korea introduced a VAT after two to three years of preparation, whereas Turkey successfully implemented a VAT within two months of its enactment, following a relatively long period of analysis. Administrations with few resources often stress enforcement for large taxpayers and practice restrictive refunds. Such administrative practices weaken the broad-based and neutral features of an ideal VAT. Most successful tax reforms, however, have introduced some form of a VAT, with both to reduce distortions in production and trade, and to generate adequate revenues to compensate for revenues lost through rationalizing other tax instruments.

IMPORT TAXES. In principle, taxes can be collected from imports at the border without driving a wedge between the price of imports and competing domestic products, provided the tax on imports has a counterpart on domestic production. In practice, however, import taxes are used not only to raise revenue but also to protect domestic production and to promote equity in consumption.

In view of these multiple objectives it is not surprising that the typical import tax regime is com-
plex. For imported goods that have no domestic competition, tariff rates are determined by the need for revenue or adjustments in the exchange rate rather than the need to achieve a desired degree of protection. But for competing imports, where protection is the primary concern, rates are often differentiated, with goods for production subject to lower rates than goods for consumption. Rebates or duty drawbacks are often introduced to avoid increasing the cost of production for exporters and for firms that have been granted investment incentives. For equity reasons some basic goods are either exempt from tariffs or subject to very low rates, whereas luxuries are subject to high rates. In some countries strategic or priority imports, including government and parastatal purchases, are exempt from duties. Finally, where high rates do not stem the volume of selected imports, quantitative restrictions or prohibitions are introduced, but these entail a loss of tariff revenue.

The incentives generated by such complex systems are often not transparent. It would be preferable to transfer as much as possible of the revenue function of tariffs to broadly based domestic consumption taxes, such as the VAT, and of the equity function to selective taxes. Quantity restrictions on trade are best replaced by tariffs, and “specific” rates (per unit quantity) should be changed to ad valorem rates (per unit price). These changes would make it easier to rationalize the protective functions of tariffs.

As noted above, a tax on domestic production can also be collected from imports at the border. This will fulfill the revenue function of a tariff and be equally easy to administer without protecting domestic producers. Similarly, if the objective is to restrict the consumption of imported luxuries rather than to stimulate their domestic production, it is better to subject them to a domestic luxury tax rather than a higher rate tariff. In the absence of a retail-level consumption tax, the luxury tax on imports can be collected at the border, with its domestic counterpart collected at the factory gate—as in Indonesia.

In rationalizing tariffs there is a general consensus that protection should be reduced in the long run because it penalizes consumers and promotes inefficient patterns of production. In practice it is hard to cut tariffs quickly because of revenue losses and opposition from the protected sectors.

Moreover statutory tariff rates are a poor measure of the protection provided to domestic producers because of interactions with other taxes. If the domestic producer is subject to a domestic excise or turnover tax and the competing import is not, then the nominal rate of protection is not the statutory tariff, but the difference between the statutory tariff rate and the domestic tax. If, in addition, domestic production uses imported inputs, then the nominal rate of protection is unlikely to be a good measure of the protection afforded to domestic value added. A better measure is the effective rate of protection (ERP). This takes into account the interaction between tariffs on output and inputs. The dispersion of ERPs is often large—larger than for statutory rates—and can include negative rates of protection (see Table 4.1). When calculating ERPs, taxes on domestic inputs must also be taken into account, so restructuring the pattern of protection generally requires a joint review of taxes and tariffs.

Import tariffs also implicitly tax exports. An increase in import tariffs can result in an exchange rate appreciation and the preferential treatment of import-substituting industries. This reallocates resources toward import-substituting industries and away from all other industries, including exports. This is so even when imported inputs are not subject to tariffs; where imported inputs also face tariffs, the distortion against exports can be greater

Table 4.1 Distribution of effective rates of protection for selected countries in East Asia (percent)

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<td>15-125</td>
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<td>37</td>
<td>116-201</td>
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<td>27</td>
<td>25</td>
<td>..</td>
</tr>
<tr>
<td>Export sectors</td>
<td>-23-11</td>
<td>..</td>
<td>5</td>
<td>-3</td>
<td>..</td>
</tr>
</tbody>
</table>
still. Many developing countries have tried to deal with this using export subsidies, export rebates, or duty drawback systems. Their record of success is mixed. When there is no paper trail of taxes and tariffs paid, it is difficult to avoid over- or under-compensating different exports, although well-administered schemes, as in Korea, have been reasonably successful. Linking information about tariffs and excises on intermediate goods raised the cost of exports—making Malawi less competitive, especially in nontraditional exports such as textiles and even in traditional agricultural exports. The tax rebate system was not functioning well because of administrative problems and restrictive interpretations of the definition of inputs qualifying for rebates. In addition, increasingly high tax rates on imported luxuries and exemptions for imported necessities were creating a protective structure inconsistent with the objectives of industrial development. Finally, increased import tariffs and excises on intermediate goods caused the tax content in consumer prices to cascade and to reduce the already limited progressivity of indirect taxes.

On the basis of a 1985 tax study the government initiated a comprehensive tax reform in 1986-87 to broaden the tax base and simplify tax procedures. The first phase was to eliminate the export tax and reduce taxes on intermediate goods. Revenue losses were to be offset by increasing the rate of the surtax. However, the surtax—essentially a consumption tax at the manufacturer and importer level and less distortive of production and trade decisions—had to be increased by 5 percentage points to 35 percent to offset revenue losses associated with the declining import tax base and the elimination of the export base. This unusually high rate demonstrated the narrowness of the domestic tax base. Expanding the base to include additional producers and distributors will take a few years and will include, among other things, the introduction of a crediting system within the surtax. This new feature will reduce tax pressure on exports, which results from the taxation of inputs used in production. It will also indirectly tax the informal sector producers and traders who would not be eligible for a credit unless their output is taxed. Distributional concerns in the reformed surtax are addressed by introducing two or three luxury rates, which will apply equally to domestic and imported goods. This will enable import tariff rates on luxuries to be lowered and restructured so as not to inadvertently stimulate their production relative to necessities. The joint determination of domestic and trade taxes will allow improvements in trade tariff incentives without losing revenue. However, revenue needs will still set limits on the extent to which the tax structure can be rationalized in the short run.

During a fiscal crisis trade liberalization can falter for revenue reasons. Import tariffs on inputs are, in effect, also a tax on export production. This weakens the case for increasing tariffs on inputs to compensate for revenue losses when tariffs on output are cut. Joint reform of tariffs and taxes then becomes desirable, as in Malawi (see Box 4.3). Restructuring trade tariffs and domestic taxes to produce a broadly based consumption tax should be the primary objective of tax reform in countries that do not already have one. Such a tax can become an important source of revenue.

