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Assessing Enterprise Taxation and the Investment Climate in Pakistan

James Alm
Mir Ahmad Khan

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ANDREW YOUNG SCHOOL OF POLICY STUDIES

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International Studies Program
Andrew Young School of Policy Studies
Georgia State University
Atlanta, Georgia 30303
United States of America

Phone: (404) 651-1144
Fax: (404) 651-4449
Email: ispaysps@gsu.edu
Internet: http://isp-aysps.gsu.edu

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Background Papers for the Pakistan Tax Policy Report

08-07 Bahl, Roy, Wallace, Sally and Cyan, Musharraf. *Pakistan: Provincial Government Taxation*.

08-08 Thirsk, Wayne. *Tax Policy in Pakistan: An Assessment of Major Taxes and Options for Reform.*

08-09 Michelse, Geerten. *Pakistan – a Globalized Tax World – An Analysis of its International Tax Practice.*

08-10 Alm, James and Khan, Mir Ahmad. *Assessing Enterprise Taxation and the Investment Climate in Pakistan.*

8-11 Ahmed, Robina Ather and Rider, Mark. *Pakistan's Tax Gap: Estimates by Tax Calculation and Methodology*.

08-12 Sally Wallace and Harini Khan. Pakistan: Comprehensive Individual Tax Reform: Round 2

08-13 Wahid, Umar and Wallace, Sally. *Incidence of Taxes in Pakistan: Primer and Estimates*

Assessing Enterprise Taxation and the Investment Climate in Pakistan

James Alm* and Mir Ahmad Khan**
*Andrew Young School of Policy Studies, Georgia State University
** Federal Board of Revenue, Pakistan

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EXECUTIVE SUMMARY

The Pakistan system of taxing enterprises has undergone some major changes in recent years. Nevertheless, the corporate tax system remains plagued by a number of problems. The existence of numerous exemption programs has significantly reduced tax revenues, and has greatly distorted the allocation of investment across sectors and asset types. There also seem to exist significant amounts of tax evasion, evasion that also distorts resource allocation, reduces tax revenues, and compromises the distributional objectives of the system. In part as a result of tax avoidance and tax evasion, the tax base has shrunk over time, further reducing revenues and leaving the more visible taxpayers still out of the tax net. The extensive use of tax incentives is seldom tracked, quantified, and evaluated, and the intended effects on economic growth are uncertain. The incentives are only one feature of the tax system that contributes to an overly complicated system, complications that illustrate the limitations of the tax administration. The tax system was designed for times and circumstances that are long past, and the system has evolved over time in a piecemeal, ad hoc manner with little apparent thought given to the ways in which the pieces of the system need to fit together.

This working paper examines these issues, which relate to the yield, the neutrality, the progressivity, and the simplicity of the system of tax enterprises.

Based on this analysis, various reforms of the current system of corporate income taxation in Pakistan are suggested, including:

- Reducing the statutory tax rate of the corporate income tax. Such reductions would reduce significantly the distorting effects of the corporate tax. Recall also that the world-wide trend in corporate taxation is clearly for reductions in

statutory tax rates.

- Reducing the widespread use of withholding taxes (WHT); if some of the WHT are to be retained, they should be made adjustable rather than final. The withholding taxes clearly increase the effective tax rate on companies; in many cases, they also have become final taxes in themselves. Indeed, in most cases WHT have very little to do with income taxation, and instead they resemble discriminatory taxes, as is the case with many of the withholding taxes on imports and exports. Consideration should be given to elimination of these taxes, especially those that generate trivial amounts of revenues. Further, as a general rule withholding taxes should be adjustable as a pre-payment on the final tax liability of taxpayers, and should not be the final tax liability.
- Expanding the base of the corporate income tax, mainly by reducing, and where appropriate rationalizing, the use of tax incentives and exemptions. Conversations with business executives indicated in most cases a strong willingness to trade off reductions in tax incentives and exemptions for compensating reductions in corporate tax rates. In this regard, a complete examination of the benefits and costs of tax incentives and exemptions should be performed.
- Simplifying the tax system, especially in the ways in which tax incentives and exemptions are used. Reducing the use of tax incentives and exemptions would obviously help in this regard.
- Re-examining the thresholds for the “small business” classification, in order to ensure that only truly “small businesses” qualify.

- Re-examining the widespread use of the PTR.
- Continuing to improve tax administration, with a special focus on improving tax compliance. The re-introduction of the National Audit Plan is a helpful step in this direction. In this regard:
    - More stringent penalties need to be imposed in the event of non-filing, perhaps buttressed by the option of third-party intercepts if the penalty goes unpaid.
    - The use of field audits needs to be expanded. Again, it is important that non-filing companies be targeted given the apparently low rate of filing.
    - Non-filers should be assessed best judgment presumptions of liability, with the proviso that, while the presumption is potentially rebuttable and appealable, the assessment must be paid in advance of any attempt to rebut or appeal it.

ASSESING ENTERPRISE TAXATION AND THE INVESTMENT CLIMATE IN PAKISTAN

Introduction

The Pakistan system of taxing enterprises has undergone some major changes in recent years. Nevertheless, the corporate tax system remains plagued by a number of problems. The existence of numerous exemption programs has greatly distorted the allocation of investment across sectors and asset types, and has also significantly reduced tax revenues. There also seem to exist significant amounts of tax evasion, evasion that also distorts resource allocation, reduces tax revenues, and compromises the distributional objectives of the system. In part as a result of tax avoidance and tax evasion, the tax base has shrunk over time, further reducing revenues and leaving many taxpayers out of the tax net. The extensive use of tax incentives is seldom tracked, quantified, and evaluated, and the intended effects on economic growth are uncertain. The incentives are only one feature of the tax system that contributes to an overly complicated system, complications that illustrate the limitations of the tax administration. The tax system was designed for times and circumstances that are long past, and the system has evolved over time in a piecemeal, ad hoc manner with little apparent thought given to the ways in which the pieces of the system need to fit together.

Consequently, there are important issues that must be addressed in the Pakistan corporate fiscal system, issues that relate to the neutrality, the yield, and the simplicity of the tax system. This working paper discusses these issues. The next section briefly describes some general principles of and some recent global trends in taxing enterprises in a globalized world. The basic structure of the Pakistan corporate tax structure is then discussed, followed by a discussion of the system of incentives. The distorting effects of

the tax incentives and tax system on investment are demonstrated by calculating both average effective tax rates (AETRs) from tax return information, and also marginal effective tax rates (METRs) from analytical models. The following sections compare Pakistan tax practice to international practices, examine the overall investment "climate" in Pakistan by drawing upon several recent surveys of business practices in Pakistan and elsewhere, and then identify some of the other core issues in the "system" of corporate taxation. The final section presents some issues that need to be considered in any possible reforms, including some possible reform options.

Some General Principles and Worldwide Trends for Taxing Companies in a Globalizing World

Globalization and Taxation

The tax systems of many countries were designed in a world that is dramatically different from the globalized world that now exists, and these systems have often failed to evolve relevance to the changing economic circumstances of governments in a more integrated world economy. The tax systems of most governments were originally designed for a world in which production and consumption were primarily of *tangible goods*, in which the sale and consumption of these goods generally occurred in the *same location*, and in which the factors of production used to make the goods were for the most part *immobile*. In such a world, taxation was a fairly straightforward exercise. Income (and property) taxes could be imposed on factors where they lived and worked without fear that taxes would drive the factors elsewhere. Similarly, sales and excise taxes could be imposed on the tangible goods that were consumed, by the government in the

jurisdiction in which consumption (or production) occurred. In making these tax decisions, a government in one jurisdiction had no need to consider how its actions would affect the governments in other jurisdictions because tax bases were largely immobile.

There is little doubt that, in principle, the current economic environment, characterized by rapidly increasing globalization of economic activity and more fully integrated world markets, brings about radical changes.

First, tax bases are significantly more mobile, especially the capital income base. With integrated national and world markets, factors of production are obviously able to move more easily from one jurisdiction to another. For example, businesses have more flexibility in choosing where to locate because communication and transportation costs have been slashed. Some forms of production activity require little in the way of traditional capital and labor, so that physical location becomes less important. Labor, especially skilled labor, becomes more mobile in this environment, and financial capital is able to flow quickly across national boundaries.

Clearly, if factors of production can move easily from one location to another, then the ability of a government to tax these factors is greatly diminished. A government that raises its tax rates above those of other jurisdictions risks losing its tax base to these areas. Particularly in the case of income from capital, there is much speculation that taxation will become increasingly problematic (Mintz, 1992). In fact, there is some empirical evidence that factors of production are responding to these types of tax considerations (Grubert, 1998; Hines, 1999).

Increased mobility is not limited to factors of production. Consumers are also able to plan their consumption according to tax considerations, and consumption does not

necessarily occur in the jurisdiction in which a taxpayer resides. A jurisdiction that attempts to tax, say, gasoline more heavily than surrounding areas will find that consumers will purchase elsewhere. Similarly, many individuals both in developed and developing countries can now purchase many types of products (especially intangible goods) over the internet and thereby avoid paying some sales taxes. Additionally, there has been increased consumption of services (as well as of intangible goods), which are much more difficult to tax than more traditional tangible goods. The once-tight link between the location of sales and the location of consumption is now quite loose.

Second, the measurement, identification, and assignment of tax bases are much more difficult (McLure, 1997). Consider a typical multinational business. The product that the firm makes may be designed in one or more jurisdictions; the firm may use inputs purchased in multiple jurisdictions; the product may be produced in several places and assembled in a still different location; and the final good may be sold in multiple locations. Because the business operates in multiple jurisdictions, the firm has considerable leeway to manipulate its prices (e.g., "transfer prices") to minimize its tax liabilities. This latter problem is well known, but its severity has increased with the enormous expansion in the number of firms operating in multiple jurisdictions.

Likewise, consider an individual whose income comes from multiple sources. A global income tax requires that income from these sources be aggregated. However, it is easy for an individual to hide, say, interest income from multiple areas. In the absence of information sharing across governments, and in the face of administrative problems faced especially by governments in developing countries, the ability of any government to identify incomes from other jurisdictions is quite limited.

Consider finally a consumer who can purchase goods and services in several different ways: from traditional local merchants or from company websites. In the former case, identification, measurement, and assignment of the tax base are straightforward. In the latter case, they are not.

How will governments respond to these various challenges, especially in their tax choices? Most importantly, globalization implies that the ability of any government to choose its tax policies independently of those in other jurisdictions is greatly curtailed. In the presence of mobile tax bases, a single government's choice of tax policies will have effects beyond its own borders and will be affected by the actions of other jurisdictions. In short, *tax competition* will increase, and this increase will have a number of effects: on the level of taxation, on the composition and form of taxes, and on the general strategies that a government can pursue in designing its taxes.

The *level* of tax rates seems likely to decline. In particular, if tax bases can move easily from one jurisdiction to another, then they will tend to flow from high-tax to low-tax areas. Owners of capital, skilled labor, and consumers will become increasingly sensitive to tax differentials in their locational decisions. As a consequence, it is commonly argued that governments will face increasing pressures to compete with one another by reducing tax rates or by offering special tax incentives for attracting and retaining the various tax bases. For example, when a government reduces its tax rates on capital income, it thereby attracts capital flows from other jurisdictions, and in doing so the government benefits its own jurisdiction. However, the government's action also imposes costs on the jurisdictions that lose factors of production, and so it risks generating similar tax-cutting responses from those governments. Indeed, with tax

competition there could well be what some have referred to as a "race to the bottom", in which overall tax collections decline precipitously as governments compete to attract or to retain their tax bases (Wilson, 1999). There is much work that suggests in particular that governments will lose completely the ability to tax capital income (Mintz, 1992; Gordon and Hines, 2002; Desai and Hines, 2004).

The *composition* of taxes could also change as a result of increased difficulty in taxing mobile tax bases. The overall tax burden from income taxes on mobile tax bases like capital (and skilled labor) will likely decline across governments; tax rates on these factors should also flatten and converge. In contrast, taxes on immobile bases – unskilled labor, physical capital, and property – should increase. Charges and fees for specific services should also rise in importance because these tax bases are largely immobile.

The *form* of taxes many also change. Governments may well decide that, say, a residence-based corporate income tax (in which a country taxes the world-wide income of the enterprise) is preferable to a source-based (or territorial-based) corporate income tax (in which a country taxes only income arising within its own borders).

These latter changes suggest more broadly that there may be scope for greater *harmonization* (or at least greater *coordination*) of tax systems, in an attempt to reduce the negative fiscal externalities that one government's decisions impose upon other governments. Such harmonization implies that there should be some *convergence* in tax rates across governments, and also in the definitions of tax bases. With harmonization, government autonomy in tax policy will obviously diminish (Tanzi, 1995).

Overall, these compositional changes imply that the tax systems of many countries will likely become more regressive than at present. If taxes on capital and

skilled labor decline, if excise and sales taxes increase, if income taxes on all forms of labor, especially immobile unskilled labor increase, and if marginal income tax rates flatten, then governments will find it quite difficult to maintain any progressivity in their tax systems. The ability of governments to redistribute income to lower income individuals will likely diminish.

Recent Global Trends in Taxing Companies

Indeed, there is now some emerging evidence that these trends are occurring, at least to some degree. Devereux and Sorensen (2005) and Auerbach, Devereux, and Simpson (2007) identify several "stylized" facts about the evolution of taxes on corporate income in OECD countries in the last two decades:

- Statutory corporate tax rates have fallen significantly since 1982 for most of the 19 countries examined, and continue to decline today. In 1982, 15 of the 19 countries had statutory tax rates above 40 percent; by 2004, no country had a tax rate above 40 percent. Overall, the (unweighted) mean statutory tax rate fell from 48 percent to 32 percent over this period.
- The tax bases of most countries were broadened over much of this period, at least as measured by the (reduced) generosity of depreciation allowances.
- The effective tax rate on corporate income, measured by the "marginal effective tax rate" and the "average effective tax rate", has tended to fall over time. These measures of effective tax rates are discussed in more detail later.

More anecdotal evidence for other developed and also for developing countries is also broadly consistent with these trends. For example, examination of statutory tax rates

in world-wide compilations of corporate tax rates, such as the *KMPG Corporate Tax Rate Survey 2007* or the *PricewaterhouseCoopers Corporate Taxes, Worldwide Summaries* (now available online) also indicate a clear downward trend over time, in many countries. There are now at least 16 countries in the former Soviet sphere, including Russia, Slovakia, Poland, Serbia, Hungary, Moldova, Latvia, Romania, Mongolia, Kyrgyzstan, Macedonia, Estonia, Latvia, Ukraine, Georgia, and Lithuania, that have a corporate tax rate of 25 percent or lower; some of these countries also have a flat rate tax system with identical corporate and individual tax rates. Several countries in the Middle East, such as Kuwait, have dramatically reduced their corporate tax rate. At least 26 developed countries have reduced corporate (or individual) tax rates even in the short period since 2005. The evidence from developing countries is similar, according to *Paying Taxes 2008 – The Global Picture*.

Some General Principles

More generally, then, how should corporations be taxed in this new world economy? The taxation of corporate income can be classified along two dimensions (Devereux and Sorensen, 2005). First, what is the location of the tax base? Here there are several possibilities:

- Source-based (or territorial-based), where a country taxes income arising within its own borders); that is, the tax base is corporate income earned in the source country in which production takes place.
- Residence-based, where a country taxes the worldwide income of the enterprise; that is, the tax base is corporate income earned in the residence country of the

corporation's owner.

- Destination-based taxation, where a country taxes sales (net of costs) to the destination country where final consumption of the company's products takes place.

Traditional corporate income taxes are either source-based or residence-based. Broadly, capital-exporting countries use the residence method, while capital-importing countries use the source method. A capital-importing country that does not impose a corporate tax simply loses tax revenues to the home country of the enterprise.[1]

Second, what is the type of income subject to the tax? Again, there are several possibilities:

- Full return to equity (e.g., economic profit, including pure rent)
- Full return to capital only
- Rent (e.g., economic profit in excess of the level needed to justify the investment).

The standard practice in the classical corporate income tax is to tax the full return to equity (e.g., corporate profits), typically measured as some form of net accounting profits (or gross revenues less operating costs plus capital adjustments including interest expenses, depreciation allowances, and inventory adjustments).

[1] Most capital-exporting countries tax multinational companies on their world-wide income but allow a credit against home-country corporate income taxes of taxes paid in foreign countries. Consequently, failure by a capital-importing country (country A) to impose its own corporate income tax on profits earned within the country simply means that the home country (country B) collects the taxes on income earned by the company in country A; that is, failure by the capital-importing country (A) to impose the tax transfers taxes from the capital-importing country (A) to the treasury of the capital-exporting country (B).

There are no simple, "optimal" rules for taxing corporate income that emerge from all of these considerations. Even so, there are some general principles. One is the principle of *capital import neutrality* (CIN), which occurs when all foreign and domestic investors who provide capital to a given country receive the same return on investments there and so face the same effective tax rate. A source-based tax is consistent with CIN because under a source-based (or territorial-based) income tax the taxes on foreign and domestic investments are the same within a given territory with capital income taxed at the same rate regardless of the residence of the investor. An alternative principle is *capital export neutrality* (CEN), in which investors are taxed at the same effective rate on all of their world-wide income, regardless of the country in which the income is generated. A residence-based system in which residents of a jurisdiction are taxed on their world-wide income regardless of its source is consistent with CEN because the same tax rates apply to investments regardless of the location in which they are earned.