Where rudimentary taxes on consumption are already in place, their role as a source of revenue should be increased at the expense of tariffs. This could be achieved by an increase in the tax rate with a compensating reduction in tariff rates. In the long run an increasing amount of revenue can be generated from taxing domestic activities. The development of the manufacturer’s stage VAT in Côte d’Ivoire illustrates this. In 1960 the tax ac-
counted for 15 percent of total revenue, with 70 percent of its contribution coming from the taxation of imports. By 1982 the corresponding figures were 30 and 40 percent. Thus the tax generated more revenue, with an increasing share coming from the taxation of domestic activities.

**Export Taxes.** Many countries levy export taxes on primary products. The use of export taxes in mining is less frequent than in agriculture primarily because economic rents in mining can often be captured through company taxation, such as the resource rent taxes in Papua New Guinea. Export taxes are on occasion used, as in Liberia and Zambia, to supplement the company tax. Such use of export taxes is justified to the extent they substitute for royalties. They should not, however, be greater than the royalties, otherwise they are likely to interfere with the time profile of extraction.

The use of export taxes is more common in agriculture. A 1987 study of seventy-four developing countries found that export taxes were used in at least fifty-three of these countries. In general these taxes did not account for more than 5 percent of tax revenue, but there were exceptions to this observation in selected periods (see Figure 4.6). Export taxes are inadvisable because they reduce the incentive to produce for export. This is inappropriate in view of the slow rates of growth in agriculture and the importance of trade in agricultural products to many of the countries that use this form of tax. Under some circumstances these taxes can be justified as imperfect substitutes for other forms of taxation, but for a limited period only (see Box 4.4).

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**Box 4.4** Export taxes and agriculture

Export taxes are commonly used in agriculture because traditional taxes on income and profit are hard to administer in this sector. In principle land taxes are an attractive alternative. Where land is in fixed supply, a land tax is collected from economic rent and leaves production decisions unchanged. However, with a few exceptions, such as Ethiopia, Kenya, Paraguay, Peru, and Somalia, land taxes generate less than 1 or 2 percent of total revenue. The low yield reflects the inadequacy of land registration and valuation. In many African countries and the Pacific islands it is difficult to establish ownership because land tenure is based on customary arrangements. In other countries rural land transactions are infrequent, which restricts the use of market prices to determine the value of land. There are also limitations on the use of presumptive measures to link land values to the productivity of land, because data on land quality and the variations in productivity between seasons are generally inadequate.

Some export taxes are implicit and result, for example, from the price-setting activities of marketing boards, such as the Cocoa Board in Ghana and the Agricultural Development and Marketing Corporation in Malawi. These boards act as distributor and exporter of a few important smallholder crops and usually set farmgate prices below border prices, thereby implicitly taxing smallholders.

Evidence on the level of taxation suggests that in some countries producers of agricultural exports may be overtaxed. If export taxes substitute for income taxes, it is possible to compute a rate of tax on exports that will generate the same amount of revenue as a tax on the smallholder's income. A simple calculation for a typical cocoa farmer in Ghana in the early 1980s reveals that an export tax of 4 percent of the farmgate price would have yielded as much revenue as if the farmer's profits had been subject to income tax. The prevailing export tax was more than 100 percent, which suggests that to the extent export taxes substituted for income taxes, rates could have been reduced substantially. Even as a tax to capture excess profits, the export tax would be only 12 percent.

More important, export taxes create an incentive to shift production to other crops. Given the ample empirical evidence that smallholders respond to prices, the economic costs of export taxes are likely to be substantial. Where feasible, presumptive taxes on agricultural income may be preferable, as in Uruguay.

Other arguments favoring export taxes include the desire to manipulate the terms of trade and the need for revenue. The former should be treated with caution.

Inelasticity of world demand in the short run can lead quickly to loss of markets in the long run because of changes in both world demand and supply. This happened to Ghana and Nigeria's world market share of cocoa and to Nigeria's and Zaire's share of palm oil in 1961-63. Given the large budget deficits in many countries, the need for revenue cannot be ignored in the short run, especially if there is a case for export taxes as a cess or proxy user charge. In the long run extending broadly based commodity and income taxes to also include the agricultural sector is necessary to reduce and eventually eliminate agricultural export taxes.
Income taxes

Income taxes have long been the principal means of taxation in industrial countries. With relatively few distortions they can generate a great deal of revenue and leave scope for income redistribution. Experience in developing countries, however, suggests that personal income taxes are difficult to administer, raise little revenue, are weak in redistribution, and are often unfair. Recent reforms have therefore stressed the role of commodity taxes. Nonetheless, the reform of taxes on personal and company income will often be necessary to enhance the revenue and efficiency of a tax system.

Company income taxes

Reform of taxes on company income is especially important because they account for about a third of revenue in developing countries and have a greater potential for misallocating new investments.

**Base and rate structure.** Company taxes are designed to collect revenue from a firm’s economic profits. In practice, the tax base is net accounting profits: gross revenue less operating costs and capital adjustments. Often a single statutory rate is used and is usually most desirable, particularly when there are administrative constraints. However, a few developing economies use an explicitly progressive rate structure with two to three brackets and a moderate range of 15 to 35 percent. Fewer still use more than three brackets: Guatemala’s and Mexico’s rates ranged between 5 and 42 percent up to 1987. Finally, some have an implicitly progressive rate structure through the use of differentiated surcharges, as in Brazil.

The statutory rate of the company tax is often a poor indicator of its effect on revenue or investment behavior. Rates apply to financial income not economic income; inflation, for instance, drives the two apart. For policy, therefore, effective tax rates are more important. The average effective tax rate (AETR) is the ratio of total revenues collected through the company income tax to the company’s economic profits. For revenue purposes this rate should be high. By contrast, the marginal effective tax rate (METR) measures the effect of taxes on investors’ rate of return for an incremental addi-
tion to their activities. To avoid interfering with investment decisions, the METR should be low. The main tasks of company tax design should be to achieve a high AETR while keeping the METR low, or preferably zero, and to avoid large variations in METRs across different types of investment.

Differences between METRs and statutory rates arise from provisions that allow the recouping of invested capital, deduction of interest incurred on investment debt, credits for investment, corrections for inflation, and so forth. As a result a single rate company tax can mean many different METRs across assets and sectors.

A 1985 study of taxes in Malawi found that when statutory rates changed, METRs changed in the same direction (see Figure 4.7). However, METRs in manufacturing were substantially lower than in nonmanufacturing. At a subsectoral level the METR of an investment project varied according to the economic lifespan of its assets. Since METRs are so hard to observe, it is difficult to use company taxes to steer investment in a particular direction.

It is possible to compare company taxes across countries as well, as in Table 4.2, by positing a hypothetical standard project with a fixed asset composition and a common pretax rate of return, investment horizon, and other relevant parameters. As a result the figures do not show actual after-tax rates of return, which will be affected by variations in the asset composition of projects and by tax enforcement practices. However, they are useful for highlighting on a comparable basis the wide variation between statutory rates and METRs. As is apparent in the table, METRs are equal to statutory rates only by chance. Countries

### Table 4.2 Marginal effective tax rates for a hypothetical project investment, circa 1985

<table>
<thead>
<tr>
<th>Economy</th>
<th>Statutory</th>
<th>All equity financing with loss carried forward</th>
<th>50 percent debt financing with loss carried forward</th>
<th>50 percent debt financing with full loss offset</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>tax rate</td>
<td>5 percent inflation</td>
<td>50 percent inflation</td>
<td>5 percent inflation</td>
</tr>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hong Kong</td>
<td>18.5</td>
<td>18.4</td>
<td>29.5</td>
<td>16.4</td>
</tr>
<tr>
<td>Ecuador</td>
<td>20.0</td>
<td>13.5</td>
<td>27.9</td>
<td>10.1</td>
</tr>
<tr>
<td>Yemen, Arab Republic</td>
<td>25.0</td>
<td>32.2</td>
<td>62.2</td>
<td>30.5</td>
</tr>
<tr>
<td>Colombia</td>
<td>30.0</td>
<td>28.5</td>
<td>47.4</td>
<td>36.9</td>
</tr>
<tr>
<td>Korea, Republic of</td>
<td>30.0</td>
<td>33.2</td>
<td>48.0</td>
<td>32.8</td>
</tr>
<tr>
<td>Egypt</td>
<td>32.0</td>
<td>37.0</td>
<td>73.9</td>
<td>31.2</td>
</tr>
<tr>
<td>Argentina</td>
<td>33.0</td>
<td>31.7</td>
<td>51.0</td>
<td>29.7</td>
</tr>
<tr>
<td>Jamaica</td>
<td>33.3</td>
<td>40.6</td>
<td>59.0</td>
<td>35.3</td>
</tr>
<tr>
<td>Brazil</td>
<td>35.0</td>
<td>54.4</td>
<td>68.1</td>
<td>45.9</td>
</tr>
<tr>
<td>Indonesia</td>
<td>35.0</td>
<td>41.6</td>
<td>81.4</td>
<td>36.0</td>
</tr>
<tr>
<td>Philippines</td>
<td>35.0</td>
<td>40.5</td>
<td>81.0</td>
<td>40.2</td>
</tr>
<tr>
<td>Thailand</td>
<td>35.0</td>
<td>24.9</td>
<td>68.6</td>
<td>20.0</td>
</tr>
<tr>
<td>Jordan</td>
<td>38.0</td>
<td>37.4</td>
<td>64.2</td>
<td>27.3</td>
</tr>
<tr>
<td>Tunisia</td>
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<td>24.5</td>
<td>23.0</td>
<td>19.8</td>
</tr>
<tr>
<td>Malaysia</td>
<td>40.0</td>
<td>31.7</td>
<td>62.7</td>
<td>24.2</td>
</tr>
<tr>
<td>Portugal</td>
<td>40.0</td>
<td>45.5</td>
<td>79.1</td>
<td>28.7</td>
</tr>
<tr>
<td>Singapore</td>
<td>40.0</td>
<td>29.5</td>
<td>46.5</td>
<td>23.2</td>
</tr>
<tr>
<td>Guatemala</td>
<td>42.0</td>
<td>10.7</td>
<td>40.3</td>
<td>2.8</td>
</tr>
<tr>
<td>Mexico</td>
<td>42.0</td>
<td>19.6</td>
<td>24.0</td>
<td>10.3</td>
</tr>
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<td>Turkey</td>
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<td>45.5</td>
<td>81.5</td>
<td>27.7</td>
</tr>
<tr>
<td>Morocco</td>
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<td>44.0</td>
<td>65.3</td>
<td>24.0</td>
</tr>
<tr>
<td>Greece</td>
<td>49.0</td>
<td>20.0</td>
<td>68.3</td>
<td>10.6</td>
</tr>
<tr>
<td>Ireland</td>
<td>50.0</td>
<td>5.8</td>
<td>11.5</td>
<td>5.5</td>
</tr>
</tbody>
</table>

Note: The asset composition of the hypothetical project consists of 40 percent building, 40 percent machinery and equipment, 10 percent vehicles, and 10 percent land. Replacement investment is at the rate of economic depreciation for ten years. Real rate of return before taxes is fixed at 10 percent. Calculations are based on tax code provisions, not actual enforcement. Ireland is included as an example of a tax code with 100 percent depreciation in the first year but no adjustment to nominal interest deductions.

a. Ranked by statutory income tax rates.
b. Refers to the use of negative tax liabilities in the project to offset positive tax liabilities on income from other investments. This can arise either from legal provisions in the tax code, allowing the filing of consolidated returns for a firm or holding company, or through transfer pricing schemes when consolidated returns are not allowed.

Sources: Pellechio and Dunn 1987, and Pellechio and others 1987a and 1987b.
with equivalent statutory rates—such as Brazil, Indonesia, the Philippines, and Thailand at 35 percent or Malaysia, Portugal, and Singapore at 40 percent—can have dramatically different METRs because of other company tax provisions. Equally, differences in statutory rates may not reflect differences between METRs. For example, Ireland’s METRs are lower than Hong Kong’s despite a much higher statutory rate.

In most cases debt financing lowers the METR for a given level of inflation (columns 4 and 5 against 2 and 3, respectively, in Table 4.2). This creates a bias in favor of debt financing—increasingly so for higher rates of inflation. However, the interaction of inflation and the mode of financing can vary. In Ecuador high inflation increases the METR for equity financing relative to the statutory rate and lowers it for debt financing; in Argentina, Brazil, and Colombia high inflation increases the METR relative to the statutory rate regardless of the mode of financing and despite indexing provisions. If the tax code allows negative tax liabilities in a project to be offset against positive tax liabilities on income from other investments, the METR will be lowered (columns 6 and 7, Table 4.2). It can even become negative, as in Mexico and Tunisia, which suggests an implicit investment subsidy at the expense of the treasury for activities submitting consolidated returns.

The treatment of depreciation, debt, and inflation greatly affects the METR. Valuing assets at historic cost and spreading depreciation allowances over more than one year ensure that tax depreciation will diverge from economic depreciation in the presence of inflation; the recouping of the initial investment is understated and taxable income overstated. When this is combined with full deductibility of nominal rather than real interest on debt, it is likely that the company tax will skew the firm toward debt, as the deductibility of nominal interest rates overcompensates for the real cost of borrowed funds. The firm’s reduced capitalization may then increase its vulnerability to external shocks.