It can be shown that, in a global economy with capital mobility, global production efficiency requires that the pre-tax marginal returns to investment must be equalized across countries, so that CEN is consistent with global efficiency in capital allocation because the return to capital is taxed at the same rate regardless of where it is earned. A residence-based system therefore is consistent CEN and so with global efficiency. In contrast, CIN (and source-based taxation) violates world-wide efficiency. In a world in which capital is mobile internationally, the return to investment is determined by world capital markets. A source-based income tax can therefore have no effect on the return to domestic savers, and will simply lead to a reduction in domestic investment as capital

flees the country. It follows immediately that a source-based corporate income tax is dominated on efficiency grounds by a residence-based tax. If capital income of domestic residents is taxed at the same rate regardless of where it is earned (a residence-based system) and if any tax payments to foreign governments are treated as deductible expenses, then a residence-based system achieves global efficiency in the allocation of capital.

Of course, the conditions under which a pure residence-based tax system ensures global efficiency in capital allocation are quite restrictive (Keen and Wildasin, 2004). There are also other possible goals of corporate taxation, as emphasized by Devereux and Sorensen (2005) and Desai and Hines (2003, 2004), so that any principles must be taken with some caution.[2]

[2] These other principles include:

- National Neutrality (NN). A tax system satisfies NN if it maximizes national welfare only. Here the goal of a home-country government is to maximize the sum of tax revenue and the after-tax world-wide income of home-country firms. Tax policies should therefore advance only national welfare, so that foreign income should be fully taxed domestically (after deduction of any foreign income taxes paid overseas).
- Capital Ownership Neutrality (CON). A tax system satisfies CON if it does not distort the ownership patterns of capital assets. CON advances global efficiency whenever the productivity of an investment differs based on its ownership. A regime in which all countries exempt foreign income satisfies CON; a regime in which all countries tax foreign income but provide foreign tax credits also satisfies CON.
- National Ownership Neutrality (NON). A tax system satisfies NON if it improves the profitability of home-country firms only (and so home-country welfare only). A regime in which a country exempts foreign income from home-country taxation regardless of what other countries do satisfies NON, as long additional foreign investment in the home country does not reduce home-country tax revenues generated from domestic economic activities.

See especially Desai and Hines (2003, 2004).

Pakistan's Corporate Income Tax Structure[3]

As specified in the Income Tax Ordinance, 2001, the Pakistan corporate income tax is imposed on the world-wide profits of resident companies and the Pakistan source income of non-resident companies. Resident companies are those whose control and management are located in Pakistan at any point during the tax year; a branch operation is normally considered to be a non-resident entity.

Enterprise profits taxes are in general designed to collect revenues from a firm's economic profits, or its net income. In practice, the tax base is generally some commercial accounting measure of profits. To this base, a tax rate (or rate structure) is then applied. The revenues from the tax reflect these two elements. Consider these, and other, elements of the tax.

Corporate Tax Rates

The rates for the corporate sector were exceptionally high in the past. During 1992-93, banking, public, and private companies were taxed at the rate of 66 percent, 44 percent, and 55 percent, respectively. These rates have been reduced significantly over time. Currently, there is one uniform corporate tax rate of 35 percent for all three types of companies (private, banking, and public companies). In order to encourage "small" companies, a lower rate of 20 percent has been in operation; the definition of a "small" company is discussed in the next subsection. The gradual reduction of corporate tax rates is indicated in Table 1.

[3] See Thirsk (2008) for a detailed discussion of many of these same issues, as well as a similar discussion for the other major taxes used by the Government of Pakistan. We are also especially grateful to Mr. Anjum Ata Sheikh and Mr. Muzammil Rasheed of Grant Thornton Chartered Accounts in Islamabad for detailed discussions on enterprise taxation in Pakistan.

Table 1: Corporate Tax Rates
(percent)

Tax Year	Banking Company	Public Company other than a Banking Company	Private Company other than a Banking Company
1992	66	44	55
2002	50	35	45
2003	47	35	43
2004	44	35	41
2005	41	35	39
2006 [a]	38	35	37
2007 [a]	35	35	35

Source: Income Tax Ordinance, 2001.

Note:
[a] Note that the tax rate is 20 percent for "small companies". See the following discussion.

Small Companies

The concept of a "small company" was introduced in the Finance Act, 2005. Currently, a small company means a company registered on or after the first day of July 2005 under the Companies Ordinance, 1984, one that fulfills the following criteria:

- The company has paid up capital plus undistributed reserves not exceeding Rs. 25 million;
- It has employees not exceeding 250 any time during the year;
- It has annual turnover not exceeding Rs. 250 million; and
- It was not formed by splitting up or the reconstitution of business already in existence.

In order to encourage small companies, a lower corporate tax rate of 20 percent (versus the standard rate of 35 percent) was chosen. This is a significant fiscal incentive for small companies. Note that there is no smooth graduation for a company as it moves from small to regular status; that is, if a company increases, say, its employees above

250, then in principle the entire net income of the company is immediately taxed under the regular company regime tax rate of 35 percent. This feature creates a significant notch problem, one in which a company has a strong incentive to remain (for tax purposes) a "small company". Note also that the various criteria for a "small company" seem to describe companies that are in fact not very small (e.g., 250 employees, annual turnover of Rs. 250 million).

Deductions and Special Provisions

As noted earlier, the tax base is net accounting profits, which equals gross revenues less various deductions and special provisions such as operating costs and capital adjustments. The following deductions are allowed in the Income Tax Ordinance, 2001:

- depreciation allowances for tangible assets (including initial allowances) and amortization for intangible assets
- bad debts (if classified as "irrecoverable")
- pre-commencement expenditures
- scientific research and development expenditures
- transfers to participatory reserves
- expenses for employees training and facilities
- losses on non-performing debt of a banking company or development financial institution
- debt on consumer loans for banking companies, non-banking companies, or the House Building Finance Corporation
- interest expenses on company debt

- compulsory payments to the Workers Welfare Fund and Worker's Profit Participation Fund.[4]

Depreciation Allowances

There are two types of depreciation allowances for tangible goods in the Pakistan corporate income tax: an initial depreciation allowance for some assets and depreciation allowances for other tangible assets.

An initial depreciation allowance of 50 percent of the cost of eligible depreciable assets is allowed in the first year only for assets when first used in Pakistan or when not previously used for commercial production in Pakistan, whichever begins later. Assets that are not eligible for the initial allowance include depreciable assets previously used in Pakistan, furniture (including fittings), road transport vehicles (unless the vehicle is for hire), and any plant or machinery on which a deduction has been allowed under another section of the Income Tax Ordinance, 2001 for the entire cost of the asset in the tax year in which the asset was acquired.

The basic method of depreciation allowances for tangible assets is a declining balance schedule of depreciation. The rates of depreciation for tangible specific assets in tax year 2007 are given in Table 2. When assets are transferred outside Pakistan, the original cost is treated as the sale price, so that the entire depreciation is recaptured at the time of export. Also, if an asset disposed, then any excess of disposal value over depreciated value is considered income from business; if the disposal value is less than depreciated value, then the difference is deductible from business income.

[4] These funds are separate sources of social security support. The Workers Welfare Fund (WWF) is funded by a 2 percent tax on the taxable income of companies, paid to the Ministry of Labor. The Workers Profit Participation Fund (WPPF) is funded by a 5 percent tax on the taxable income of large companies and multi-national enterprises, and distributes the proceeds primarily for the benefit of low wage workers.

Amortization of intangibles is allowed on a straight-line basis of 10 percent rate if the useful life of the intangible asset is more than one year.[5] Similarly, an amortization rate of 20 percent is allowed in the case of pre-commencement expenditures. Specified pre-commencement expenditures are those incurred before the commencement of business wholly and exclusively to derive income, such as the cost of feasibilities studies, construction of prototypes, trial production activities, and the like. However, any expenditure incurred in acquiring land, depreciable assets, or other specified assets cannot be included in the specified pre-commencement expenditure.

Table 2: Depreciation Allowances (Tax Year 2007)

SNO		Description	Depreciation Rate, as Percent of Depreciated Value
A		Initial depreciation allowance	50
B		Other depreciation allowances	
	I	Buildings (all types)	10
	II	i) Furniture (including fittings) ii) Machinery and plants (not otherwise specified) iii) Motor vehicles (all types) iv) Ships v) Technical or professional books	15
	III	Computer hardware including printer, monitor and allied items, machinery and equipment used in manufacture of information technology products, aircrafts, and aero-engines	30
	IV	The income of mineral oil concerns is liable to be computed in accordance with rules in Part I of the Fifth Schedule of Income Tax Ordinance, 2001	
		i) Below-ground installation	100
		ii) Off-shore platform and production installation	20

Source: Income Tax Ordinance, 2001.

[5] An "intangible asset" means any patent, invention, design or model, secret formula or process, copyright, trade mark, scientific or technical knowledge, computer software, motion picture film, export quota, franchise, license, intellectual property, or other like property or right, contractual right, and any expenditure that provides an advantage or benefit for a period of more than one year (other than expenditure incurred to acquire a depreciable asset or improved land).

Minimum Tax Provision

Resident companies are subjected to minimum tax of 0.50 percent of the gross turnover; non-resident companies are exempt from the minimum tax. The minimum tax provision is applied in the following cases:

- No tax is payable or paid by the company for the tax year
- The tax payable or paid is less than one-half percent of the amount representing the gross turnover from all sources for the tax year.

Note that the minimum tax must be paid even if the company reports losses.

Filing of Returns

The tax year for income tax purposes is from July 1st to June 30th of the following year. With some exceptions, all companies are required to file their annual return for the preceding financial year by December 31st. After the introduction of the Universal Self Assessment Scheme (USAS) in 2002 (see below), all returns are considered to be finalized, although 5 percent of the returns are randomly selected for a detailed audit. Companies pay advance tax on a quarterly basis on the last assessed income with certain prescribed adjustments. The discharge of total liability is made at the time of the filing of the return. Advance tax and some taxes withheld at source are adjustable against the final tax liability at filing. If a company has paid more than its final tax liability, it can apply the excess against future tax liability. It is apparently quite difficult to claim and receive any tax refunds.

Universal Self Assessment Scheme

For many years, companies believed that their tax returns were subjected to full assessment, resulting in many cases in an unmanageable litigation process and an unnecessary waste of taxpayer time. One of the major issues was the scope for ample contacts between taxpayer and tax collector, contacts that (it was believed) provided the opportunity for corruption and connivance. Honest taxpayers believed that the burden of full assessment was considerable and unjustified.

Accordingly, in July 2002 the Universal Self Assessment Scheme (USAS) was introduced in the income tax. The goals of USAS were several: to restore the confidence of taxpayers, to minimize the contact between taxpayers and tax collectors, and to speed up the pace of income tax revenues. The introduction of USAS has provided taxpayers a chance to pay their due taxes in a more congenial environment.

Following its introduction, voluntary compliance has increased substantially, perhaps due to the restoration of taxpayers' confidence in the tax system and in the Federal Board of Revenue. Figure 1 illustrates how the introduction of USAS has changed the overall complexion of income tax revenue distribution, where COD, VP, and WHT denote collection on demand, voluntary payments, and withholding taxes, respectively.

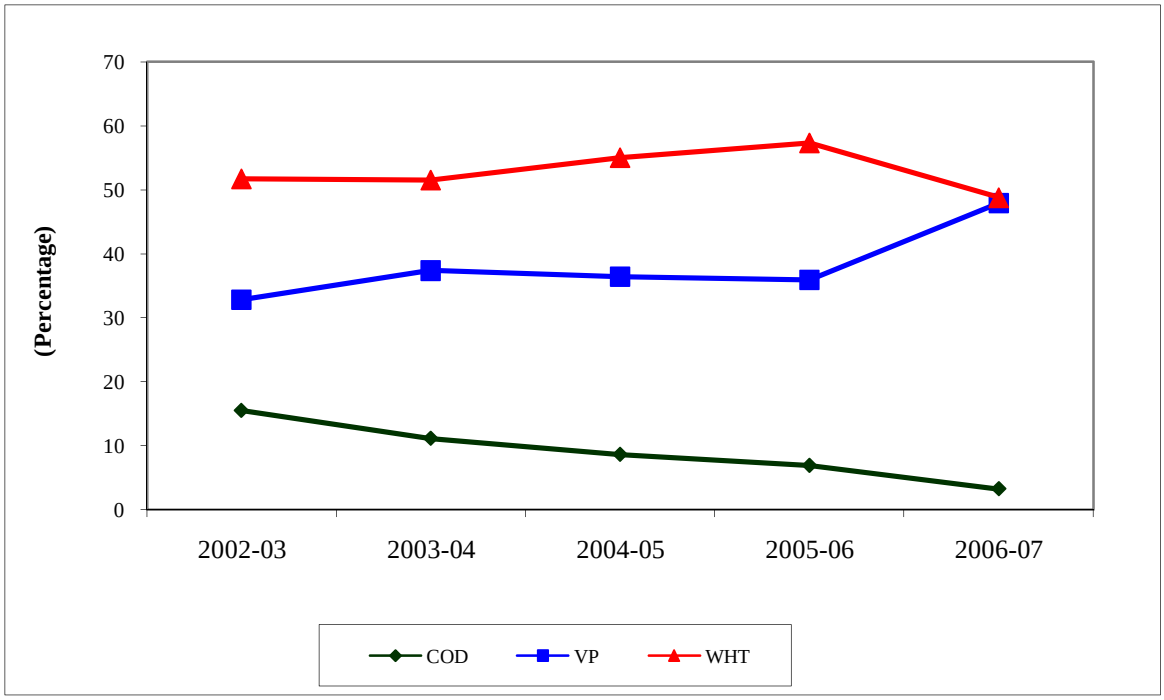

Figure 1: USAS – Changing Patterns of Components of Income Tax

Presumptive Taxation Regime

Some companies or types of income are taxed under a presumptive taxation regime (PTR), in which gross receipts (and not income) are taxed at a specified rate. These companies/income types and tax rates include:

For Residents:

- Execution of contracts at 6 percent
- Supply of goods at 3.5 percent
- Commercial imports at 5 percent
- Dividends at 10 percent

- A reduced tax rate of 7.5 percent is applicable in case of dividends received from a company engaged exclusively in mining operations, other than petroleum.
- A reduced rate of 7.5 percent is applicable in case of dividends declared or distributed by purchaser of a power project privatized by Water and Power Development Authority.
- Rental income at 5 percent of gross rent paid
- Compressed natural tax stations at 6 percent of the gas consumption charges.

For Non-Residents:

- Execution of specified contracts at 6 percent
- Royalties and fees for technical services at 15 percent of the gross amount of the royalty or fee for technical services

- Dividends at 10 percent
  - A reduced rate of 7.5 percent is applicable in case of dividends declared or distributed on shares of a company set up for power generation
  - Shipping income at 8 percent of the gross amount received or receivable
  - Air transport income at 3 percent of the gross amount receivable

There taxes are collected via withholding.

Treatment of Losses

Operating losses may be carried forward for up to 6 years; unabsorbed depreciation can be carried forward indefinitely. Brought forward losses cannot be utilized if the ownership of business changes by 50 percent or more or if a new business is started with the goal of simply using the losses. Also, operating losses can be carried forward up to a period of six years in case of the amalgamation of two companies, with the condition that the same business will continue for a minimum period of five years. The subsidiary of a public listed company can surrender its operating losses for up to 3 years to its holding company (with a holding of 75 percent), for the set off against its profit of the current and the subsequent two years; these consolidated returns have only been allowed since 2006.

International Taxation Treaties

Pakistan has signed full scope treaties on double taxation with 54 countries (Table 3). Limited purpose treaties have also been negotiated with Kenya, and with Greece, India, and Jordon on income from airlines.

Compliance and Coverage

The base of taxation of the corporate sector is quite narrow. Out of 2.2 million National Tax Number (NTN) holders in 2006, only 28,756 (or 1.4 percent) are related to the corporate sector (Table 4), and of these only 13,946 filed a tax return. As discussed in more detail later, the majority of filers either declared losses or reported no taxable income.

Table 3: Countries with Double Taxation Treaties with Pakistan

Austria	Iran	Norway	Syria
Azerbaijan	Ireland	Oman	Tajikistan
Bangladesh	Italy	Philippines	Thailand
Belgium	Japan	Poland	Tunisia
Bosnia Herzegovina	Kazakhstan	Portugal	Turkey
Canada	Korea	Qatar	Turkmenistan
China	Kuwait	Romania	United Arab Emirates
Denmark	Libya	Singapore	United Kingdom
Egypt	Malaysia	South Africa	United States
Finland	Malta	Sri Lanka	Uzbekistan
France	Mauritius	Sweden	Yemen
Germany	Nepal	Switzerland	Vietnam
Hungary	The Netherlands	Saudi Arabia	
Indonesia	Nigeria	SAARC[a]	

Source: Federal Board of Revenue.

Note:

[a] SAARC denotes the South Asian Association for Regional Cooperation, established on 8 December 1985 by Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka. In April 2007 Afghanistan became its eighth member.

Table 4: Filing Rate of Corporate Tax

Tax Year	Corporate NTN Holders	Filers	Filing Rate (percent)
2004	19,020	12,526	65.9
2005	22,290	14,191	59.2
2006	28,756	13,946	48.4

Source: Federal Board of Revenue.

Revenue Performance and Buoyancy of Corporate Taxes

Income tax collections from the corporate sector have increased at a fast pace during the past few years. Despite the gradual but steady reduction of corporate tax rates, especially for banking and private sector companies, overall collections have improved substantially, and the corporate share in gross income taxes has jumped from 60 percent

in 2004-05 to 76 percent in 2006-07.[6] As far the overall contribution of corporate taxes is concerned, Rs. 250 billion has been realized during 2006-07 against Rs. 171 billion in 2005-06. The corporate sector witnessed robust growth of 47.6 percent, 36.9 percent and 69.6 percent during 2006-07 in public, private, and banking companies respectively. In absolute terms, their collections stood at Rs. 92.9 billion, Rs. 112.1 billion, and Rs. 44.6 billion respectively.

The profitability of the banking sector has been instrumental in this revenue performance. The robust growth in the collections from public companies is mainly due to the oil and gas sector. Private companies exhibited a reasonably high growth rate but one that is lower than for public and banking companies. This outcome spotlights the need of revisiting the extent of tax compliance by the private sector.