There is no single answer to this interlocking set of problems. When inflation is low, the overcompensation of financing costs (due to nominal interest deductions) may just offset the undercompensation of depreciation values based on historic cost. The effect of inflation on revenues would then be limited. Although the incentive in favor of debt finance remains, it is likely to be small and unlikely to justify the administrative complications of schemes to convert financial income into economic income. In such cases the METR can be reduced by lowering the statutory rate. This approach, however, also lowers the AETR, which usually a windfall to past investments and a revenue loss for the treasury whether or not new investments materialize. The revenue loss can be partially offset by reducing asset-specific investment incentives. The combination of a lower statutory tax rate and streamlined investment incentives—as in Jamaica and Indonesia, as well as in the recent U.S. tax reform—will reduce tax differentiation between taxed sectors. (It may reduce the difference between the taxed and untaxed sectors.) However, the METR remains positive.

When inflation is high, other measures may be needed. Indexation of historic cost or periodic revaluations are an important step toward bringing depreciation allowances in line with economic depreciation. Periodic revaluation of assets, as in Africa, or various indexing schemes, as in Latin America, have a mixed record. Revaluations are costly and infrequent; indexation is often insufficiently comprehensive to avoid generating distortions between assets or sectors. For example, a move toward economic depreciation must be accompanied by the use of real interest rates, yet nominal interest deductions are rarely adjusted for inflation. Such a correction was recently introduced in Mexico and has been proposed for Turkey.

A simpler alternative is "full expensing." Under this approach, when calculating taxable profits, firms can treat investment expenses like other business costs at the time they are incurred. This relatively new approach has not been applied frequently in practice, but it is similar to the treatment of exploration and development expenses for mining in developing countries. It is also used for the manufacturing sector in Ireland and as an option in the tax codes of Bangladesh and Zimbabwe. Full expensing eliminates the need for indexing, for special rules about inventories, and for estimates of depreciation rates for different types of assets. It would also make it easier to withdraw explicit investment incentives, many of which have the same purpose, that is, to reduce the taxation of returns to new investment.

If expensing is allowed, however, the cost of debt should not be allowed as a tax deduction. If an interest deduction is granted, the firm would be receiving a double deduction for assets financed by debt. This can result in a negative METR, as in Ireland. It is appropriate only if there is a strong case to subsidize overall investment and if other
activities can generate the revenue to finance such a subsidy.

Full expensing without interest deductions provides, in effect, a zero METR and does not interfere with an investor’s rate of return. It also reduces intersectoral differences in incentives and eliminates the bias toward debt finance and thin capitalization. It can be difficult to introduce in some sectors—financial institutions, for instance—and initially it can be costly in revenue foregone, because the invested capital is recouped in the early years rather than over the life of the asset. However, income in later years will not be reduced by depreciation allowances, and tax revenue will then increase—although not to the levels associated with a positive METR. In the oil and hydrocarbon mining sectors in many countries (for example, Cameroon and Nigeria) revenue from company taxes is high because of high economic profits. The taxes imply AETRs of 70 to 80 percent, even though METRs may be negative because of the combined immediate write-off of most investments and the full deductibility of nominal interest. Transition problems make hybrids—with partial expensing, positive METRs, and a lower initial loss of revenue, as in Malawi—attractive. This is an area that warrants further research.

**Box 4.5 Reform of Indonesia’s investment incentives**

The government of Indonesia adopted a major tax reform in late 1983. Here the focus is on only one aspect of the reform—namely the wholesale elimination of tax incentives for investment.

Before 1983 the tax structure was inordinately complex. Hundreds of ad hoc amendments had been adopted, which created a law that was incomprehensible to taxpayers and tax collectors alike. Many amendments resulted from changing trade and business conditions, and many more were for special nonrevenue purposes, with predictably negative consequences for revenues and unforeseen results on equity and development.

The massive array of incentives in the investment code was designed to favor specific industries, promote exports, develop remote regions, promote technology transfers, strengthen the stock exchange—and even to encourage firms to be audited by public accountants. The numerous and often contradictory tax incentives created an excessively complicated system unable to fulfill its revenue function or to serve the special purposes originally intended.

Investors and the Investment Coordinating Board (BKPM) negotiated many incentives as part of an overall package. These incentives, and the relatively rapid change in both their design and their structure, meant that firms in the same industry were taxed under different rules and that the same firm faced a different tax regime at various times. Such incentives created effective tax rates that varied both between and within sectors and thus misallocated the capital stock. For example, the tax rules created incentives to change the composition of investment toward short-term projects that, in extreme cases, never paid taxes, such as “hit-and-run” projects, particularly in textiles and light manufacturing.

Because of a lack of communication with the BKPM, auditors in the tax department did not know what incentives were available to firms, which resulted in audit conflicts. In addition some firms did not file returns during the tax holiday period, or simply filed blank returns, which made it difficult to audit returns once the holiday period ended.

Finally, nonuniform tax holidays created the impression of discrimination against certain industries, which would then seek extended tax holidays or alternative incentives to offset the perceived discrimination. Problems similar to these existed for every incentive. Tax incentives are difficult to administer, and thus the gains from incentives must be weighed against the increased administrative costs.

The principles underlying the tax reform were administrative simplicity, transparency, and minimum distortion of economic behavior. As a result all special tax incentives—tax holidays, investment allowances, and accelerated depreciation other than double-declining balance—were eliminated. The expected revenue gains from eliminating incentives allowed the tax rate to be reduced. The simplified incentive system is expected to minimize tax-induced intersectoral preferences, while the lowered company tax rate is expected to benefit all investors.
period. Tax incentives for special purposes, however, are often ad hoc and poorly integrated into the overall tax structure.

In general the effectiveness of a tax is inversely related to the number of goals it is meant to achieve. Tax incentives overload tax instruments with multiple objectives. They complicate compliance and prompt unproductive efforts to obtain their benefits. If the incentives are small, the economic gains are likely to be limited. If they are large, the erosion of the tax revenue base is likely to be significant.

Investment incentives are also difficult to administer. Consider tax holidays, for instance. To be consistent, they would have to be granted to existing firms making new investments as well as to new firms. But costs and profits must then be divided between old and new operations, thus causing problems of internal transfer pricing and cost allocation. It makes sense to reduce the number of investment incentives; Indonesia has eliminated them altogether (see Box 4.5).