The collection of corporate taxes is mainly generated from advance taxes, payment with return and other sources (including realization from arrears), and withholding taxes. Advance tax collections are mainly related to the corporate sector, with only 2 percent stemming from the non-corporate sector. Out of total corporate advance tax payments in 2006-07, 28 percent is contributed by banking, 21 percent by oil and gas, 6 percent by telecommunication, 2 percent by fertilizer, and 1.5 percent each by tobacco and pharmaceuticals. The remaining collections are shared in small amounts by the other sectors. All government revenues, as well as the sectoral composition of the corporate income tax collections during 2005-06 and 2006-07, are in Annex 1.

The buoyancy of direct tax collections (of which the corporate income tax is the most important) has been estimated using liner regression methods. The natural logarithm of direct taxes is regressed on the natural logarithm of GDP, using data for the

[6] This analysis is mostly based on the *CBR Quarterly Review* (July-June 2007).

period 1984-85 to 2006-07. The estimated coefficient for GDP measures the response of direct taxes to a change in GDP. This estimated coefficient is 1.21, which indicates that, say, a 1 percent change in GDP leads to a 1.21 percent change in direct tax revenues.[7]

Tax Incentive Systems in Pakistan

The burden of the corporate income tax is significantly affected by the presence of numerous fiscal incentives available to firms. Fiscal incentives are used as a tool for promoting investment in most developing (and developed) economies, and Pakistan is no exception. Pakistan offers a generous package of tax incentives to the corporate sector, of several types. Indeed, the Income Tax Ordinance, 2001 contains numerous exemptions and concessions for the corporate sector, as indicated by the 70 pages in the Ordinance that describe exemptions and concessions, including a number of incentives that identify a specific company name as the recipient. One of the most conspicuous exemptions is for the agriculture sector, which contributes a significant part of the GDP of the country but a miniscule share of tax revenues.

In general, Pakistan's corporate tax laws do not discriminate among different sectors of the economy in terms of concessionary rates or special tax breaks. However, there are some notable exceptions. For example, Pakistan offers income tax incentives for firms that set up operation either in an export processing zone (EPZ) or a special investment zone (SIZ). There are also other incentives that operate in these zones. Certain types of economic activity are also exempt from the corporate income tax. These include the income earned by micro-finance banks (provided that no dividends are paid

[7] Similarly derived estimates for the sales tax, federal excise taxes, custom duties, and all federal taxes combined are 1.45, 0.90, 0.48, and 0.90, respectively.

out and that all profits are reinvested in micro-finance operations). The profits or gains of a venture capital company are also exempt, until 30 June 2014; the profits or gain on the sale of immovable property to a real estate unit trust up to 30 June 2010 enjoy a similar exemption. Any profits earned by a computer training or vocational institute are exempt from the income tax.[8] Electric power companies are exempt as well.

The following subsections discuss these and other incentives in more detail. Note that this section does not discuss those types of incentives that stem from the standard structure of the corporate income tax, such as depreciation allowances and allowable deductions.

Incentives for Industrial/Export Processing Zones (EPZs)/Special Investment Zones (SIZs)

Firms operating in EPZs receive a five year tax holiday and a 75 percent tax exemption after the holiday expires; firms operating in SIZs enjoy an unlimited income tax rebate of 75 percent. In addition, any income that is chargeable under the head "capital gains" derived by a person from an industrial undertaking set up in an EPZ is exempt from payment of income tax (Authority Ordinance, 1980). Firms in EPZs are also exempt from customs duties and sales taxes, under the following conditions:

- exemption of customs duty for plant, machinery, and equipment and raw materials (under some conditions)
- duty-free import of vehicles (under certain conditions)

[8] Inter-corporate dividends are also exempt, according to the Second Schedule of Exemptions and Concessions.

- no sales tax on input goods, including electricity and gas bills
- zero-rated sales tax supplies of raw material, components, and goods
- zero-rated sales tax supplies under Duty and Taxes Remission Scheme, 2001 for further manufacture of goods
- zero-rated sales tax on supplies of plant and machinery.

Exempt Incomes

Certain types of income receive favorable tax treatment via exemption from the income tax. These include:

- Information Technology

  Under Section 133, income derived by a company from the export of computer software, information technology services, or information technology enabled services is exempt up to 30 June 2016. "Information technology" services include software development, software maintenance, system integration, web design, web development, web hosting, and network design. Similarly, "information technology enabled services" include inbound or outbound call centers, medical transportation, remote monitoring, graphic design, accounting services, human resource services, telemedicine centers, data entry operations, locally produced television programs, and insurance claim processing.

- Capital Investment

  Profit and gains derived by between 1 July 2000 and 30 June 30 2007 are exempt from tax by a venture capital company and venture capital fund registered under

Venture Capital Companies and Funds Management Rules, 2000 and a Private Equity and Venture Capital Fund.

- Power Generation

  Profits and gains of a company registered in Pakistan from power generation projects are exempt from the income tax without any time frame.

- Mutual Funds, Investment Companies, and Trusts

  Profits and gains derived by a mutual fund, investment company, collective investment scheme, real estate investment trust, or private equity and venture capital fund is exempt from the income tax, as long as there is no less than 90 percent distribution of its income among unit-holders.

- Capital Investment

  Profits and gains derived by a venture company set up between 1 July 2000 and 30 June 2007 are exempt from the income tax. An exemption is also granted for any distribution received by a taxpayer from the National Investment Trust or from a collective investment scheme out of the capital gains of the trust or fund on which tax has already been paid.

- Capital Gains

  Any income chargeable under the head "capital gains" (or income from the sale of modaraba certificates or any instrument of redeemable capital as defined in the Companies Ordinance, 1984 listed on any stock exchange in Pakistan and shares of a public company and Pakistan Telecommunications Corporation vouchers issued by the government of Pakistan, derived by a taxpayer up to the tax year ending on the thirtieth day of June 2008) is exempt from the income tax.

- Dividends

  Any dividends received by the Investment Corporation of Pakistan from any other company that has paid or will pay tax in respect of the profits out of which such dividends are paid is exempt from the income tax. There is also an exemption for any income derived from inter-corporate dividends within a group companies entitled to group taxation.

- Exemptions for Micro-finance Banks

  According to the Second Schedule Part 1, Clause (66*)* I, income from micro-finance banks is exempt from the income tax for 5 years, starting from 1 July 2007, provided that these banks will not issue dividends to their shareholders and utilize their profits and gains for micro finance only.

Preferential Tax Rates

Several types of preferential tax rates are given.

As noted earlier, there is a reduced corporate income tax rate on "small companies" of 20 percent; they are also exempt from the withholding tax under Section 153 of the Income Tax Ordinance, 2001. A "small company" is one that has paid-up capital plus undistributed reserves not exceeding Rs. 25 million, has employees not exceeding 250 any time during the year, has annual turnover not exceeding Rs. 250 million, and was not formed by splitting up or reconstituting any business already in existence.

There is a reduced rate of 1 percent on imports of specified types. The tax on income from construction contracts outside Pakistan is charged at the rate of 1 percent of

the gross receipts provided that such income is brought into Pakistan in foreign exchange through normal banking channel. Also, the tax on income from services outside Pakistan is charged at the rate of 1 percent of the gross receipts provided that such income is brought into Pakistan in foreign exchange through normal banking channel. There is also a tax of 1 percent on the import of capital goods and raw material imported exclusively for its own use by a manufacturer registered with the sales tax. In respect of manufacturers of cooking oils or vegetable ghee or both, an income tax at 1 percent of the purchase price is charged on the purchase of locally produced edible oil. A reduced rate of 1 percent is also applied to a wide spectrum of items imported including capital goods, cement, coal, some trucks, dump trucks, and so on. A 1 percent tax rate is also applied to a variety of items notified under various SROs under the Customs Act, 1969 and to the import of five major export-oriented industries, including textiles, carpets, leather, sports, and surgical goods. Note that the inputs for these industries are zero-rated for the purpose of sales tax.

There is a reduced rate of 2 percent on imports that is applied to the import of raw material for the steel industry and raw material of the poultry, edible oil, energy saver lamp, bitumen, fixed wireless terminal, pesticide, and weedicide industries.

There is a reduced rate of 0.75 percent on foreign exchange proceeds from the export of fish and fisheries products packed in retail packs of five hundred grams to two kilograms.

In the case of a non-resident company, the rate of deduction of dividend taxes under Section 150 on dividends received from a company engaged exclusively in mining operations (other than petroleum) is subject to a tax at 7.5 percent of the gross amount of

dividends. This reduced tax rate is applied in the case of dividends declared or distributed by purchasers of power projects privatized by the Water and Power Development Authority, and in the case of dividends declared or distributed on the shares of a company set up for power generation.

Some Miscellaneous Direct Tax Incentives

The notion of "group taxation" was recently introduced. The salient features of this regime are:

- 100 percent owned group of companies locally incorporated under the Companies Ordinance, 1984 will be taxed as a single fiscal unit, provided an irrevocable option is exercised to be taxed as a group
- Losses incurred by the group company will be offset against the income of other group companies
- A consolidated group account as required under the Companies Ordinance, 1984 will form the basis of computation of income and the computation of tax payable by the group
- The relief under group taxation will not be available to losses prior to the formation of the group
- Any income derived on or after 1 July 2007 from inter-corporate dividends within a group of companies entitled to group taxation is exempt.

There is also a provision of the law to provide an exemption for the permanent establishment of non-resident petroleum exploration and production companies. The law provides an exemption from the withholding tax on any payment received by an oil

distribution company or an oil refinery for supply of its petroleum products. In order to bring at par the non-resident petroleum exploration and production companies, the permanent establishments of the non-resident companies have also been exempted from withholding tax on the supply of crude oil and gas.

Incentives in Indirect Taxes

There are some special provisions that work through indirect taxes. In the sales tax, there is zero rating for:

- machinery, plant, and equipment not manufactured locally, including agricultural machinery
- the entire chain of five major export oriented industries (textiles, leather, surgical goods, sport goods, and carpets)
- iron and steel scrap
- trailers or semi-trailers

The standard rate in the sales tax is 15 percent. However, there are differential sales tax rates of 17.5 and 20 percent for some items. There are also many exemptions in the sales tax, including:

- unprocessed and unpacked items
- pharmaceuticals
- live animals
- meat
- poultry and cattle feed

- edible fruits and vegetables
- dairy products
- reading materials like newspapers and books
- computer software
- ghee and cooking oils
- vehicles like compressed natural gas buses, ambulances, and firefighting vehicles.

Incentives in customs duties include:

- a maximum duty rate of 25 percent
- continuous reduction within slabs (e.g., from higher to lower)
- creation of a 0 percent slab for specified primary raw materials
- a 5 percent rate applied mostly to primary raw materials
- a 10 percent rate applied to mostly secondary raw materials
- a customs duty of 5 percent on plant, machinery, and equipment not manufactured locally for information technology, construction, tourism, and others
- a customs duty rate of 0 percent on agriculture machinery
- exemption of crude petroleum oils, urea, and agricultural tractors
- free trade agreements with China, Sri Lanka, and Malaysia
- complete harmonization of Pakistani customs with the World Trade Organization and the World Customs Organization.

The Investment Climate in Pakistan

The taxation of corporations in Pakistan is an important part of the picture of how taxes affect the investment climate. However, there are other relevant factors, and the analysis of corporate taxation only in Pakistan does not provide a complete picture of its competitiveness, including its competitiveness relative to other countries, in terms of its overall investment climate.

The World Bank, working with PricewaterhouseCoopers, has recently conducted a survey on the ease or difficulty in conducting business (including "the ease of paying taxes") in 178 countries around the world, *Doing Business 2008.* The survey is based on a "case study company" approach, in which a standardized, common company is constructed, and then the specific institutional features of each country are applied to this identical company in order to determine how easy (or difficult) it is to conduct business in the country. There are various dimensions along which doing business is examined: starting a business, dealing with licenses, employing workers, registering property, getting credit, protecting investors, trading across borders, enforcing contracts, closing a business, and paying taxes. For purposes here, the last criterion is of special importance.

Specifically, the company is assumed (among other things) to:

- be a limited liability, taxable company in its second year of operation
- be domestically owned, with five resident owners
- be engaged in general industrial and commercial activities (e.g., producing and selling ceramic flower pots)
- have 60 resident employees (4 managers, 8 assistants, and 48 workers)
- have a turnover of 1050 times income per capita
- distribute 50 percent of its profits as dividends.

The study also calculates a "Total Tax Rate" (TTR), which is meant to include all taxes that are paid by companies, including corporate income taxes as well as property taxes, labor taxes and contributions, sales, and other indirect taxes. See Box 1 for Pakistan's rankings in each of the ten categories, relative to the 178 countries included in the rankings.[9]

Looking at Pakistan's rankings relative to some select and relevant countries (Table 5), Pakistan is placed well ahead in ranking from India and Sri Lanka in 3 out of the 4 indicators of taxation. These include the overall ease of paying taxes, the number of payments, and the TTR. Despite this, Pakistan is quite low by international standards. Pakistan's ranking of 156th in time to comply is well below all the South Asian countries. Pakistan requires immediate steps to improve its ranking to a level that competes with countries like Malaysia, Thailand, Turkey, and Korea.

It should be noted that Pakistan's worldwide ranking in paying taxes has improved slightly in the last three years, moving from 149th to 146th. However, this improvement is quite small. Further, time for compliance (560 hours) per year is stagnant, and has not improved in the last three years. The time for compliance is inordinately high when compared to Singapore (49 hours), Malaysia (166 hours), Thailand (264 hours), and Korea (290 hours). There is also little change in the number of payments (e.g., 47 payments in one year). However, tangible progress has been made to bring down the total tax rate from 42.2 percent to 40.7 percent. [10]

[9] Note that these types of rankings should be used with some caution, as recently emphasized by Arrunda (2007).

[10] The top five of the 178 countries included in the overall ranking of ease of doing business are Singapore (1st), New Zealand, the United States, Hong Kong, and Denmark (5th). The bottom five countries are Burundi (174th), Republic of Congo, Guinea-Bissau, Central Africa Republic, and Democratic Republic of Congo (178th). In the specific category of paying taxes, the top five countries are Maldives (1st), Singapore,

Box 1: Pakistan's Rankings in *Doing Business 2008*

Note that the number in parentheses is the overall ranking of Pakistan in the relevant category. There are 178 countries that are included in the rankings.

Starting a business (59)
- Procedures (number): 11
- Time (days): 24
- Cost (percent of income per capita): 14.0
- Minimum capital (percent of income per capita): 0.0

Dealing with licenses (93)
- Procedures (number): 12
- Time (days): 223
- Cost (percent of income per capita): 869.5

Employing workers (132)
- Difficulty of hiring index (0-100): 78
- Rigidity of hours index (0-100): 20
- Difficulty of firing index (0-100): 30
- Rigidity of employment index (0-100): 43
- Nonwage labor cost (percent of salary): 11
- Firing costs (weeks of salary): 90

Registering property (88)
- Procedures (number): 6
- Time (days): 50
- Cost (percent of property value): 5.3

Getting credit (68)
- Strength of legal rights index (0-10): 4
- Depth of credit information index (0-6): 4
- Public registry coverage (percent of adults): 4.6
- Private bureau coverage (percent of adults): 1.4

Protecting investors (19)
- Extent of disclosure index (0-10): 6
- Extent of director liability index (0-10): 6
- Ease of shareholder suits index (0-10): 7
- Strength of investor protection index (0-10): 6.3

Trading across borders (94)
- Documents to export (number): 9
- Time to export (days): 24
- Cost to export (U.S. $ per container): 515
- Documents to import (number): 8
- Time to import (days): 19
- Cost to import (U.S. $ per container): 1336

Hong Kong, United Arab Emirates, and Oman (5th); and the bottom five countries are Venezuela (174th), Central Africa Republic, Republic of Congo, Ukraine, and Belarus (178th).

Box 1. Pakistan's Rankings in *Doing Business 2008* (continued)

Enforcing contracts (154)
Procedures (number): 47
Time (days): 880
Cost (percent of claim): 23.8

Closing a business (51)
Time (years): 2.8
Cost (percent of estate): 2.8
Recovery rate (cents on the dollar): 39.1

Paying taxes (146)
Payments (number per year): 47 (138)
Corporate income tax payments (number): 5
Labor tax payments (number): 25
Other taxes payments (number): 17
Time (hours per year): 560 (156)
Corporate income tax time (hours): 40
Labor tax time (hours): 40
Consumption tax time (hours): 480
Total Tax Rate (percent of profit): 40.7 (80)
Corporate income tax rate (percent): 25.8
Labor tax rate (percent): 12.6
Other taxes rate (percent): 2.3

Overall Ease of Doing Business (76)

Source: Doing Business 2008.

Table 5: Ranking of Taxation Criteria for Selected Countries (out of 178 countries)

Country	Ease of Paying Taxes	Number of Tax Payments in Year	Time to Comply	Total Tax Rate
Maldives	1	1	1	2
Sri Lanka	158	163	90	153
India	165	162	105	159
Pakistan	146	138	156	80
Bangladesh	81	42	141	74
Malaysia	56	104	54	54
Thailand	89	104	93	66
Korea	106	141	114	44
Turkey	54	121	24	39
Egypt	150	110	165	110

Source: Doing Business 2008.

In terms of tax rates, Pakistan's corporate income tax is 35 percent, while its General Sales Tax (GST) standard rate is 15 percent.[11] Table 6 indicates that Pakistan's corporate and VAT tax rates are higher than many selected countries. Both rates in Pakistan are higher than in India.

The indicator of the Total Tax Rate (TTR) in *Doing Business 2008* is also of relevance here. The TTR is a standardized indicator that is used to gauge the overall burden of corporate taxes after adjusting for necessary exemptions and the like. Figure 2 indicates that Pakistan's TTR of 40.7 percent is significantly lower than that of India, Australia, and Turkey. It is, however, slightly higher than Malaysia, Thailand, and Indonesia.

Table 6: Statutory Corporate and Statutory VAT Tax Rates

Country	Corporate Income Tax (percent)	VAT (percent)
Turkey	20.0	18.0
Malaysia	20.0, 28.0	10.0
Thailand	30.0	7.0
Korea	14.3, 27.5	10.0
Indonesia	10 to 30	10.0
Australia	30.0	10.0
India	33.7	12.5
Pakistan	35.0	15.0
Egypt	20.0	10.0
China	33.0	17.0
Sri Lanka	35.0	15.0
Bangladesh	40.0	15.0

Source: Doing Business 2008.

[11] In budget 2007-08, two additional rates of sales tax were introduced for some items, at 17.5 percent and 20 percent.

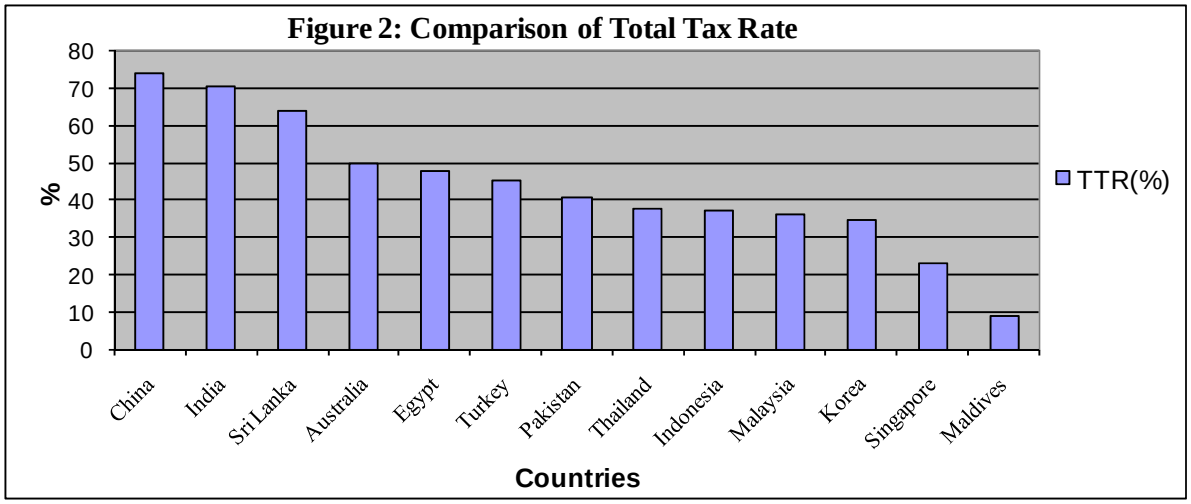

Figure 2: Comparison of Total Tax Rate

Another set of rankings is provided by the World Economic Forum's *The Global Competitiveness Report 2007-2008.* Several indices are provided, including a "Business Competitiveness Index" (BCI) and a more comprehensive "Global Competitiveness Index" (GCI). Both provide a broad array of competitiveness indicators for a large number of industrialized and developing economies. The current report includes 131 economies. The indices are based in part on the Executive Opinion Survey carried out by the World Economic Forum, which is intended to measure the perceptions of several thousand business leaders across the countries covered on topics related to national competitiveness, as well as on a wide range of other data sources that measure relevant factors. See Box 2 for detailed information on the pillars that are used to construct the rankings and on Pakistan's rankings.

Box 2: Pakistan's Rankings in *The Global Competitiveness Report 2007-2008*

The World Economic Forum defines "competitiveness" as "the set of institutions, policies, and factors that determine the productivity of a country", and identifies 12 "pillars" of competitiveness. Pakistan's Global Competitiveness Index (GCI) rankings (out of 131 countries) in these 12 pillars in the 2007-2008 study are:

	Pakistan Ranking
Subindex A: Basic Requirements	98
1st Pillar: Institutions	81
2nd Pillar: Infrastructure	72
3rd Pillar: Macroeconomic Stability	101
4th Pillar: Health and Primary Education	115
Subindex B: Efficiency Enhancers	81
5th Pillar: Higher Education and Training	116
6th Pillar: Goods Market Efficiency	82
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Note that Pakistan's GCI ranking in 2006-2007 (out of 122 countries) was 83rd. Note also that the World Economic Forum computes a Business Competitiveness Index (BCI), and Pakistan's 2007-2008 ranking was 79th, which represents a decline from its previous year's ranking (out of 122 countries) of 64th.

Source: World Economic Forum, *The Global Competitiveness Report 2007-2008*.

Pakistan's 2007-2008 GCI ranking is 92nd (out of 131 countries), which represents a slight deterioration from its previous years ranking of 83rd (out of 122 countries); Pakistan's 2007-2008 BCI ranking is somewhat higher, at 79th, which again reflects a decline from the previous year's ranking of 64th. In both cases, Pakistan ranks well below a number of relevant countries, as seen in Table 7. [12]

[12] The top five countries in the overall ranking of 131 countries are the United States (1st), Switzerland, Denmark, Sweden, and Germany (5th). The bottom five countries are Timor-Leste (127th), Mozambique, Zimbabwe, Burundi, and Chad (131st).

Table 7: Ranking of Global Competitiveness Index 2007-2008 for Selected Countries

Country	GCI	BCI
Turkey	53	46
Malaysia	21	21
Thailand	28	37
Korea	11	19
Indonesia	54	36
Australia	19	18
India	48	31
Pakistan	92	79

Source: World Economic Forum, *Global Competitiveness Report 2007-2008*.

The most problematic factors working to lower Pakistan's rankings are, in descending order: inadequate supply of infrastructure, inefficient government bureaucracy, corruption, policy instability, inadequately educated workforce, and government instability/coups. Regulation and tax rates are also identified as concerns.

Table 8 examines a different issue, whether Pakistan's overall tax *structure*, and especially its reliance on the corporate income tax, is similar to that of other countries. Table 8 uses International Monetary Fund (2003) data for 2000, with taxes divided into four groups: income and payroll taxes, property taxes, indirect taxes, and taxes on international trade (where social security taxes have been excluded from this computation.) The relative reliance on each of these groups is shown in Table 8, in a comparison of Pakistan with all countries for data are available.

Table 8: Pakistan's Tax Structure in International Perspective (2000)
(taxes as percent of total taxes)

Country	Income and Payroll Taxes	Property Taxes	Indirect Taxes	Taxes on International Trade	Other Taxes
Argentina	26.3	8.4	35.0	3.8	0.1
Bahrain	36.3	3.8	16.1	43.8	0.0
Belarus	27.1	3.2	62.3	4.9	0.0
Bhutan	53.4	0.4	42.6	3.6	0.0
Bolivia	10.9	10.5	65.1	6.2	0.1
Bulgaria	31.6	1.5	61.2	3.8	1.8
Canada	57.0	11.7	27.3	0.8	0.0
Chile	22.8	4.1	61.3	7.6	4.2
Congo, Dem. Rep.	12.6	0.0	23.8	24.7	38.8[a]
Congo, Rep.	11.3	0.0	64.5	22.9	1.4
Costa Rica	22.4	0.5	68.7	8.4	0.0
Cote d'Ivoire	29.1	1.7	23.3	45.4	0.5
Croatia	22.1	1.8	66.4	8.7	1.0
Czech Republic	40.1	2.4	53.9	3.1	0.4
Denmark	60.8	3.6	34.6	0.0	1.0
Dominican Republic	20.5	1.1	28.5	48.5	1.4
Estonia	39.2	2.2	58.4	0.2	0.0
Georgia	25.9	9.4	54.6	6.1	0.0
Hungary	36.1	2.6	55.6	4.0	1.7
India	37.3	0.1	37.3	25.1	0.2
Iran	53.0	2.5	19.9	23.3	1.3
Israel	53.2	7.7	37.3	0.9	0.7
Jamaica	41.9	0.6	40.5	8.9	8.1
Kazakhstan	52.7	6.0	36.3	4.1	0.7
Latvia	36.9	4.9	56.6	1.6	0.0
Lithuania	40.5	2.7	55.3	1.5	0.0
Macao, China	8.9	6.5	82.1	0.0	2.5
Madagascar	15.7	1.0	29.1	53.5	0.6
Maldives	4.6	0.0	29.7	64.4	1.3
Mauritius	14.6	5.8	46.2	33.4	0.1
Mexico	32.6	1.7	59.6	3.9	0.7
Moldova	17.5	6.1	68.9	7.5	0.1
Mongolia	28.4	0.1	56.2	10.1	1.3
Myanmar	34.5	0.0	58.2	7.2	0.0
Nepal	22.4	3.4	41.6	32.6	0.0
Nicaragua	17.1	-0.2	73.6	9.4	0.0
Pakistan	28.1	1.2	44.7	16.0	10.1b
Paraguay	17.9	0.0	59.4	18.2	4.4
Peru	26.8	0.0	67.0	12.4	3.2
Poland	35.5	5.2	55.9	3.5	0.0
Puerto Rico	66.8	0	22.0	0	11.2
Romania	34.5	2.7	54.8	6.2	1.1
Russian Federation	33.2	4.5	44.4	13.0	0.1
Seychelles	26.7	0.1	7.8	63.1	2.3
Singapore	50.2	6.5	31.2	2.5	9.6
Slovak Republic	35.9	2.8	54.3	7.0	0.0
Slovenia	36.3	2.5	57.6	3.6	0.0
South Africa	54.0	5.8	34.8	3.1	0.7
Switzerland	58.1	12.3	28.6	1.1	0.0
Tajikistan	16.0	5.6	63.8	12.6	0.0

Table 8. Pakistan's Tax Structure in International Perspective (2000) (continued)
(taxes as percent of total taxes)

Country	Income and Payroll Taxes	Property Taxes	Indirect Taxes	Taxes on International Trade	Other Taxes
Thailand	32.2	2.3	53.1	11.9	0.5
Tunisia	28.5	1.9	51.8	15.5	2.2
Turkey	37.4	4.0	52.1	1.7	4.7
Ukraine	42.3	0.0	52.4	5.3	0.0
United States	66.4	13.2	19.5	1.0	0.0
Uruguay	26.2	9.3	57.1	4.7	3.1
Venezuela	42.5	5.5	39.7	11.4	0.9
Mean (unweighted)	**32.6**	**3.6**	**47.5**	**13.4**	**2.0**

Source: Government Finance Statistics, International Monetary Fund (2003). Data are for 2000, and exclude social security taxes.

Notes:
[a] Some direct taxes are classified as "other".
[b] This includes surcharges on natural gas and petroleum.

Table 8 indicates that Pakistan's tax structure is not very far from the international norm in its relative reliance on total income taxes, with about 28 percent of Pakistan tax revenues coming from income taxes relative to the mean value for this category for the sample of countries of 33 percent. Where Pakistan differs considerably from international practice is its very heavy reliance on corporate income taxes rather than on individual income taxes. Table 9 shows the breakdown of income tax collections for a large sample of developing and transitional countries into individual income taxes and corporate income taxes. Of the 28 percentage points in total revenues collected from income taxes in Pakistan, only 4 percentage points come from personal income taxes. In contrast, for the sample of countries in Table 9, individual income taxes of the 32 percentage points in total revenues on average collected from income taxes, 19 percentage points come from personal income taxes. More recent data indicate an even heavier reliance on corporate income taxes.

Table 9. Pakistan's Composition of Direct Taxes in International Perspective (2000)
(taxes as percent of total Taxes)

Country	Total Income Taxes	Components		
		Individual Income Tax	Company Income Tax	Not Allocated[a]
Argentina	26.3	17.1	9.2	0.0
Bahrain	26.8		26.8	
Belarus	24.6		9.9	
Bhutan	53.4	11.3	42.1	
Bolivia	10.9		8.6	0.0
Bulgaria	31.6	19.1	8.2	
Canada	57.0	42.7	8.5	1.3
Chile	22.8			
Congo, Dem. Rep.	12.6	8.2	4.4	0.0
Congo, Rep.	11.3	11.3	0.0	
Costa Rica	22.4	1.5	18.1	2.7
Cote d'Ivoire	26.9	13.7	13.2	0.0
Croatia	22.1	16.7	3.7	
Czech Republic	40.1	22.7	12.1	
Denmark	60.4	51.0	4.2	2.1
Dominican Republic	20.5	12.4	7.7	0.3
Estonia	39.2	34.7	4.5	0.0
Georgia	25.9	15.0	2.9	
Hungary	35.7	27.2	8.5	0.0
India	37.3	17.8	19.5	0.0
Iran	53.0	19.3	33.4	0.3
Israel	50.2	35.0	11.9	3.3
Jamaica	41.9	19.4	10.4	12.1
Kazakhstan	48.2	11.5	18.4	
Latvia	36.9	28.8	8.1	0.0
Lithuania	40.5	37.2	3.3	
Macao, China	8.9	3.5	5.4	
Madagascar	15.7	5.2	8.0	2.6
Maldives	4.6		4.6	
Mauritius	13.9	7.4	6.5	
Mexico	32.6			32.6
Moldova	17.5		4.4	0.0
Mongolia	28.4		16.2	
Myanmar	34.5	34.5		
Nepal	21.0	5.6	13.4	2.0
Nicaragua	17.1			
Pakistan	28.1	4.2	23.1	0.8
Paraguay	17.9		17.9	
Peru	26.7	13.6	13.1	0.0
Poland	34.5	22.2	11.6	
Romania	34.5	20.4	13.7	0.0
Russian Federation	33.2	10.7	10.0	
Seychelles	26.7	0.0	26.7	
Singapore	50.2			
Slovak Republic	35.9	16.9	13.4	5.0
Slovenia	29.7	16.1	4.9	
South Africa	53.5	36.4	16.2	0.8
Switzerland	58.1	46.1	5.1	
Tajikistan	16.0	10.9	1.9	

Table 9. Pakistan's Composition of Direct Taxes in International Perspective (2000)
(taxes as percent of total Taxes)

Country	Total Income Taxes	Components		
		Individual Income Tax	Company Income Tax	Not Allocated[a]
Thailand	32.2	12.0	18.8	1.5
Tunisia	27.5	18.3	9.2	0.0
Turkey	37.4	24.7	10.3	2.4
Ukraine	39.9	17.8	15.9	
Uruguay	25.1	11.1	13.5	0.6
Venezuela	42.5	1.6	40.9	0.0
Mean (unweighted)	**31.9**	**19.3**	**12.4**	**2.4**

Source: Government Finance Statistics, International Monetary Fund (2003). Data are for 2000.

Note:
[a] Taxes not allocated include schedular taxes, such as taxes on interest income.

As noted earlier, the level of tax rates in the Pakistan corporate income tax is comparable to international norms, although the 35 percent standard rate is now somewhat on the high end of international comparisons.[13]

Some Distorting Effects of Pakistan's Corporate Taxes

The Pakistan corporate income tax introduces a range of distortions in corporate behavior, distortions that reduce the efficiency of resource allocation. Reforming the tax structure to minimize these tax-induced distortions can significantly increase taxpayers' welfare without decreasing their taxes paid. However, measuring these distortions is quite difficult. In this section, several methods are used to suggest the magnitude of these efficiency losses. See Box 3 for a brief discussion of the way in which these distortions are measured, through the concept of "excess burden".

[13] Also, see Tanzi and Zee (2000) for more general comparisons.

Box 3: The "Excess Burden" of Taxes

In a market economy, consumers and producers react to market prices. Individuals buy goods they want and can afford; employers buy inputs they need and can afford. In most cases, a consumer would be willing to pay even more for a good than the price charged in a store. Suppose, for example, the going price in the market for a CD is Rs. 1000. Suppose also that one consumer is willing to pay Rs. 1500 for the CD, and another consumer is willing to pay Rs. 1200 for the CD. By paying the going market price of Rs. 1000, both individuals benefit, the first by Rs. 500 and the second by Rs. 200, for a total benefit of Rs. 700. This "benefit" is called the consumer surplus. Now, consider what happens if an excise tax of Rs. 300 per CD is imposed, making the going market price now Rs. 1300. The person who was willing to pay Rs. 1500 will still purchase the CD and will pay a tax of Rs. 300, but he will now enjoy a benefit of only Rs. 200. The person who was willing to pay Rs. 1200 will no longer purchase the CD because its cost (Rs. 1300) is now greater than the amount she was willing to pay (Rs. 1200). The tax on the CD has generated revenues of Rs. 300, but the tax has also made both individuals worse off: the total benefit has fallen by Rs. 500, from Rs. 700 to only Rs. 200. Because the decline in the total benefit of Rs. 500 is greater than the tax revenues of Rs. 300, there is an "excess burden" that equals the difference, or Rs. 200. Most all taxes create this excess burden because most taxes cause agents to change their behavior. If we add up the losses to everyone in society, we arrive at an estimate of the excess burden, or the efficiency cost, of taxes.

Calculating Average Effective Tax Rates and Marginal Effective Tax Rates

One simple approach is to measure the average effective tax rate (AETR), calculated as total taxes actually paid as a fraction of gross corporate (accounting) income. If this measure differs across sectors – as it does in Pakistan – then these differences give an indication of the ways in which the corporate income tax (together with all of its special provisions) creates incentives for resources to move between sectors and therefore creates distortions in the allocation of resources.

Another approach is to calculate the marginal effective tax rate (METR). METRs attempt to measure the impact of taxes on the marginal (or incremental) decision by economic agents to invest in capital; more precisely, the METR is defined as the additional tax paid by a firm when it decides to invest in one more unit of capital. A positive METR indicates that investment is discouraged; a negative METR indicates that investment is subsidized even in the presence of the corporate income tax via such special provisions as accelerated depreciation, investment tax credits, tax holidays, and the like.