**Personal income taxes**

Personal income taxes account for about a tenth of total tax revenue in developing countries. The low yield reflects limited coverage and poor design. Improving the yield requires changes in the base and rates to make the tax easier to administer, without adverse effects on incentives to work and save.

**Base and rate structure.** The typical personal income tax is levied on net taxable income, derived by deducting allowances and exemptions from gross personal income. A schedule of rates is applied to determine tax liability. Tax credits are then subtracted from this tax liability to generate the final tax obligation.

The design of personal income taxes varies considerably across countries. In some countries, such as Ghana in 1984, very low levels of income are legally subject to tax; in others, such as India, exemption rates are quite high. In some the marginal rate increases very rapidly—as in Jamaica before tax reform. In others the rate schedule is relatively flat—as in Côte d'Ivoire. Finally, the highest marginal rate and the level of income to which it applies vary significantly.

Figure 4.8 shows two groups of countries, based on their legal or intended tax structures, not the tax structures as actually enforced. In the group A countries low levels of income are subject to tax, and the marginal tax rate increases rapidly. This structure is difficult to administer since large numbers of small taxpayers are caught in the tax net and subject to high rates. The higher exemptions and more gradual increase in marginal tax rates of the group B countries are better suited to the administrative capacity of most developing countries.

Figure 4.9 shows that many countries have maximum rates above 50 percent. These rates often affect only a handful of individuals—those with incomes in excess of fifty times per capita GDP. High rates on narrow bases generate little revenue and, if not enforced, damage the credibility of the system.
The revenue share of personal taxes has grown slowly in the past two decades. Their base had been expected to expand more rapidly than GDP as more and more activities entered the formal sector. The ability to fine-tune tax rates according to ability to pay was another reason to expect the share of personal taxes to rise. But these factors have been outweighed by the difficulties of enforcement and collection. In many countries personal income taxes are collected from less than 15 percent of the population; in South Asia and Sub-Saharan Africa the figure is less than 5 percent. Almost everywhere the potential revenue from personal taxes is further eroded by avoidance through loopholes and tax shelters, as well as outright evasion. A 1981 study of Bolivia estimated that 75 percent of the revenue due from labor income was collected primarily because of withholding taxes on wages, whereas the equivalent figure for capital income was 20 percent.

Many of the same features that limit the revenue yield of personal income taxes also limit the equity features of these taxes in practice. In developing countries personal income taxes are not the mass taxes they are in industrial countries. The progressivity of the rate structure is therefore less important when 80 to 90 percent of the population, primarily the lowest income groups and those in subsistence or informal activities, are outside the personal income tax net. With the difficulty of enforcing this tax on high-income recipients in agriculture, trade, and the professions, plus the prevalence of a multitude of allowances and provisions benefiting wealthier groups in society, it is not surprising that in many countries it is now recognized that the personal income tax does not significantly improve the distribution of income. However, a less ambitious distributive objective can be attained. Legally excluding the poor from the tax base altogether is a more powerful way to protect them than incorporating lower rates in a multirate structure. Revenue lost from more exemptions at the bottom of the income scale can be largely offset by eliminating loopholes for those at the top. This

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### Figure 4.9 Maximum marginal tax rate (MTR) and the level of personal income at which it becomes effective during 1984 and 1985

<table>
<thead>
<tr>
<th>Maximum MTR (percent)</th>
<th>Multiples of per capita GDP at which the maximum rate becomes effective</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Less than 30</td>
</tr>
<tr>
<td>Greater than 70</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>50 to 70</td>
<td>Ghana</td>
</tr>
<tr>
<td></td>
<td>Mali</td>
</tr>
<tr>
<td>Less than 50</td>
<td>Hong Kong</td>
</tr>
</tbody>
</table>

will also improve the equity features of the tax.

Horizontal equity requires that all sources of income (from agriculture, trade, manufacturing, and services) and all types of income (wages, interest, rent, profits, and so forth) be treated equally. This favors a global income tax over schedular taxes for different sources or types of income. A global tax, however, entails a tradeoff between equity and savings. Personal income taxes can affect the volume of private saving by reducing both the income of would-be savers (usually higher income households) and the returns to savings. The second effect depends on the openness of capital markets and the extent of financial intermediation—that is, the availability of nonbank institutions to attract savings through insurance schemes, social security schemes, pension plans, and so forth.

Some governments have tried to exclude the returns to savings from the income tax base. They have exempted interest from certain types of deposits, for example, small post office deposits in India and Malawi, or interest income up to a ceiling, as in Jamaica. In other countries schedular income taxes are used to tax different sorts of income—such as interest from savings deposits—at a lower rate. Such taxes are used, as in West Africa, because they are considered easy to administer.

There is some evidence, however, that in developing countries changes in the returns to savings may have a greater effect on the composition of savings than on the level. Taxes on the return to financial savings can reallocate savings between different types of assets—for example, between stocks and bonds in middle-income countries (if capital gains and dividend income is treated differently from interest income) or between financial and real assets in lower income countries. These switches can disturb the efficiency of intermediation between savings and investment. Some have therefore argued that personal taxes based on expenditures are preferable to personal taxes based on income; expenditure taxes do not tax income that is saved. However, such taxes applied to individuals, as opposed to transactions, have not yet been implemented anywhere.

It makes better sense to ease the tasks of administration and enforcement by simplifying personal income taxes. Most allowances can be eliminated. Instead the threshold should be set high enough—say up to incomes three times per capita GDP—to exclude most low-income earners, and the maximum rate should be set low enough—say 30 to 40 percent—to reduce the incentive for tax evasion. Revenue would in any case be low from the very lowest income groups and from those subject to confiscatory rates. A multitude of brackets can be replaced by a few brackets. Even a single rate tax with the fewest number of loopholes and a high threshold can still be reasonably progressive, as, for example, in Jamaica (see Box 4.6).

**Presumptive Income Taxes.** One way to improve the income tax is to supplement it with a presumptive tax—a tax assessed not on income itself but on indicators of income—for evasion-prone groups such as self-employed professionals and those employed in agriculture and trade. Income tax assessment has evolved from presumptive to exact methods as indicators of income have gradually been replaced by measures of actual income received. In practice, however, income tax assessment for large numbers of taxpayers in both industrial and developing countries is still largely presumptive.

The francophone countries of West Africa rely on presumptive or “forfeit” taxes more than other developing countries. However, this kind of tax is also used elsewhere. In the early 1980s Turkey’s tax authorities noted that 85 percent of taxpayers filing income declarations claimed to be in the lowest tax bracket; audits of cases of suspected evasion found that approximately 50 percent of income was undeclared. The government introduced a system of presumptive taxation in 1983. Indicators of living standards are used to assess taxpayers filing regular tax declarations. A presumptive assessment of certain minimum tax amounts is made for activities in agriculture, trade, and professional practices. Further, specified amounts of income are presumed to be associated with, for instance, ownership of residential property (both owner-occupied and rental), automobiles, boats, airplanes, and racehorses; foreign travel; and employment of personal servants. Tax is levied on the income determined by a presumptive assessment or the taxpayer’s declaration, whichever is greater. This system increased tax collections; 84 percent of those who filed declarations in 1985 had their tax liability based on the presumptive assessment.