METRs can be calculated by sector and also by asset types. Differences in METRs across sectors and across assets generate incentives for resources to reallocate due entirely to tax considerations, and therefore create efficiency losses. A summary of METR calculations is given in Boxes 4 and 5; a more detailed discussion is in Annex II.

Note that both methods may accurately capture the effective tax rates on those businesses that actually pay taxes. However, both methods are almost certain to overstate – perhaps quite significantly – the overall average effective tax rates on all businesses, including those that comply and those that do not comply. The widespread existence of tax evasion means that many businesses face an effective tax rate (marginal or average) of zero.

Box 4: Calculating Marginal Effective Tax Rates

The marginal effective tax rate (METR) on capital is an effective tax rate on capital, and combines all corporate taxes and other provisions that affect capital investment, including statutory tax rates and related tax treatments (e.g., tax depreciation, tax credits, tax deductibility, tax holidays) and various economic factors interacting with these tax treatments (e.g., borrowing cost, inflation). It also includes features of individual income taxes when their presence affects the return on an incremental capital investment. METRs can be calculated for marginal investments in a specific sector (e.g., manufacturing, services), as well as for marginal investments in a specific asset type (e.g., buildings, equipment, vehicles, inventories). The resulting numbers are often quite sensitive to specific assumptions made about depreciation rates, the costs of debt versus equity finance, the individual income tax rate, as well as all features of the corporate income tax.

The premise underlying METR calculations is that the gross rate of return on capital (net of economic depreciation) for a profit-maximizing firm must be equal to the financing cost of capital, adjusted for taxes. The size of this adjustment for taxes on a new investment is the marginal effective tax rate on capital; that is, the METR is the difference between the pre-tax rate of return on a marginal investment (or the gross rate of return on investment) and the required post-tax rate of return, expressed as a percentage of pre-tax rate of return.

More precisely, the marginal effective tax rate (*t)* on a given type of capital investment is defined as the proportional difference between the gross-of-tax rate of return required by a firm r^G and the net-of-tax rate of return required by an investor r^N, where r^G is the difference between the marginal revenue product (or "user cost" of capital) and economic depreciation and the after-tax rate of return is the weighted average of the return to debt and equity held by the investor. Thus, the effective tax rate (*t*) is defined as:

$$t = (\mathrm{r}^G - r^N)/r^G.$$

For example, if the gross-of-tax rate of return to capital is 20 percent and the net-of-tax rate of return is 10 percent, then the METR on capital is 50 percent. The formulae used to calculate r^G and r^N are discussed in detail in Annex II.

Box 5: A Numerical Example of Calculating Marginal Effective Tax Rates

The calculation of a marginal effective tax rate (METR) for a hypothetical industry X and its assets is explained here using a numerical example. For detailed assumptions, see Annex II.

Assume that there are domestic investors as well as foreign investors, where the foreign investors are assumed to be from the United States. Suppose the following values hold for important tax parameters in hypothetical industry X, as given in Box Table I:

Box Table I: Tax Parameters (in percent except last three rows)

Tax Parameter	Investor	
	U.S.	Pakistan
Statutory CIT Rate	34	35
Tax on Transfer of Property, Import Duty on Capital Goods	*	5
Capital Tax Rate	*	0
Tax Depreciation Rate-Building	*	10
Tax Depreciation Rate-Machinery	*	15
Property Tax Rate	*	5
Gross Receipt Tax Rate or Presumptive Tax	*	0.5
Sales Tax Rate	*	15
Present Tax Value of Accumulated Capital Cost Allowance for Building	*	0.093
Present Tax Value of Accumulated Capital Cost Allowance for Machinery	*	0.107
FIFO=1 and LIFO=0	0	1

where * denotes that this parameter is not used in the calculations. In most cases, the values in the table are those applicable for Pakistan. The present tax value of accumulated capital cost allowance for buildings and machinery has been calculated assuming a 50 percent allowance in the first year and declining depreciation from the next year. The same values of taxes (e.g., those levied in Pakistan) are assumed to apply to both the domestic and the foreign (U.S.) investor.

Non-tax parameters are given in Box Table II:

Box Table II: Non-tax Parameters (in percent)

Non-tax Parameter	U.S.	Pakistan
Expected Inflation Rate	2.40	4.57
Expected Real Interest Rate	3.1	6.0
Cost of Equity	6.89	6.89
Debt to Assets Ratio		
Debt Raised Abroad to Home Capital	40	40
Debt to Asset Ratio in Home Country	40	40
Rate of Economic Depreciation		
Building	*	2
Machinery	*	5

The first stage in the calculation of the METR for an industry is the computation of the real cost of financing. Using the formulae given in equations (2) and (2') in Annex II, we calculate the real cost of financing for domestic and foreign investors, respectively. These calculations give 2.3 percent and 3.6 percent, respectively.

Box 5: A Numerical Example of Calculating Marginal Effective Tax Rates (continued)

The second stage in the calculation is the computation of the net-of-tax rate of return. Using equations (3) and (3') in Annex II, for domestic and foreign investors as before, we calculate the net-of-tax rate of return on capital for each category of assets (building, machinery, inventory, and land). See Box Table III.

The third stage in the calculation is the computation of the gross-of-tax rate of return on capital; these are calculated using equations (4) and (4') in Annex II, separately for domestic and foreign investors. Given the assumed values above, the net-of-tax and gross-of-tax rates of return are in Box Table III:

Box Table III: Rate of Return on Capital (percent)

Rate of Return on Capital	U.S.	Pakistan
Net-of-tax Return	4.61	3.83
Gross-of-tax Return		
Building	6.60	4.73
Machinery	8.04	6.20
Inventory	6.24	6.93
Land	6.06	4.00

In the final stage, it is straightforward to calculate the marginal effective tax rate for each type of asset using the two rates of return as:

$$METR = (r_g - r_n)/r_g$$

Based on the above assumptions and calculations, the results for industry X are in Box Table IV. The total METR for industry X is the weighted average of the METR by asset type, where we assume that the value of each asset type in the industry is: building 30 percent; machinery 50 percent; inventory 10 percent; and land 10 percent.

Box Table IV: METRs (percent)

METR	U.S.	Pakistan
Building	30	19
Machinery	43	38
Inventory	26	44
Land	24	4
Industry X	**36**	**32**

See Annex II for more details.

Effects on Investment: Intersectoral Allocation Effects – AETRs

A first indication of the distorting effects of taxation on the allocation of resources between sectors is given in Table 10, which shows the average effective tax rate (AETR)

paid by corporations that filed tax returns in 2006-07 for the main economic sectors in Pakistan. These AETRs equal taxes actually paid divided by gross income, and are based on the actual returns filed by corporations in 2006-07. Taxes paid include income and profit taxes, of which the main taxes are advance tax and withholding taxes (WHT); separate calculations are made that include and exclude WHT. See Annex III for a detailed listing of the many withholding taxes under the Income Tax Ordinance, 2001, including those that are adjustable and those that are final. The most important withholding schemes in terms of revenues are withholding on contracts, on imports, on salaries, on exports, and on interest; other withholding taxes include those on dividends and securities, technical fees, indenting, rentals, prizes, petroleum products, cash withdrawn from banks, commissions, stock exchanges, transport, electricity bills, and telephone. In total, the presence of WHT obviously increases the tax burden on firms.

Only those returns that showed gross income of Rs.1 million and above and that paid taxes are included in Table 10. Note that the statutory corporate tax rates in this tax year were 39 percent for banking and financial institutions, 37 percent for private companies, 35 percent for public companies, and 20 percent for "small" companies.

The overall average tax rate (including WHT) is 34.3 percent, or very close to the statutory tax rate of 35 percent. However, there is enormous variation in AETRs across sectors, ranging from a high of nearly 46 percent for beverages to a low of 14 percent for cement. The existence of some AETRs in excess of the top statutory tax rates for the different firm categories in 2006 is due to the inclusion of WHT; if withholding taxes are excluded from the calculations, then the AETRs are of course significantly lower.

Table 10: AETRs for Tax Year 2006 by Industry[a]
(percent)

Industry	AETR with WHT	AETR without WHT
Automobile	34.6	24.3
Beverages	45.7	27.8
Cement	13.9	12.7
Tobacco	31.1	29.5
Fertilizer	24.1	21.3
Iron and Steel	37.2	30.6
Petroleum	34.5	32.0
Sugar	28.6	24.6
Textile	21.3	15.9
Telecom	34.5	33.6
Banking/Financial Institutions	35.4	31.2
Insurance	44.4	33.5
Hotels and Restaurants	39.4	20.6
Transport	17.9	15.1
Gas	34.5	33.4
Pharmaceuticals	38.7	28.4
Chemicals	41.5	20.2
Other	37.1	24.8
Total	**34.3**	**30.1**

Source: Calculations by authors based on tax return data provided by Pakistan Revenue Automation Ltd. (PRAL) for tax year 2006.

Note:
[a] Only those returns for firms that showed gross income of Rs.1 million and above and that paid taxes are included.

These variations in AETRs reflect the differential treatment of sectors in the Income Tax Ordinance, 2001; given the differential treatment of assets in combination with the different proportions of assets across sectors, the variations in AETRs also reflect the differential treatment of assets in the tax code. For example, the relatively high AETR in banking and financial institutions stems from the (assumed) application of the 10 percent capital gains tax to these firms. The relatively low AETRs on cement

firms and on transport firms are attributable to the high depreciation allowances (e.g., the initial allowance) that these firms typically claim; relatedly, insurance companies face a relatively high AETR because the magnitude of depreciation allowances for these firms is relatively low. Sectors that are machinery-intensive also have relatively high AETRs because of the differential application of high customs duties on machinery.

Note that many firms incurred losses. Negative gross incomes by sector are given in Table 11, while the distribution of corporate filers is shown in Table 12.

Some comparisons of AETRs with EEC countries are given in Table 13.[14] Pakistan's statutory corporate tax rate is relatively high compared to these countries; the calculated AETR in Pakistan is also relatively high, especially when WHT is included in the calculations.

[14] Note that the methodology employed by EEC (2001) to calculate the AETRs in Table 13 is slightly different than the one employed in this paper. In particular, EEC (2001) defines the AETR as "… the net present value of tax revenue expressed as a proportion of the net present value of the income stream (excluding the initial cost of the investment)". In particular, the AETR in EEC (2001) is the answer to the question: "Given a real interest rate of 5% and an assumed pre-tax rate of return of the investment of 20% in each country, which is the proportion of total income taken in tax in each type of investment financed by different methods (the average effective tax rate)?" Despite the differences in methodology, the AETR both in the EEC (2001) study and in this study is the effective tax burden held by an infra-marginal (or average) investment, as opposed to the marginal effective tax rate, which is the effective tax burden imposed on an incremental, or marginal, investment.

Table 11: Industry Declaration of Gross Income for Tax Year 2006

Industry	Negative Gross Income (Rs. million)	Share (percent)
Electricity	53,208	25.9
Telecommunications	36,248	17.6
Transport (mainly Pakistan Air Lines)	22,989	11.2
Textile	18,862	9.2
Chemicals	11,887	5.8
Cement	10,275	5.0
POL	8,270	4.0
Banking	6,392	3.1
Sugar	6,062	3.0
Automobile	1,682	0.8
Hotels	2,164	1.1
Food	1,359	0.7
Other	25,984	12.7
Total	**205,382**	**100.0**

Source: Calculations by authors based on income tax returns data for tax year 2006 provided by Pakistan Revenue Automation Ltd. (PRAL).

Table 12: Distribution of Corporate Filers, Tax Year 2006

Category of Filers	Number of Returns
Gross Income of Rs. 1 million and above	1882
Gross Income below Rs. 1 million and greater than zero	2673
Gross Income of Rs. 0	6196
Negative Gross Income [a]	3295
Total	**13,946**

Source: Calculations by authors based on income tax returns for tax year 2006 provided by Pakistan Revenue Automation Ltd. (PRAL).

Note:
1561 companies recorded losses of less than Rs. 1 million (in absolute terms).

Table 13: AETRs for EEC Countries, 2000

Country	Corporate Tax Rate	Overall AETR
Australia	34.00	29.8
Belgium	40.17	34.5
Denmark	32.00	28.8
Finland	28.00	25.5
France	40.00	37.5
Germany	52.35	39.1
Greece	40.00	29.6
Ireland	10.00	10.5
Italy	41.25	29.8
Luxembourg	37.45	32.2
Netherlands	35.00	31.0
Portugal	37.40	32.6
Spain	35.00	31.0
Sweden	28.00	22.9
UK	30.00	28.2

Source: EEC (2001).

Effects on Investment: Intersectoral Allocation Effects – METRs

Calculation of marginal effective tax rates (METRs) by sector also illustrates the sectoral distortions generated by the entire system of corporate taxation. Tables 14 and 15 show calculations of METRs for the manufacturing sector, under various assumptions about the type of investor (e.g., the country of residence); the calculations in Table 14 are for a statutory corporate tax rate of 35 percent, and those in Table 15 are for the preferential tax rate of 20 percent. These calculations are made in part to illustrate the effects of a general reduction in the corporate tax rate on the distortions of the tax system and also in part to indicate the distorting effects of the differential treatment of "large" versus "small" firms (e.g., the 35 percent rate versus the 20 percent tax rate). (Note that it is possible to calculate METRs by asset type, or for buildings, machinery, inventory, and land. METRs by asset type are discussed in the following subsection.)

Table 14: METRs by Sector at 35 Percent Corporate Tax Rate
(percent)

Industry	Foreign Investors from Canada	Foreign Investors from U.S.	Investors from Pakistan
Automobiles	40	34	35
Beverages	42	39	37
Cigarettes	38	36	32
Cement	39	34	34
Fertilizer	36	29	29
Iron and Steel	34	31	27
Petroleum (Offshore)	35	30	28
Petroleum (Underground)	16	7	6
Sugar	38	36	32
Textile	40	37	35
Chemicals	42	35	38
Telecommunications	41	40	36
Banking/Financial Institutions	55	55	50
Insurance	26	26	16
Hotels and Restaurants	31	29	23
Transport	31	30	23
Gas	42	41	38
Power Generation [a]	19	19	20

Source: Calculations by authors.

Note:
[a] Power generation companies are exempt from the corporate income tax.

The METRs in Tables 14 and15 illustrate that the marginal effective taxation of different businesses differ quite significantly depending on the type of investor. The main tax factors contributing to intersectoral tax distortions include the level of various tax rates and the variance in tax rates and tax allowances across sectors.[15] Higher

[15] Non-tax factors such as the inflation rate, the interest rate, the financing structure, and the capital structure also affect the intersectoral tax distortion. For example, with a higher (lower) discount rate, as determined by the inflation rate, the interest rate, and the financing structure, a given depreciable asset will be taxed at a higher rate since the present value of its tax depreciation allowance will be worth less (more). When such a higher (lower) taxed asset accounts for a larger share of a capital used by a given sector, it contributes to a higher (lower) METR in this sector compared to other sectors.

statutory corporate tax rates increase METRs, as demonstrated by the always-higher METRs in Table 14 (at 35 percent) versus Table 15 (at 20 percent). More generally, METRs tend to increase in a fairly linear way with the statutory corporate tax rate. Consider, for example, automobiles. An increase in the tax rate in 5 percentage point increments from a 0 percent corporate income tax rate to a 50 percent rate increases the METR for investors from Pakistan from 20 percent to 40 percent, or by roughly 2 METR percentage points for every 5 percentage points in the corporate rate. METRs for other sectors differ in their exact responses to corporate tax rate increases, but the general tendency is unaffected. Note that the wider the gap in METR tax rates between sectors the higher are the intersectoral tax distortions.

Table 15: METRs by Sector at 20 Percent Corporate Tax Rate
(percent)

Industry	Foreign Investors from Canada	Foreign Investors from U.S.	Investors from Pakistan
Automobiles	26	21	26
Beverages	28	25	28
Cigarettes	24	22	24
Cement	25	21	25
Fertilizer	22	17	21
Iron and Steel	21	18	21
Petroleum (Offshore)	22	18	21
Petroleum (Underground)	9	5	6
Sugar	24	22	24
Textile	26	23	26
Chemicals	28	22	28
Telecommunications	28	26	28
Insurance	15	15	14
Hotels and Restaurants	19	17	19
Transport	19	18	18
Gas	29	27	29

Source: Calculations by authors.

Many of the same factors that generated large differences in AETRs across sectors are of course present here. For example, the high METR in banking and financial institutions is due largely to the 10 percent capital gains tax that is assumed to apply to these firms. Also, the relatively low METR on petroleum (underground) firms arises because of the use of 100 percent expensing of capital purchases in this sector, and the relatively low METR on petroleum (offshore) firms is due to the partial expensing of machinery purchases. Similarly, firms in the power generation sector face a lower METR because these firms are assumed to be exempt from several taxes (e.g., the tax on profits) that apply to most other sectors. Sectors that are especially machinery-intensive tend to have higher METRs because of the differential application of high customs duties on machinery; this tendency may be partially offset for sectors with large purchases of capital (e.g., fertilizer, iron and steel, transport, power generation), thereby generating lower METRs, in part because of the high initial allowance that these firms are allowed. Relatedly, sectors that are especially inventory-intensive tend also to have higher METRs because these sectors are differentially and negatively affected by the sales tax.

Other tax factors that affect the magnitude of the METR calculations include mainly the assumed rate of tax depreciation and the various taxes that may be imposed on firms, especially the statutory corporate tax rate, the tax on the transfer of property, and the tax on capital gains. An increase in the tax depreciation rate always lowers the METR, but often by a relatively small amount.[16] Also, note again that there are large differences in METRs in Tables 14 (statutory corporate rate of 35 percent) and Table 15

[16] For example, the assumed rate of tax depreciation on buildings for the automobile sector is 10 percent. As the tax depreciation rate for buildings varies from 0 percent to 10 percent, the METR falls in total by only 2 percentage points. Changes in the tax depreciation rate for machinery have similar effects. These impacts also depend on the relative importance of buildings or machinery in the overall capital stock of the sector.

(statutory rate of 20 percent). Further, if the capital gains tax rate is assumed in Table 14 to be zero rather than 10 percent (and all other parameters are unchanged), then the METR on Pakistan investors in banking and financial institutions falls from 50 percent to 14 percent; even a smaller reduction in the capital gains tax rate from 10 percent to 5 percent lowers the METR for these investors from 50 percent to 38 percent. If the capital gains tax is applied to other sectors, then the obvious effect is to increase METRs, typically by large amounts.[17] An increase in the property transfer tax increases the METR in the affected sectors, but the impact is generally small.[18]

Non-tax parameters can also affect the METR calculations. Other things equal, an increase in the (assumed) rate of economic depreciation increases the METR, generally by roughly 5 percentage points for each 1 percentage point increase in the rate of economic depreciation.[19] An increase in the assumed debt to asset ratio decreases the METR in all sectors, although the effect is not large. An increase (decrease) in the assumed rate of inflation tends to increase (decrease) the METR because many features of the corporate tax system (e.g., depreciation allowances, capital gains) are not indexed for inflation; however, the effect is non-linear because higher inflation also reduces the real cost of debt finance. Changes in the cost of equity also have a complicated impact on METRs because the cost of equity affects both the gross-of-tax return required by the

[17] Imposing a 5 percent (10 percent) capital gains tax on beverages increases the METR on Pakistan investors in Table 14 from 37 percent to 61 percent (73 percent); for offshore petroleum, the comparable increase in the METR from a 5 percent (10 percent) capital gains tax rate is 23 percent (37 percent); and for automobiles the METR at a 5 percent (10 percent) capital gains tax rate is 51 percent (63 percent).

[18] For the automobile sector, a doubling of the transfer tax rate from 5 percent to 10 percent increases the METR by 3 percentage points for investors from Pakistan facing a 35 percent corporate income tax rate; an increase in the transfer tax to 15 percent increases the METR by another 3 percentage points.

[19] For example, in banking/financial institutions the assumed rate of economic depreciation for buildings is 2 percent. An increase to 3 percent (4 percent) increases the METR for Pakistan investors facing a 35 percent corporate income tax rate to 56 percent (62 percent); a decrease to 1 percent (0 percent) decreases the METR to 45 percent (39 percent). For automobiles, the effects are similar if slightly smaller; for each 1 percentage point increase in the economic depreciation rate for buildings, the METR increases by 4 percentage points. Roughly similar impacts are found in other sectors.

firm and the net-of-tax return required by the investor. Most other non-tax (and tax) parameters tend to have relatively small impacts on METRs.

Effects on Investment: Asset-type Effects – METRs

Similar calculation of METRs by asset type clearly shows that assets are treated quite differently by the various features of the tax system (Tables 16 and 17). Again, these large variations in METRs distort marginal investment decisions across assets, and thereby generate efficiency losses. These differences are driven by the same features of the tax code as those discussed earlier.

Some recent international comparisons are given in Tables 18 and 19; the calculations in Table 18 are from EEC (2001), and those in Table 19 are from Mintz (2005).[20] The methodologies in these various studies (including the calculations here) differ somewhat. Even so, a consistent result is that the METRs in Pakistan are often higher than in several other countries, though not always dramatically so. It is important to note that the METRs for these international comparisons do not reflect the reductions in statutory corporate tax rates in many of these countries in the most recent years, so the differences between Pakistan and other countries is now likely to be considerably higher than suggested by the comparisons in Tables 18 and 19.

[20] Again, the exact methodologies differ somewhat across the various studies. The concept of the marginal effective tax rate is identical across all studies; that is, the METR is the difference between the pre-tax rate of return on a marginal investment and the required post-tax rate of return, expressed as a percentage of pre-tax rate of return. However, specific assumptions (e.g., interest rates, depreciation allowances, type of investor) can differ across the studies, thereby generating different METRs.

Table 16: METRs by Assest Type at 35 Percent Corporate Tax Rate
(percent)

Industry	Foreign Investors from Canada					Foreign Investors from U.S.				
	Building	**Machinery**	**Inventory**	**Land**	**Total**	**Building**	**Machinery**	**Inventory**	**Land**	**Total**
Automobiles	28	43	49	19	40	29	43	24	21	34
Beverages	28	50	49	19	42	29	50	24	21	39
Cigarettes	30	42	49	25	38	30	43	26	24	36
Cement	28	43	49	19	39	29	43	24	21	34
Fertilizer	28	33	49	19	36	29	33	24	21	29
Iron and Steel	28	38	49	19	34	29	38	24	21	31
Petroleum (Offshore)	28	32	49	19	35	29	32	24	21	30
Petroleum (Underground)	28	-14	49	19	16	29	-11	24	21	7
Sugar	28	43	49	19	38	29	43	24	21	36
Textile	28	43	49	19	40	29	43	24	21	37
Chemicals	28	47	49	19	42	29	46	24	21	35
Telecommunications	28	47	49	19	41	29	46	24	21	40
Banking/Financial Institutions	54	49	77	56	55	54	49	75	57	55
Insurance	28	26	49	19	26	29	27	24	21	26
Hotels and Restaurants	28	50	49	19	31	29	50	26	21	29
Transport	28	33	49	19	31	29	33	23	21	30
Gas	28	53	49	19	42	29	53	24	21	41
Power Generation[a]	14	25	13	10	19	14	24	13	10	19

Table 16: METRs by Asset Type at 35 Percent Corporate Tax Rate (continued)
(percent)

Industry	Investors from Pakistan				
	Building	**Machinery**	**Inventory**	**Land**	**Total**
Automobiles	19	38	45	4	35
Beverages	19	48	45	4	37
Cigarettes	19	38	45	4	32
Cement	19	38	45	4	34
Fertilizer	19	26	45	4	29
Iron and Steel	19	33	45	4	27
Petroleum (Offshore)	19	25	45	4	28
Petroleum (Underground)	19	-31	45	4	6
Sugar	19	38	45	4	32
Textile	19	38	45	4	35
Chemicals	19	43	45	4	38
Telecommunications	19	43	45	4	36
Banking/Financial Institutions	50	45	78	51	50
Insurance	19	17	45	4	16
Hotels and Restaurants	19	47	45	4	23
Transport	19	26	45	4	23
Gas	19	51	46	4	38
Power Generation[a]	15	26	13	10	20

Source: Calculations by authors.

Note:
[a] Power generation companies are exempted from Income Tax.

Table 17: METRs by Asset Type at 20 Percent Corporate Tax Rate
(percent)

Industry	Foreign Investors from Canada					Foreign Investors from U.S.				
	Building	**Machinery**	**Inventory**	**Land**	**Total**	**Building**	**Machinery**	**Inventory**	**Land**	**Total**
Automobiles	17	29	31	9	26	17	29	13	10	21
Beverages	17	36	31	9	28	17	36	13	10	25
Cigarettes	17	29	31	9	24	17	29	13	10	22
Cement	17	29	31	9	25	17	29	12	9	21
Fertilizer	17	21	31	9	22	17	21	13	10	17
Iron and Steel	17	25	31	9	21	17	25	13	10	18
Petroleum (Offshore)	17	20	31	9	22	17	20	13	10	18
Petroleum (Underground)	17	-4	31	9	9	17	-3	13	10	5
Sugar	17	29	31	9	24	17	29	13	10	22
Textiles	17	29	31	9	26	17	29	13	10	23
Chemicals	17	33	31	9	28	17	32	13	10	22
Telecommunications	17	33	31	9	28	17	32	13	10	26
Insurance	17	16	31	9	15	17	16	13	10	15
Hotels and Restaurants	17	36	31	9	19	17	35	13	11	17
Transport	17	21	31	9	19	17	21	21	13	10
Gas	17	39	31	9	29	17	38	13	10	27

Table 17: METRs by Asset Type at 20 Percent Corporate Tax Rate (continued)
(percent)

Industry	Investors from Pakistan				
	Building	**Machinery**	**Inventory**	**Land**	**Total**
Automobiles	16	29	31	7	26
Beverages	16	37	31	7	28
Cigarettes	16	29	31	7	24
Cement	16	29	31	7	25
Fertilizer	16	20	31	7	21
Iron and Steel	16	25	.31	7	21
Petroleum (Offshore)	16	20	31	7	21
Petroleum (Underground)	16	-5	31	7	9
Sugar	16	29	31	7	24
Textiles	16	29	31	7	26
Chemicals	16	33	31	7	28
Telecommunications	16	33	31	7	28
Insurance	16	15	31	7	14
Hotels and Restaurants	17	37	32	8	19
Transport	16	20	31	7	18
Gas	16	40	31	7	29

Source: Calculations by authors.

Table 18: METRs for EEC Countries for 2000 from EEC (2001) Study
(percent)

Country	Cost of Capital	METR
Australia	5.8	43.5
Belgium	5.7	30.2
Denmark	4.1	78.4
Finland	5.4	60.2
France	5.3	72.5
Germany	5.4	79.5
Greece	5.0	27.8
Ireland	4.1	56.4
Italy	5.1	18.8
Luxembourg	4.1	70.3
Netherlands	2.8	95.7
Portugal	5.4	33.8
Spain	1.5	156.3
Sweden	5.3	73.2
UK	5.1	56.9

Source: EEC (2001).

Table 19: METRs for Large and Medium Sized Corporations for 2005 from Mintz (2005) Study
(percent)

Country	Statutory CIT Rate	Manufacturing	Services	Average
China	24.0	45.5	46.5	45.8
Canada	34.3	35.5	41.3	39.0
Brazil	34.0	40.1	37.2	38.5
United States	39.2	34.6	40.0	37.7
Germany	38.4	37.7	36.3	36.9
Italy	39.4	33.3	38.1	36.2
Russia	22.0	35.0	34.1	34.5
Japan	41.9	34.4	33.1	33.6
France	35.4	33.3	33.4	33.3
Korea	27.5	31.9	29.6	30.8
New Zealand	33.0	30.1	28.8	29.3
Greece	32.0	33.0	27.8	29.3
Spain	35.0	29.9	25.8	27.3
Norway	28.0	26.1	24.7	25.1
Netherlands	31.5	25.3	24.9	25.0
India	33.0	23.2	24.9	24.3
Australia	30.0	29.4	22.1	24.1

Table 19: METRs for Ladge and Medium Sized Corporations for 2005 from Mintz (2005) Study (continued)
(percent)

Country	Statutory CIT Rate	Manufacturing	Services	Average
Finland	26.0	23.5	22.4	22.9
Luxembourg	30.4	21.4	22.1	21.9
UK	30.0	22.7	21.2	21.7
Belgium	34.0	21.4	21.3	21.4
Turkey	30.0	7.3	5.7	6.4
Singapore	20.0	5.8	6.6	6.2
Pakistan: 35 percent CIT	***35***	***32.8***	***20.9***	***26.9***
Pakistan: 20 percent CIT	***20***	***25.2***	***17.1***	***21.2***

Sources: Authors' calculations for Pakistan and Mintz et al. (2005) calculations for other countries.

Effects on Financial Policies

It is well-known that the corporate income tax can distort a firm's "financial policies", such as the decision on paying dividends to shareholders versus retaining the profits within the firm, and the decision to finance new investment with debt versus with equity. It is not possible to estimate the exact magnitude of these distortions in Pakistan. Even so, the nature of the distortions can be illustrated.

Consider dividend policy. Profits earned by a corporation can be distributed to shareholders in the form of dividends or kept within the firm as retained earnings. In the absence of any taxes, the owners of a firm are indifferent between Rs. 1000 in dividends and Rs. 1000 of retained earnings.[21] In the former case, the owners will receive directly the Rs. 1000 in dividends; in the latter case, the value of the corporation will increase by precisely Rs. 1000. Put differently, corporate financial policy has no effect on the value

[21]Additional assumptions are also required here: no uncertainty (or perfect information), perfect capital markets, and no risk of bankruptcy.

of the firm, a result sometimes referred to as the "Modigliani-Miller Theorem" (Auerbach, 2002).

However, with corporate income taxes, this indifference no longer holds. The owner must pay individual income taxes on dividends, while the capital gains generated by retained earnings are either untaxed (as is current practice in Pakistan), or are taxed at preferential rates (as in many countries), or are taxed only upon realization at some future date (as in many countries). In the presence of a corporate income tax (and an individual income tax), owners prefer retained earnings to dividends; that is, owners are no longer indifferent between these alternative uses of profits. Taxation now distorts corporate financial policy. Put differently, taxes reduce the cost to the corporation of retained earnings relative to dividends. Indeed, there is some evidence that U.S. companies have increased retained earnings and/or reduced dividend payments when the cost of retained earnings has decreased.[22]

Consider also debt versus equity finance. When choosing to finance new investments, a corporation can borrow money (e.g., use debt finance) or it can issue new shares of stock (e.g., use equity finance).[23] With debt finance, the company must pay interest on its debt; with equity finance, the company must pay shareholders a return in the form of dividends or capital gains. In the absence of taxes (and with no uncertainty, perfect capital markets, and no risk of bankruptcy), the cost to the firm of either method will be the same because the returns to lenders (in the case of debt finance) or shareholders (in the case of equity finance) must be the same. Again, corporate financial policy has no effect on the value of the corporation.

[22] See U.S. Department of the Treasury (1992).
[23] The corporation can also use retained earnings to finance its investment. This option is ignored for simplicity.

However, with taxation corporations are typically permitted to deduct payments of interest from chargeable income (as is the case in Pakistan), but they are often not allowed to deduct dividends (as is also the case in Pakistan). Pakistan's system of corporate taxation therefore creates a bias in favor of debt financing versus equity finance; that is, the tax system distorts this financial decision. As in dividend policy, taxation again creates a distortion in corporate financial policy. Unfortunately, measuring the exact magnitude of this distortion is quite difficult.

Treatment of "Small Businesses": The "Notch" Problem

Recall that a "small business" is taxed on its income at a reduced rate of 20 percent, rather than the standard rate of 35 percent. This large difference in tax rates creates an enormous incentive for a company to be classified as a "small business", even if it does not in fact meet the criteria of having paid up capital plus undistributed reserves not exceeding Rs. 25 million, of having employees not exceeding 250 any time during the year, of having annual turnover not exceeding Rs. 250 million, and of not being formed by the splitting up or the reconstituting of a business already in existence.

Aside from the strong incentive to opt for the small business classification (whether legally justified or not), the system further distorts incentives facing companies in several significant ways. First, firms at the threshold have an incentive to fragment their operations in order to meet the requirements; the law specifies that these types of fragmentation disqualify a firm from the "small business" designation, but monitoring these splits is quite difficult. Such purely tax-driven fragmentation is economically inefficient. Second, there is a major "notch" problem facing taxpayers. Consider a legal

entity with turnover of exactly Rs. 250 million (or exactly 250 employees). An increase of 1 unit in either turnover or employees would in principle generate an enormous increase in tax liability, as the company must legally move into the regular corporate tax system; the company would also now also be subject to withholding requirements. These disincentives for growth in turnover or in employment are economically inefficient. There may be sound reasons for preferential taxation of small business, such as more difficult access to credit markets or higher (proportionate) compliance costs for small firms. Even so, preferential treatment is typically given by taxing an initial slab of income at a lower concessionary rate and then by taxing any income in excess of that ceiling at a higher rate, rather than by taxing all turnover exceeding the small business threshold at the higher corporate rate of 35 percent, as is the case of Pakistan.

The distortions can also be illustrated by the calculation of METRs for otherwise identical corporations facing a corporate income tax rate of 20 percent versus 35 percent. As shown in Tables 12 and 13, as well as in Tables 14 and 15, the differential taxation of small versus large companies creates very large differentials in METRs.

Evaluating the Pakistan System of Corporate Taxation

Tax systems are designed to achieve multiple objectives. An obvious purpose is to raise the revenues necessary to finance government expenditures (sometimes termed "adequacy"), and also to ensure that the growth in revenues is adequate to meet expenditure requirements ("elasticity"). Another is to distribute the burden of taxation in a way that meets with a society's notions of fairness; such "equity" is typically defined in terms of "ability to pay", such that those with equal ability should pay equal taxes

("horizontal equity") and those with greater ability should pay greater taxes ("vertical equity"). Taxes can also be used to influence the behavior of those who pay them; in choosing taxes, a common goal is to minimize the interference of taxes in the economic decisions of individuals and firms ("efficiency"). Taxes should be "simple", both to administer and to comply with because a complicated tax system wastes the resources of tax administrators and taxpayers.

In many – though not all – ways, the basic structure of corporate taxation in Pakistan is sound, in terms of the correspondence between Pakistani practices in the definition of the tax base and in the choice of tax rates versus international practices in these dimensions. There are, however, significant problems in the Pakistan system, problems that relate mainly to the distortions – between sectors and between asset types – that the system of enterprise introduces; there are also significant administrative limitations in taxation that reduce tax collections. This section discusses the performance of the Pakistan tax system in achieving the various objectives of taxes, and focuses especially on the distorting effects and on administrative issues.

There are Likely to be Large Efficiency Costs.

Perhaps the most serious problem with the system of enterprise taxation relates to the distortions in investment – across sector and across assets – that it generates. A commonly accepted notion about "good" tax policy holds that the tax system should raise revenues with minimal interference in the decisions of consumers and firms. When a tax leads individuals and business to change their decisions solely because of the existence of

the tax, the tax is said to impose an efficiency cost, or an "excess burden", as discussed earlier.