These methods can also be applied to taxes on goods and services or on wealth, where valuation is difficult. However, experience in countries as different as Colombia and Korea suggests that a considerable administrative effort is still required for any type of presumptive tax to ensure it is based on realistic criteria and applied fairly.
Tax administration

Tax administration in industrial countries by and large carries out the intent of tax legislation; in developing countries tax administrators often make their own tax policy by selective administration.

As a result steps to simplify the task of tax administration are likely to make tax policy more ef-

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**Box 4.6 Reform of Jamaica’s personal income tax**

The government of Jamaica embarked on a comprehensive tax reform in 1985. It includes changes in the personal income tax, the company tax, and indirect taxes. The reform of the personal income tax is unique. A complicated, narrowly based individual income tax levied under a progressive statutory rate structure—commonly found in developing countries—was replaced by a broadly based, single-rate tax in 1986.

Before the reform the highest marginal tax rate of 60 percent (including payroll taxes) was reached at the relatively low annual income level of less than three times per capita GDP. The provisions in the tax code were complicated. There was no standard deduction, but taxpayers qualified for sixteen separate credits. These credits had been added to the system over the years for purposes that ranged from personal allowances to stimulation of savings and home ownership, and even to employment of helpers in the home. In addition employers could grant nontaxable allowances to employees. These allowances were negotiated between employer and employee, and the results did not have to be reported to the income tax commissioner. The ratio of nontaxable allowance to taxable wage was estimated to average 40 percent.

The tax was difficult and costly to administer. Important disincentives were inherent in the rate structure. Capital gains and interest income were tax free, but dividends were taxed twice. The pay-as-you-earn (PAYE) tax ensured that formal sector labor income was taxed at a high rate but that self-employed income went virtually untaxed. In addition Jamaicans with higher incomes, many outside the pay-as-you-earn system, tended to avoid or evade a substantially higher percentage of the tax liability than did lower income families. This evasion and avoidance all but negated the progressivity of the statutory rate structure. A taxpayer survey suggested that the tax net did not cover about half of the potential individual income tax liability. The complexities of the system contributed to poor enforcement, which compounded the inequities.

The primary objective of the tax reform was to simplify the tax and minimize adverse incentives. This led to several changes in its design: the sixteen tax credits were replaced with a standard deduction equal to two times per capita GDP; the present rate structure was replaced with a single rate of 33 1/3 percent, most nontaxable allowances were incorporated into the tax base, and interest income was included in the tax base.

The tax reform was enacted after a committee of citizens from the private sector spent several months scru-

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Administrative reforms can improve the tax structure by bringing reality in line with intentions. But they can also magnify distortions that were dormant when the structure was badly administered. Setting goals for long-term tax policy—broadening the base, say, or shifting the tax base from production and trade toward consumption—can identify needed improvements in administration. So, even though present administrative resources limit the scope for tax reform, thinking about reform helps to set administrative priorities.

In the 1960s and 1970s comprehensive tax reforms focused on instruments rather than on the system as administered. Some of these comprehensive reforms were only partially implemented, as in Colombia, and some not at all, as in Ghana. Some partial reforms paid attention to administrative difficulties (as in Korea, for instance) and were successful. In the 1980s, in contrast, comprehensive reforms placing a greater weight on administration have become more common (such as the reforms in Indonesia, Jamaica, and Malawi). Administrative reforms must try to address the following problems.

**Compliance and enforcement**

Poorly drafted tax forms, long queues, rude officials, and cumbersome appeals procedures all reduce compliance. Slow—or no—refunds of legitimate claims can foster reluctance to pay taxes in the first place. High tax rates increase the benefits of evasion, particularly if the tax authorities are known to lack the resources to track down the offenders. In most developing countries the sanctions on fraudulent taxpayers are negligible. For obvious reasons evasion is hard to measure. Defining avoidance and evasion also raises conceptual problems. As a result there are few country-specific or comparative studies on the subject. A 1980 study of the income tax in Indonesia before reform found that, depending on the year, tax evasion ranged from 84 to 94 percent of taxes due on personal income tax, and 76 to 93 percent of taxes due on corporate income. These high evasion rates were blamed on rates too high to be enforceable even by a relatively efficient administration. Realism in tax laws is important.

A 1985 study estimated India’s black, or unrecorded, economy to account for roughly a fifth of GDP. Not only was the treasury losing revenue, but evasion was also blunting the allocative and distributive features of the system. For example, tax rates could not be lowered to reduce tax-related distortions without a loss in revenue given that the tax base had been narrowed by evasion. Other, older studies in the 1960s and 1970s for Chile, Colombia, Kenya, and Nigeria all found similar high rates of evasion.

Poor system design promotes corruption. Reform can reduce the opportunities for taxpayers to bribe rather than pay taxes. One way to do this is to reduce the number of discretionary elements in the tax code (as was done in Indonesia and Jamaica). Another partial solution is to separate assessment and collection (as in Malawi), while ensuring that assessments are not made without regard for what is collectible.

Other measures are also often needed, including reasonable salary levels and more trained officials, particularly those able to audit company and personal accounts and to design and operate computer procedures. A greater capacity to gather and process data would enable administrators to identify assessment and collection problems more easily. Ultimately, though, political backing is necessary for successful enforcement.

**Improving collection**

The revenue yield of the tax system cannot readily be increased unless ways are found to improve collection.

**Tax amnesties.** It serves no purpose to have a tax assessed but not paid. In some countries the problem of tax arrears has become so critical that governments have taken emergency measures such as tax amnesties and provisions for rescheduling tax payments. These may make it easier to collect delinquent taxes, but they can also undermine voluntary compliance if used frequently.

**Withholding.** The scant auditing resources available in the tax administrations of most developing countries make it impractical to audit more than a small percentage of taxpayers. A system to withhold money from current income is therefore one of the most efficient techniques for preventing delinquency and evasion. Withholding is most commonly applied to wage income, as in the pay-as-you-earn (PAYE) systems in Jamaica, Malawi, and other countries. Withholding is also applied to interest and dividends in some countries, such as Colombia and Indonesia. An effective withholding scheme, however, requires a relatively small number of easily identifiable payers of income. Withholding is hard to apply to rental income, profes-
sional income, and small business income, where there are as many payers as receivers.