The system of corporate taxes in Pakistan almost certainly introduces a wide range of distortions in firm (and individual) behavior, perhaps more than any other tax in the system. These distortions are illustrated most clearly by the large variation in AETRs and in METRs by sector and by asset type. Together with the extensive system of tax incentives and exemptions, the preferential tax rate for small businesses, and the use of the presumptive tax regime for some companies, the corporate tax gives preferential treatment both to different types of investment and to different sectors, thereby leading firms to base their investment decisions mainly on tax considerations rather than on market forces.[24]

There is Widespread Use of Tax Incentives and Exemptions.

One of the major sources of these distortions is the relatively heavy reliance in Pakistan on tax incentives and exemptions. In the case of the income (individual and corporate) tax, the exemptions are contained in the Second Schedule of the Income Tax Ordinance, 2001 ("Exemptions and Tax Concessions"), which contains over 70 pages of items. The exemptions and concessions are from "Total Income" in Part I of the Second

[24] A business tax system is said to be "neutral" if the production, employment, and investment decisions of a firm made in the absence of taxation are unchanged after the imposition of the tax system (Diewert, 1981). It can be shown that a corporate income tax is neutral under several conditions:

- If the rate of depreciation for tax purposes is equal to the true rate of economic depreciation and if both equity and debt costs of finance are fully deductible, then (with zero inflation) the corporate income tax is neutral.
- If there is immediate write-off of all investment purchases (e.g., expensing) and if there is no deductibility of either debt or equity costs of finance, then the corporate income tax is neutral even in the presence of non-zero inflation.

Under these circumstances, the effective rate of corporate taxation becomes equal to the statutory rate of taxation, and the corporate income tax becomes a tax on "pure" economic profit.

Schedule, for "Reduction in Tax Rates" in Part II, for "Reduction in Tax Liability" in Part III, and for "Specific Provisions" in Part IV. Often included in the Second Schedule of the Income Tax Ordinance, 2001 are specific exemptions for named organizations. There are also many investment incentives, as discussed in detail earlier.

What should be the role of these incentives and exemptions, especially in relation to the alternative policy of reducing corporate tax rates? Pakistan has gradually lowered its statutory corporate tax rates over time, and has brought some uniformity in these rates across different types of companies (e.g., public, banking, private); there is also a reduced rate of 20 percent for small businesses. There is currently a debate about whether the corporate rate should be further reduced to 30 percent by the year 2010 (Ali, 2007). A crucial issue here is whether a lower statutory tax rate by itself would attract investment, or whether investment incentives are also necessary. As demonstrated in the calculation of METRs, it is quite possible for a country to have low statutory tax rates but high effective tax rates on capital investment if other provisions of the tax law impose burdens. In Pakistan, there is a fairly widespread view that lower corporate tax rates alone will not work but must be supplemented with such incentives as investment tax credits, investment allowances, and accelerated capital consumption allowances. In fact, Pakistan has been generous in providing broad-based corporate tax incentives to attract foreign direct investment (FDI). However, the actual effect of incentives on FDI (and on investment more broadly) in Pakistan and elsewhere is a hotly contested empirical issue that remains controversial and unresolved.

Tax incentives are widely used in most all countries, usually in the form of special provisions that favor investment. According to Zee, Stotsky, and Ley (2002), 22 percent

of the foreign affiliates of U.S. companies operating abroad received some form of tax concessions, and nearly all countries offer tax concessions. These concessions are designed to encourage two kinds of investments: from investors in foreign countries and from domestic investors.

Regarding domestic investors, the general principle is that domestic investors should be treated equally regardless of the sector or the asset in which they are investing (unless there are special considerations favoring certain specific investments), in order to avoid efficiency losses; domestic investors should also be treated equally relative to foreign investors. Regarding foreign investors, the general principle here is that capital imports should occur as long as their contribution to the domestic economy (or the "marginal product of capital") exceeds the cost to the economy. Now a small open economy like Pakistan must compete with investment opportunities in other countries, so it must offer the foreign investor the going after-tax rate of return. In general, this means that the country should not tax capital imports, because doing so reduces the rate of return received by foreign investors and thereby discourages capital imports. However, as discussed earlier, an important exception to this rule-of-thumb is when a capital-exporting country taxes multinational companies on their world-wide income but allows a credit against home-country corporate income taxes of taxes paid in foreign countries. The failure by a capital-importing country (say, Pakistan) to impose its own corporate income tax on profits earned within Pakistan simply means that the capital-exporting home country of the enterprise (say, the U.S.) collects the taxes on income earned by the company in Pakistan. Failure to impose the tax therefore transfers taxes from the capital-importing country (Pakistan) to the treasury of the capital-exporting country (the U.S.).

This suggests that a small capital-importing country like Pakistan should aim for tax rates that are close to – neither higher nor lower – than the tax rates of the countries from which capital imports can be expected. This result also follows when it is recognized, as it must be, that countries compete with one another for capital. If one country lowers its taxes on capital (or gives incentives), then other countries may respond in kind. The result is that no country may be able to gain a tax advantage against its rivals, and all that occurs is that the countries in the aggregate lose tax revenues, either to capital-exporting countries or to the multinational enterprises.

In general, there are several major types of incentives, most of which depend upon the existence of positive profits and most of which are targeted to specific types of assets (e.g., plant or machinery) or to certain types of industries (e.g., manufacturing) that the country wishes to encourage:

- Investment Tax Credits and Deductions. Here the enterprise is allowed a deduction or a credit that is a percentage of the purchase price of the investment good, over and above the depreciation provisions of the asset. It can be shown that these incentives bias a firm's investment choices in favor of shorter-lived assets: the tax credit is like a “gift” that is more valuable the more often it is used.
- Accelerated Depreciation. Here the enterprise is allowed to write off the price of the capital good at a faster rate than the standard accounting practice (or the “true economic depreciation”) for the asset. This can be accomplished by shortening the tax life of the asset or by moving the write-offs toward the early years of the asset. It can be shown that accelerated depreciation biases a

firm's choices in favor of longer-lived capital goods: accelerated depreciation is like an interest-free loan that is more valuable on investments whose tax write-off is farther in the future.

- Tax Holidays. Here the enterprise is exempted from taxation for a given number of years immediately following its establishment, typically 5 to 10 years. This incentive is only of value to a firm that has profits, which may not occur in the early years for many enterprises. It may well be that a firm will dissolve after the holiday ends, selling its capital to a new firm that is then eligible for the tax holiday; it may also be that a firm will deliberately invest in shorter-lived assets so that it may exit quickly after the holiday ends; and it may be that a firm will use transfer-pricing methods to reallocate income between branches eligible for a tax holiday and branches not eligible.
- Investment Grants. Often an enterprise is given a direct cash grant that depends on the magnitude of its investment, independent of its level of profits. Another related type of investment incentive is one in which the enterprise is given a waiver or a rebate on the duties paid on imported factors of production, often on imported capital goods.
- Miscellaneous Incentives. Included here are provisions such as reduced corporate income tax rates, reduced tax rates on some activities, exempt purchases, and the like.

In all cases, the exact magnitude of the benefit to the enterprise depends upon the specific features of the incentive: the period in which the incentive applies, the magnitude

of the incentive, the tax rates in the corporate income tax (both in the country itself as well as in the home country of the enterprise, if relevant), the assets and sectors to which the incentive applies, the amount and time profile of the expected profits of the enterprise, and so on.

Evidence from Gugl and Zodrow (2005) and others suggests that the most popular type of investment incentive is the tax holiday (based on a somewhat small sample of countries). This is followed by accelerated depreciation, investment tax credits, and import duty exemptions. Nearly all countries use several incentive schemes, not simply one.

It is in fact possible to quantify the magnitude of these incentives, using a variety of fairly complicated formulae; the calculation of METRs is one standard approach here. However, many countries do not seem to undertake such analyses. When the formulae have been applied (Thirsk, 1991; Russo, 2004), the analysis has typically shown that tax holidays and investment tax credits lower the marginal effective tax rate more than other incentives and that the interaction of different incentive schemes is crucial in determining their overall impact.

Still, the crucial issue is: Why give these incentives? The main reason appears to be that many small countries believe that they must have the incentives to compete with rival countries, especially when the country has little in the way of market size or resource endowment to attract foreign investors. Put differently, the introduction of a tax incentive by one country leads to strategic responses by other, rival countries. A related reason is that the introduction of tax incentives stems from the power of large domestic firms, who pressure the government to take measures that favor their enterprises. In both

cases the result is the same: the incentives have little impact on investment because other countries have similar incentives, but the incentives distort investment decisions and have a large and negative impact on the aggregate tax collections of all countries, simply transferring revenues to large enterprises. There is little question that in Pakistan incentives (and the resulting preferential tax treatments) have created a misallocation of investments and that they have been a significant fiscal drain on the budget.

Even so, it is important to consider – and quantify – the benefits and costs of incentives. The possible benefits to a country that offers tax incentives may include increases in investment, gains from industrialization, the creation of jobs for persons who otherwise would be unemployed or employed at lower wages, the transfer of technology and training, and increases in revenues from taxes to which the incentives do not apply or from taxes payable after the initial reduction has ended. Overall, there is little consistent evidence that tax incentives are able to attract or to induce investment that would not have been undertaken anyway.

As for the costs of incentives, these include the loss of revenue, distortions in investment behavior leading to investments that are socially unproductive, administrative complications, political discord generated by favors to foreign-owned corporations, and discrimination against smaller firms that lack the resources and/or the influence to apply for incentives.

Few countries have undertaken a rigorous analysis of these benefits and costs; Pakistan certainly has not, and a full assessment of the desirability of the system of incentives requires that such a benefit-cost analysis be undertaken. In one instance (Thirsk, 1991), the benefits were generally found to be positive but small, and smaller

than their costs. In another instance, Indonesia eliminated all of its investment incentives as part of a comprehensive tax reform in the mid-1980s (Gillis, 1985). The reasons for this were several. There was much evidence that few if any incentives had the desired effects. All they had accomplished was a massive loss in tax revenues. Further, although investment may have been attracted, this investment was not on balance beneficial to the Indonesian economy. The administrative problems associated with the tax incentives were also enormous, especially for tax holidays. The presence of tax incentives for some groups of taxpayers required higher tax rates on other nonfavored taxpayers, and these taxpayers lobbied for their own special treatment. Finally, smaller firms did not generally receive tax incentives, and these firms had been an important source of job growth in Indonesia. On balance, these costs were deemed to be far in excess of the potential benefits. In particular, there was little evidence that the incentives were more important to potential investors than such factors as political stability, potential market size, economic growth, or infrastructure. The result in Indonesia was that the best policy for investment was deemed to be a reduced rate of taxation in the corporate income tax. Similarly, Jamaica has eliminated many (though not all) of its incentives as part of a comprehensive tax reform there because of similar considerations (Rider, 2004).

Indeed, there is now some evidence that the best way to encourage investment is simply to lower the tax rate in the corporate income tax, not to offer targeted incentives. There is also increasing evidence that the main effect of tax incentives is on the transfer of income across jurisdictions (via such mechanisms as transfer pricing and financial policies) rather than on the location of real activity across jurisdictions (Grubert and

Slemrod, 1998; Fisher, 2002; Zee, Stotsky, and Ley, 2002; Desai and Hines, 2004; Hines, 2004; Morisset and Pirnia, 2004).

The main messages of this research are several. Tax incentives can stimulate investment. However, a country's overall economic characteristics are much more important for the success or the failure of industries than any tax incentives package. Further, even if tax incentives stimulate investment, they are not generally cost-effective.

Again, all of this is not to deny that tax incentives can affect the movement of "capital", broadly defined. It is to question whether any such movement represents a transfer of "real" economic activity as opposed to simply a transfer of "paper" transactions that reduce a firm's tax liabilities without generating any real economic activity. It is also to question whether the benefit-cost ratio of any such incentives is greater than one.

However, it should be acknowledged that this work remains controversial and unresolved. As emphasized by Devereux and Griffith (2005) in a recent review, the existing empirical work does not provide much in the way of policy-relevant insights.

In its entirely, this work suggests some general lessons related specifically to the corporate income tax and to investment incentives:

- Avoid the use of tax incentives for investment. Incentives have little impact on "real" investment, and seem mainly to reduce tax revenues. Even where they do attract investment, the investment is not often socially productive.
- Resist the temptation to promote industrial or social policies through the tax system. Such attempts are likely to result in a proliferation of tax incentives to enterprises and in the preferential treatment of particular groups of taxpayers,

which will lead to other groups requesting them. Also, it is difficult to get rid of tax incentives once they are in place.

- Keep enterprise tax rates in line with those of neighboring countries, and with those of the capital-exporting countries: neither higher nor lower. Higher tax rates reduce the capital stock, and lower tax rates lead to strategic behavior by other countries, which simply reduce tax revenues in all countries. Recent experience shows that it is difficult, if not impossible, to prevent the movement of capital, either into or out of a country.

However, if investment incentives are desired as part of an attempt to encourage investment and attract foreign investors, then appropriate policy suggests:

- Rationalize investment incentives. Here "rationalize" means the adoption of schemes in which the scheme does not alter the relative ranking of eligible projects, even though it makes all eligible projects more profitable. A rational scheme does not lead an investor to chose project A over project B when, in the absence of the scheme, project B is more profitable than project A. There are now a number of such incentives that are available: reducing the tax rate in the corporate income tax, extending a tax credit on net investment, allowing full expensing, and so on. Tax holidays in particular should be discouraged.
- Define clearly the types of investment activities that will receive incentives and then grant these incentives automatically, minimizing discretion and negotiation. The incentive should be linked closely to the type of activity that the government deems socially productive (e.g., export activities, labor employment). Further,

negotiation leads to delays, uncertainty, and corruption.

- Permit unrestricted entry of foreign investment.
- Do not favor foreign over domestic investors. This is unfair to national entrepreneurs, it encourages questionable joint ventures, and it discourages the development of a national entrepreneurial class.
- Permit unrestricted transfers of capital income abroad. Investors invest to earn a return, and they must be assured that they can take their profits home.

Also, as emphasized in the earlier discussion of *The Global Competitiveness Report 2007-2008*, there are a number of nontax features that heavily affect investment, notably a stable political environment and the existence of private property guarantees.

There are Large Amounts of Tax Evasion.

As noted earlier, the corporate tax base is very small. Out of 2.2 million National Tax Number (NTN) holders in 2006, only 28,756 (or 1.4 percent) are in the corporate sector; of these only 13,946 filed a tax return. These numbers suggest a very low level of voluntary compliance with the corporate income tax.

Even aside from the very low filing rate of corporations there is much speculation and anecdotal evidence that companies are able to evade their true tax liabilities by taking advantage of poor administration of tax rules. Different businesses in Pakistan are subject to different tax regimes with different tax rates, and companies may be able to take advantage of these differences in tax rules by shifting income from higher to lower tax regimes.

One method is the use of over-invoicing (Thirsk, 2008). For example, taxes on transportation services are a fixed amount per passenger seat or per unit of vehicle weight. If a company supplying these services to a corporation over-invoices the value of these services, then it will not raise its own taxes but it will save taxes for its customers. Similarly, a presumptive tax on a firm of 3.5 percent on gross sales encourages over-invoicing by that firm in its sales to corporations. If a presumptively taxed firm over-invoices its corporate client by Rs. 100, then it will pay Rs. 3.5 in additional tax but it will save its client Rs. 35 in corporate tax, a net gain of Rs. 31.5 that the two parties can split by prior agreement. Over-invoicing of imported capital goods, in order to secure a larger investment allowance, is another method.

The FBR has the legal mandate that would allow it to control these forms of transfer pricing. Indeed, Chapter 8 of the Income Tax Ordinance, 2001contains anti-avoidance measures available to the FBR that would allow the Commissioner to re-characterize income and deductions and to impose arms length values on transactions. However, the actual administrative capability of the FBR to monitor these types of transfer pricing activities is quite limited. Indeed, tax administrations in most other countries are often powerless to enforce arms-length transfer pricing rules.

<u>There is a Narrow Tax Base.</u>

Related to the heavy use of incentives, the tax base in Pakistan is a narrow one. It has been narrowed in at least two important ways. As just noted, one stems from administrative failures (especially enforcement problems) that allow the existence of enormous amounts of tax evasion. The second is legal and takes the form of exemptions

or preferential treatment (e.g., "tax expenditures"). To our knowledge, there is no comprehensive and systematic listing of the tax expenditures in the Pakistan tax system, which in itself is a problem.

One result of a narrow (and likely falling) tax base is that the government by necessity must emphasize collection of taxes from those "tax handles" that are more readily available. More visible taxpayers (such as larger corporations and wage earners) end up bearing increasing amounts of the tax burden.

There are few estimates of the revenue loss from these tax expenditures, and the estimates that exist show significant differences in the magnitudes. The *Pakistan Economic Survey 2006-07* estimates that the tax expenditures in the income tax, the sales tax, central excise taxes, and customs duties totaled Rs. 46.75 billion in 2005-06, and increased dramatically to Rs. 184.90 billion in 2006-2007. By far the dominant factor generating the increase was the exemption of capital gains in 2006-2007, which increased the tax expenditures on capital gains from Rs. 0.95 billion to Rs. 112.45 billion. Tax expenditures from the income tax include those stemming from: pensions; allowances; income from funds; donations and contributions to charitable organizations; independent power producers; income from certain trusts, welfare/charitable organizations, and nonprofit organizations; profits on debt/interest from government securities and certain foreign currency accounts and profits on debt earned by certain nonresident individuals and institutions; NSS interest income; export of information technology; other interest income; capital gains; and other sector and enterprise specific exemptions. Only a few of these are related to the corporate income tax and its various provisions. Aside from capital gains, the estimated tax expenditures from these items in 2006-07were only Rs.

9.43 billion, and again only a few of these latter items are related to the corporate income tax and its various provisions. Of course, companies benefit from exemptions in the sales tax, in central excise taxes, and in customs duties. The estimated revenue losses in 2006-07 from these items were Rs. 12.00 billion, Rs. 50.52 billion, and Rs. 0.40 billion, respectively.