**INFORMATION EXCHANGE.** Another approach is for tax-collecting agencies to exchange information. In many developing, as well as industrial, countries import duties and taxes on domestic transactions are administered by separate departments, with little or no exchange of information. In other countries sales and income taxes are administered by separate departments. The exchange of information between these revenue departments is highly advisable because gross sales figures are important in determining income tax liabilities, and valuations of sales for income tax purposes make it easier to implement ad valorem excises and duties.

**Self-enforcement and cross-checking.** The availability of personal and minicomputers makes the use of self-enforcing taxes—based on matching information from different sources—more feasible than it was a decade ago. It is now possible for information furnished by one taxpayer to reveal the receipts and gains made by other taxpayers, as, for example, in a VAT. The ultimate goal of a linked, self-checking system of taxes, however, is still far away.

**COMPUTERIZATION.** Automated data processing (ADP) can improve the administration of taxes. ADP systems that perform multiple functions require an integrated master file system. The usefulness of master files depends mainly on a reliable and up-to-date system of unique taxpayer identification numbers to distinguish one taxpayer's records from another's. Despite the technical problems, automation may eventually offer the most effective way to deal with expanded workloads in customs departments (with the growing volume and complexity of international trade), income tax departments (with the growing number of taxpayers), and treasuries (which need to forecast and monitor revenues). Such systems are currently being set up in Indonesia, Jamaica, Malawi, and Morocco. They are already partially or fully operational in Brazil, Ecuador, Honduras, Korea, and Nigeria. Experience suggests that ADP can increase the efficiency of well-run operations, but it can exacerbate problems if superimposed on badly organized administrations.

**Tax analysis units**

Better collection and administration can improve the implementation of tax policy. However, it is also important in most developing countries to strengthen the treasury's ability to analyze revenue options. A tax analysis unit can support policymakers by analyzing the revenue consequences of changes in exchange rates, interest rates, and trade and industrialization policies—all of which affect tax bases and interact with tax rates. It can also weigh the implications of new revenue measures for other policies and forecast revenue to assist in fiscal planning. Such units feature in many of the comprehensive tax reform programs currently under way.

**The scope for tax reform**

With fiscal deficits high and access to new borrowing limited, there is little scope for deliberate reductions in taxation in the near future. Whether taxes can be raised to cut fiscal deficits depends on the existing structure of taxes and the period over which the deficit reduction is to occur. Where tax bases are narrow, a rapid increase in revenue will call for higher rates. But in some cases higher rates will erode the tax base through evasion. In other cases they will cause inefficiencies in economic behavior, especially if the changes rely on administratively convenient measures such as trade taxes. In contrast, carefully designed tax reform can reduce the cost of raising additional revenue and ensure that tax policy complements other policies. Such reforms take time.

Even in the absence of fiscal deficits, tax reform may be necessary, especially when price regulations and barriers to market competition are being removed, or when there is a case for rectifying an accumulation of ad hoc distortionary tax measures. Recent tax reforms in developing countries have focused on reducing tax-induced distortions and on simplifying tax administration. Reforms are long term but not permanent. Significant changes will be needed periodically to take account of shifting external circumstances or internal needs. (See Box 4.7 on Colombia's reforms.)

No system of taxation can be perfectly neutral with respect to allocation. Nor can tax policy ignore distributional concerns. The balance between the various taxes is a matter of changing priorities and constraints. Where the growth of income is adequate, equity can be given greater weight through expansion of taxes on income. However, where slow income growth and limited administrative capacity are of greater concern, taxes on consumption may need to be given preference.

In spite of the complexity of these issues, some
general prescriptions for tax design can be gleaned from recent experience. Clearly their application will vary from country to country.

- Simplify the design of tax instruments, with fewer rates and fewer adjustments to the base; in particular, eliminate or streamline special tax incentives for investment, production, and trade.
- Strengthen tax administration to improve collection and facilitate the shift in the tax structure from reliance on higher tax rates to reliance on broader tax bases.
- Avoid taxing the poor.

**Simplify the design of tax instruments**

Simplification of tax instruments applies primarily to the definition of the base and adjustments to it.

This in turn has a bearing on the number of tax instruments and their rate structure.

Commodity taxes could be consolidated into three or four instruments with the following characteristics.

- A shift from the taxation of production to the taxation of consumption. This could be achieved with two instruments. The first is a broadly based, general tax on consumption (such as a retail VAT or a manufacturer’s VAT), which does not tax transactions between industries, does not differentiate commodities by source of production (import versus domestic), and does not tax exports (implicitly or indirectly); this tax could have a single rate if equity concerns can be met with a luxury tax. The second instrument is a selective commodity tax for demonstrable and quantifiable externalities and for

**Box 4.7 Periodic tax reform in Colombia**

At the start of the twentieth century Colombia relied almost exclusively on trade tariffs for public revenue. The collapse of international trade in the 1930s sharply curtailed revenues from customs duties and prompted a reform that established the basis of the present tax system, including full-fledged taxes on income, net wealth, and inheritance. This early reform was intended to strengthen public revenues weakened by the effects of the Depression and to increase the importance of direct taxes, especially on capital income.

Since then Colombia has had major tax reforms in 1953, 1960, 1974, and 1986. The objective of the 1953 reform was broadly the same as in 1930: to increase revenue and taxes on capital income, both by raising income tax rates and by taxing dividends. The reforms were carried out in the face of strong opposition by some political groups and were successful in large part because of support from other political groups. By the end of the 1950s taxes on income and wealth were more important, and probably more progressive, in Colombia than elsewhere in Latin America.

Though it set out to increase revenue and impose taxes on capital income, the 1960 reform had the opposite effect in both respects because a wide range of tax incentives was simultaneously introduced to foster investment in manufacturing and exports. These incentives were so heavily used, however, that both the revenue and the progressivity of the income tax declined.

A series of ad hoc reforms, mainly income tax surcharges, were implemented in an effort to close the revenue gap; by far the most important reform was the introduction of a general sales tax in 1963. As a result of strong opposition aroused by fears that the sales tax would be regressive, its implementation was delayed until 1965. Serious administrative problems soon caused the tax to be transformed into a value added tax at the manufacturing level, and it came to be second only to the income tax as a revenue producer. Administrative problems with income taxation, particularly tax evasion due to high and rising marginal tax rates, also resulted in the introduction of a system of wage withholding and current payments in the late 1960s. These measures helped the income tax retain its importance in Colombia’s fiscal system.

The next major tax reform in 1974 reflected Colombia’s extensive experience with such reforms. Not only was this reform intended to strengthen revenue as in previous years, but it represented a return to the pre-1960 emphasis on taxation as an instrument of social policy rather than the use of tax incentives as an instrument of economic policy. Ineffective tax incentives were substantially reduced. Additionally, a minimum presumptive income tax was introduced to ensure more adequate taxation of income from capital. Other changes were made to reinforce the role of income (and wealth) taxation. At the same time, however, the rates of the sales tax with value added features were substantially increased, and its base was expanded.

The immediate effect of the 1974 reform was to increase income tax revenue substantially, largely as a result of the new presumptive tax regime. These effects were not permanent, however. The courts had decided that some critical administrative changes included as part of the reform package were beyond the power of the legislative authority. This greatly weakened the ability to enforce the minimum tax. Moreover, a series of rate reductions and amnesties in the late 1970s, intended in part to offset the effects of inflation, not only...
eroded the capacity of the income tax to keep up with inflation but, in effect, eliminated the capital gains tax. In 1983 the changes of the previous years were to some extent offset both by regularizing the system of inflationary correction and by strengthening the presumptive tax. At the same time the sales tax was considerably altered and became in effect a full-fledged, value added tax through the retail level.

Tax reform continued to be high on the Colombian political agenda, however, leading to significant changes in income taxation in 1986. This reform lowered tax rates on business income, freed dividends from taxation at the individual level, and abolished the inheritance tax. To some extent this reform reversed the 1974 reform, just as that in 1960 had reversed part of the 1953 reform. Unlike in 1960, however, the 1986 reform was intended more to unify the marginal effective tax rates on different types of investment than to favor some types of investment over others. At present still further changes along these lines in business taxation are being considered. An especially interesting feature of the current wave of tax reform in Colombia, however, is that it is the first designed primarily to improve the tax structure rather than to increase revenue.

The more than fifty years of tax reform in Colombia point to several lessons.
- Except for the reforms of 1986 and (to a lesser extent) 1974, all have been motivated primarily by economic crises. These in turn were frequently caused by external shocks and required new efforts to raise revenue.
- The influence of changing intellectual fashions on tax reform is as obvious in Colombia as in most countries. The reforms of the 1930s and 1950s, like those of 1974, reflected the dominant "progressive" view of most tax experts in this century, while the 1960 reform reflected the transitory popularity of "incentive-directed" growth policies, and the 1986 reform reflects the renewed interest in "market-directed" growth.
- Despite the strong influence of outside forces—whether economic or intellectual—Colombia's fiscal system, and the timing and manner in which it has developed, is peculiarly its own. It reflects both the balance of forces in its rather stable political system and what has been called "fiscal inertia," or the tendency of fiscal institutions to persist and change gradually rather than radically.
- A continuing undercurrent has been the inability of tax administration to cope with direct taxes in a distorted inflationary environment; hence the growing importance of both the sales tax and presumptive income taxes.

Above all, the Colombian experience suggest that tax reform is inherently neither a continuous nor a once-for-all process, but a periodic one. The almost-annual minor changes in tax bases and rates common in many countries are not usually enough to accommodate fundamental changes in the economic and political environment of developing countries. Circumstances change, and tax systems must change with them. The Colombian case shows that such adaptive efforts are inevitably affected by external circumstances, the political context, and administrative constraints. They are not always successful. However, Colombia's relative success in maintaining government revenue, and even a moderate degree of progressivity, in the face of considerable adversity also suggests that tax reform is not beyond the reach of a developing country.

purposes of equity. In the latter case the base should be luxuries (defined as those final consumption goods whose share of expenditure increases with income). Again there should be no distinction between sources of production (imports versus domestic producers); exports should be excluded and the number of rates limited.

• A shift from the taxation of international trade to the taxation of domestic transactions. Domestic taxes on goods and services—restructured as described above—can be collected at the point of import for administrative convenience without being confused with tariffs. It is then possible to restructure taxes on international trade so that the level and variation of protection rates are reduced. Export rebates or duty drawback schemes would have to be strengthened if production inputs faced tariffs. Export taxes should be phased out or redesigned in light of their primary function—for example, as a proxy for taxing income, profits, or economic rent.

Income taxes could be simplified as follows.
• A restructuring of company taxes so that average effective rates are high for revenue purposes and marginal effective rates low for investment purposes. This can be achieved through some combination of better approximations of annual economic depreciation rates, elimination of sector-and asset-specific allowances, lower statutory tax rates, and adjustments for inflation where inflation rates are high (say more than 10 to 15 percent). Eliminating double taxation of dividends and improving the links between personal and company taxes is also desirable.
• A restructuring of personal taxes to include all sources of income, with lower maximum rates, fewer brackets, higher exemptions, and the elimination of most existing special allowances. Indexing will be important where inflation is high.

**Strengthen tax administration**

Administrative procedures, capabilities for data processing and analysis, and staff training must be improved in all types of tax reform. A reform that eliminates multiple adjustments to the base of a tax and reduces the number of rates can go a long way toward improving administration. Increased administrative costs, however, may sometimes be justified to lower economic costs, for example, by shifting from trade taxes to a VAT.

In the abstract there is no reason to prefer comprehensive over partial reforms. Country-specific needs will determine the reform required. Comprehensive reforms need not be avoided on the grounds of overloading administrative capacity. The elements of a comprehensive reform can be introduced simultaneously or in stages in light of revenue and administrative constraints. New tax instruments have been introduced successfully, as in Colombia and Korea. Implementing a tax change, however, is likely to be easier if the reform builds on existing tax instruments, as in India and Malawi. The benefits of tax reform take time to become apparent.

**Avoid taxing the poor**

The equity characteristics of actual tax systems can be improved by incorporating moderate progressivity in both income and commodity taxes and by simplifying tax instruments to free administrative resources for collection, auditing, and enforcement. The progressivity of the tax system can be enhanced by exempting the income and essential purchases of the poor from the tax net, by eliminating most of the income tax deductions and allowances that primarily benefit the rich, and by subjecting luxury purchases to higher rates of taxation. The revenue loss resulting from high exemptions in the personal income tax can largely be offset by eliminating most allowances.

Improving the resource allocation aspects of a tax can also improve its equity aspects. For example, eliminating taxes on production inputs ensures that nominally exempt basic goods are not inadvertently taxed. Efforts at fine-tuning the tax structure to achieve income redistribution objectives, however, are not likely to be successful in practice. Poverty alleviation can better be served through coordination with other policies, especially on the spending side of the budget.

Careful reform of revenue instruments can enhance their contribution to revenue and minimize their social and economic costs. But the remaining costs of raising revenue, in effect, set a floor to the benefits required from public spending. Accordingly, revenue should be planned jointly with spending: cost-benefit considerations apply to both parts of the budget. The next chapter turns to the expenditure side of this equation.