However, the Federal Board of Revenue has estimated that the cost of exemptions in this period in direct taxes was Rs. 230 billion; similarly, the FBR estimates that the cost of exemptions under the sales tax was Rs. 220 billion and under customs duties was Rs. 80 billion. In total, these estimates indicate a revenue loss of well over Rs. 500 billion, or roughly 6 percent of GDP.

Note that agriculture is often seen as an inviting target for federal government income taxation (despite the constitutional limitations on federal taxation of agriculture). However, the revenue potential of taxing agriculture at the federal level is uncertain, because there are very few "large" farms and because most of the remaining "small" farms would probably fall below any threshold of income taxation.[25] It should also be noted provincial taxation of agriculture is allowed via the Agriculture Income Tax, but this tax is a very unproductive source of revenues for provinces. See Box 6.

[25] We are grateful to Mr. Syed Shabbar Zaidi for these observations. He estimates that the revenue potential from taxing agricultural income may only be Rs. 3 billion.

Box 6: The Taxation of Agriculture by Provinces

The Agriculture Income Tax raises a relatively small amount of money for the government of Punjab. Estimated collections in Punjab are Rs. 658 million in 2006 or 2.06 percent of total own source revenue. It represents an average of Rs. 170.3 per farm, or an average of Rs. 1,669 per farm greater than 12.5 acres in size, based on data from the Agriculture Census 2000. Real per capita collections have fallen dramatically since 1999-2000, and by 2005-06, represented only 32 percent of 1999-2000 collections.

The level of tax collections in NWFP is also quite small, or 70 million rupees in 2005-06. It constitutes 1.53 percent of total own source revenue. In NWFP, AIT collections are about on par with the level of collections from the professions tax. Based on data from the Agricultural Census 2000, the average burden of the tax in NWFP is 51.6 rupees per farm, or 241.0 rupees per farm greater than 5 acres. Real per capita collections remained approximately constant in NWFP between 1999 and 2006.

Source: Bahl, Wallace, and Cyan (2008).

There is an Apparent – and Largely Undocumented – Belief That Taxes Can Be Used to Generate Greater Economic Growth.

Closely related to the issue of tax incentives is the notion that the tax system can be used to encourage economic growth, and indeed is an essential component of any growth strategy via its use of incentives. There is a large literature that attempts to demonstrate the possible linkage between taxation and economic growth. Much of this literature focuses upon the experience of U.S. states, and examines the possible connection between state tax policies and economic growth (Yu, Wallace, and Nardinelli, 1991; Berry and Kaserman, 1993; Mendoza, Milesi-Ferretti, and Asea, 1997). This literature is somewhat inconclusive, but recent work by Alm and Rogers (2008) that examines the effects of measurement error and estimation technique demonstrates that there are some connections between state government policy variables and state economic growth but also demonstrates that these results are not very robust. For example, in some regression results it is possible to show that higher state tax revenues are associated with lower growth rates; however, this connection is fairly weak and is not present in all regressions and in all time periods. Alm and Rogers (2008) also find weak

evidence that the mix of taxes (e.g., a heavier reliance on income taxes or on sales taxes) affects state economic growth; in particular, they find fairly consistent results that greater use of sales taxes is associated with higher economic growth. As for state expenditure policy, Alm and Rogers (2008) find that higher welfare expenditures are correlated with lower economic growth, as expected, but greater spending on education and highways tends to be negatively associated with state economic growth. In short, there is some connection between various policy variables and economic growth, but the connection is very tenuous and is not very robust across all time periods, estimation methods, or specifications. There is also a growing literature that uses the World Tables to examine the determinants of country economic growth (Barro, 2000), and, as demonstrated by Levine and Renelt (1993), many of the results in this literature are also quite fragile.

In sum, then, this literature suggests that Pakistan should be cautious in manipulating tax policies (including investments incentives) to increase economic growth. There are few concrete examples from international experience that such efforts have been successful.

The Tax System is Excessively Complex.

Limitations in tax administration are magnified by the overly complex tax system. Over time, the tax system has been adjusted to raise revenue, or to respond to requests for more favorable tax treatment, or to promote specific activities, or to redistribute income, or to protect the poor. Each of these changes complicates the tax system. Complexity in turn leads to higher administrative costs, more arbitrariness in administration, and an increasing erosion of confidence in the fairness and effectiveness of the tax system.

Taxpayers are not inclined to pay a tax that they do not understand, that imposes high compliance costs, and that is administered by a tax administration that is viewed by many as arbitrary, corrupt, and ineffective.

There are numerous elements that complicate the tax system. Sometimes complication is a by-product of well-intentioned adjustments to the tax structure (e.g., the exemption of the purchases of items consumed by lower income individuals). Also, the corporate income tax in Pakistan, like that in most countries, is excessively complicated.

Still, there are areas where the system is needlessly complex. Clearly this is true for tax incentives. It is also true for capital allowances. Much effort goes into the calculation of depreciation. Many countries have elected to avoid such complicated schemes by grouping assets into broad categories.

All taxes impose compliance costs on taxpayers and administrative costs on government. Taxpayer compliance costs include time spent keeping receipts, logging appropriate books, and filing tax returns. Administrative costs include assessment, audit, and collection. Some taxes are less expensive to administer and to comply with than other taxes. This is due to such factors as the complexity of particular tax laws, the familiarity of taxpayers with various taxes, the process by which taxes are collected, and the status of data collection, enforcement, and monitoring for the various taxes. For example, taxes that are subject to source withholding are less costly to administer than taxes that require individual filing.

It is difficult to quantify the costs of administration and compliance across countries. However, there is some work that has calculated these costs, using a variety of methods (Sandford, Godwin, and Hardwick, 1989; Sandford, 1995; Blumenthal and

Slemrod, 1992, 1996; Chattopadhyay and Das-Gupta, 2002a, 2002b). These studies demonstrate that there is substantial variation in the compliance and administrative costs across taxes and countries. Income taxes appear to be especially high in terms of administrative costs per dollar of revenue collected, with the more complicated the system the higher the cost. Broader-based taxes may be less costly to administer; capital gains taxes are notoriously difficult to administer.

The structure of the corporate income tax in Pakistan is complex, and there is extensive use of tax incentives and exemptions. These factors imply higher compliance and administrative costs than would be the case for a less complicated system. See Table 20 for estimates of the collection costs for all Pakistan taxes.

Many countries in fact use simplified, or presumptive, methods of taxation in order to reduce complexity for some types of taxpayers. Pakistan is no exception. See Box 7 for "Best Practices" in presumptive methods of taxation.

Table 20: Collection of Federal Taxes, Administrative Expenditure, and Cost of Collection

Fiscal Year	Collection (Rs. billion)	Administrative Expenditure (Rs. billion)	Cost of Collection (percent)
1997-98	293.6	2.1	0.72
1998-99	308.5	2.7	0.88
1999-00	347.1	2.3	0.66
2000-01	392.2	2.6	0.66
2001-02	404.1	2.5	0.62
2002-03	460.6	3.1	0.67
2003-04	520.8	3.1	0.60
2004-05	590.4	3.8	0.64
2005-06	713.4	4.8	0.67
2006-07	847.2	6.1	0.72

Source: Federal Board of Revenue.

Box 7: Problems and Best Practices in Presumptive Taxes

Like nearly all countries, Pakistan collects taxes from some specific types of taxpayers by the use of a Presumptive Taxation Regime (PTR), in which gross receipts (and not income) are taxed at a specified rate. The use of a PTR is broadly consistent with the use of presumptive methods of taxation for these taxpayers, in which the desired base for taxation is not itself measured but is instead inferred from some simple indicators that are more easily measured than the base itself. Presumptive methods are used for a variety of reasons: to reduce the compliance costs on taxpayers by making it easier for these taxpayers to compute their tax liabilities, to simplify tax administration by removing some taxpayers (usually those with small tax liabilities) from the tax rolls and by providing more obvious and more direct measures of tax liabilities, to improve tax equity by providing more objective indicators of tax assessment, to reduce corruption by eliminating official discretion in assessing tax liabilities, to encourage taxpayers to keep better accounts in order to provide documentation that may reduce their presumptive tax liabilities, and to improve incentive effects when, say, income above the presumptive level is not subject to taxation. The introduction of these systems is also often driven in part by the desire to create a favorable environment for small-scale activities.

There are several problems that have been identified with many simplified tax systems (STS) and presumptive taxes more generally.

Incentives. One goal of any STS is to reduce the burden on small taxpayers. However, this means that the compliance cost of taxes should be reduced and not necessarily that the overall tax burden must be reduced. Indeed, the overall tax burden under the two alternative regimes should be broadly similar, in order to avoid creating artificial incentives to enter the STS purely to avoid paying one's taxes. A STS further distorts incentives facing taxpayers in several significant ways. First, individuals and firms at the threshold have an incentive to fragment their operations in order to meet the requirements. Such purely tax-driven fragmentation is economically efficient. Second, there is a major "notch" problem facing taxpayers. Consider a legal entity with turnover of exactly Rs. 5 million. An increase of Rs. 1 in turnover would generate an enormous increase in tax liability, as the taxpayer must legally move into the regular tax system. These disincentives for growth in turnover are also economically inefficient.

Thresholds. Most STSs have thresholds based upon turnover and/or upon employee size, and only individuals and legal entities that do not exceed these thresholds are eligible for STS status. The establishment of appropriate levels for these thresholds is a crucial design feature. A threshold that is set too high will undermine the regular tax system because too many agents will opt for the reduced rate of taxation in the STS; a threshold that is set too low will fail to achieve the goal of simplification for many small taxpayers, thereby imposing compliance costs on many for whom the intent was to make their tax calculations much less burdensome. In Pakistan, it is widely believed by government officials that the threshold has in fact been set far too high, and so that the PTR likely includes viable and ongoing enterprises that are fully capable of being taxed under the regular tax regime. There is little question that many retail firms are in the PTR even though they likely keep detailed financial records and are fully capable of paying regular taxes. A related issue is that there is no apparent mechanism by which taxpayers "graduate" to the regular tax system, except when they exceed the thresholds. In many countries, there is a limit on the number of years that a taxpayer can participate, even taxpayers that meet the formal eligibility requirements. However, there do not seem to be such graduation provisions in Pakistan. Finally, any threshold must be revised periodically in light of changed economic circumstances (e.g., inflation, economic growth).

Legal Eligibility and its Enforcement. There are significant financial incentives for taxpayers to elect the PTR rather than the regular tax system, even if they do not meet the legal qualifications. However, according to government officials, there is little verification that those taxpayers who elect to be taxed under the STS are in fact legally eligible for such participation. This suggests that many participants have illegally moved to the lower cost tax system.

Box 7: Problems and Best Practices in Presumptive Taxes (continued)

Fairness. The PTR contributes to horizontal and vertical inequities in the tax system. Retail firms with equal "true" turnover (and perhaps income) are taxed very differently if one is subject to the regular tax system and the other is in the PTR.

Reforms. Typical, best-practice reforms include the following:

- Ensure that the tax burdens under a STS and under the regular tax system are comparable.
- Reevaluate turnover thresholds, so as to ensure that only "small" taxpayers are eligible.
- Adjust the thresholds for inflation and other changing economic circumstances.
  Improve enforcement of a STS, to ensure that firms who participate are in fact eligible.

Source: Alm (2006).

There are Horizontal and Vertical Inequities in Corporate Taxation.

There is little question that the practice of enterprise taxation in Pakistan introduces significant vertical and horizontal inequities. If a tax system is fair, equally-situated companies (and individuals) will face the same tax obligations. When this is not the case – when the tax system is horizontally inequitable – some companies will bear a heavier burden than others who have roughly comparable means. This weakens confidence in the system, and may encourage some companies to look for avenues of nonpayment that will have negative consequences for revenues. It also may lead companies to make different economic choices in order to capture tax advantages, which in turn leads to losses in economic efficiency.

Indeed, there are many sources of horizontal inequities in the Pakistan enterprise tax system:

- The corporate income tax discriminates among firms, largely because of the existence of tax preferences that are available to some firms and sectors and not to others, including the preferential tax rate for small businesses.
- In addition to the formal provisions for tax relief, there is discretionary relief on a case-by-case basis.

- The opportunities for tax evasion differ considerably between firms in the formal and the informal sectors, between "large" and "small" firms, and between domestic and multinational firms (due to differences in transfer pricing capabilities).

These features also create vertical inequities. For example, larger firms may in fact receive more favorable treatment than smaller firms (as measured by profits or turnover or employees) if the larger firms are successful in being taxed inappropriately under the 20 percent statutory regime and the smaller firms is not. Larger firms that qualify for investment incentives may also be receive more favorable tax treatment than smaller firms that do not receive such incentives.[26]

There are Significant Limitations in Tax Administration.

A dominant theme in most assessments of the Pakistan tax system is the absence of effective tax administration. If taxes cannot be administered efficiently and equitably, then the goals of any tax system, or of any tax reform, will not be achieved. As noted by Surrey (1958), "...the concentration on tax policy on the choice of taxes may lead to insufficient consideration of the aspect of tax administration. In short, there may well be too much preoccupation with 'what to do' and too little attention to 'how to do it.'" Put differently, tax administration should be placed at the center, not the periphery, of tax reform efforts (Goode, 1981; Bird, 1989).

[26] Of partial relevance here is the overall incidence of the corporate income tax. See Wahid and Wallace (2008) for a detailed analysis of the incidence of taxes in Pakistan, including the incidence of the corporate income tax. They find that the corporate income tax imposes tax rates that increase with income, so that its impact on the distribution of income is progressive.

One indicator of administrative efficiency is the extent of tax evasion. As discussed earlier, there are apparently large amounts of evasion in Pakistan, with a wide range of negative effects. Evasion reduces the revenue and the elasticity of the tax system. It necessarily undermines the horizontal and vertical equity of the tax system, since equals are no longer taxed equally and the well-to-do are generally more successful in exploiting opportunities for evasion. The actual allocative effects of the tax system are likely to differ significantly from those implied by the statutes. In short, poor tax administration frustrates the achievement of virtually all goals of the tax system.

Other problems with the tax administration stem from the tax structure: the tax base has been narrowed by preferences, the system is overly complex, especially in its use of tax incentives, and over time the rate and base structures have become more and more complex. The structural and administrative problems are clearly related. Complexity in the rate and base structure makes administration more difficult and also reduces the compliance rate.

Reforming the Pakistan Enterprise Tax System

Reforms of the current system of corporate income taxation in Pakistan should be in the direction of reducing its distortions and improving its administration. Specifically, reforms should focus upon:

- Reducing the statutory tax rate of the corporate income tax. Such reductions would reduce significantly the distorting effects of the corporate tax. Recall also that the world-wide trend in corporate taxation is clearly for reductions in statutory tax rates.

- Reducing the widespread use of withholding taxes (WHT); if some of the WHT are to be retained, they should be made adjustable rather than final. The withholding taxes clearly increase the effective tax rate on companies; in many cases, they also have become final taxes in themselves. Indeed, in most cases WHT have very little to do with income taxation, and instead they resemble discriminatory taxes, as is the case with many of the withholding taxes on imports and exports. Consideration should be given to elimination of these taxes, especially those that generate trivial amounts of revenues. Further, as a general rule withholding taxes should be adjustable as a pre-payment on the final tax liability of taxpayers, and should not be the final tax liability.
- Expanding the base of the corporate income tax, mainly by reducing, and where appropriate rationalizing, the use of tax incentives and exemptions. Conversations with business executives indicated in most cases a strong willingness to trade off reductions in tax incentives and exemptions for compensating reductions in corporate tax rates. In this regard, a complete examination of the benefits and costs of tax incentives and exemptions should be performed.
- Simplifying the tax system, especially in the ways in which tax incentives and exemptions are used. Reducing the use of tax incentives and exemptions would obviously help in this regard.
- Re-examining the thresholds for the "small business" classification, in order to ensure that only truly "small businesses" qualify.
- Re-examining the widespread use of the PTR.

- Continuing to improve tax administration, with a special focus on improving tax compliance. The re-introduction of the National Audit Plan is a helpful step in this direction. In this regard:
    - More stringent penalties need to be imposed in the event of non-filing, perhaps buttressed by the option of third-party intercepts if the penalty goes unpaid.
    - The use of field audits needs to be expanded. Again, it is important that non-filing companies be targeted given the apparently low rate of filing.
    - Non-filers should be assessed best judgment presumptions of liability, with the proviso that, while the presumption is potentially rebuttable and appealable, the assessment must be paid in advance of any attempt to rebut or appeal it.

There are tradeoffs in any reform, and the government must recognize these tradeoffs and set priorities. It is hoped that this working paper helps in the process of identifying the tradeoffs and of highlighting the ways in which the Government of Pakistan can address them.

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Annex I: Tax Revenue

Table AI-1: Revenues and Taxes (Rs. millions)

							Indirect Taxes							Nontax Revenues			
FY	Total Revenue	Total Taxes	Federal Taxes	FBR Taxes	Direct Taxes	Indirect Taxes	ST(I)	ST(D)	ST	CD	FED	Total Surcharges	Total Provincial Taxes	Federal	Provincial	Total	Foreign Travel Tax
1999-00	513,028	406,128	387,354	347,104	112,950	234,154	67,261	49,450	116,711	61,659	55,784	38,900	18,774	90,800	16,100	106,900	1,350
2000-01	555,880	444,480	423,525	392,277	124,585	267,692	88,554	65,011	153,565	65,047	49,080	30,200	20,955	91,500	19,900	111,400	1,048
2001-02	625,132	479,132	460,021	404,070	142,505	261,565	92,779	73,782	166,561	47,818	47,186	54,854	19,111	124,700	21,300	146,000	1,097
2002-03	719,671	554,671	532,911	460,627	151,898	308,729	105,605	89,534	195,139	68,836	44,754	68,230	21,760	139,600	25,400	165,000	4,054
2003-04	794,497	611,797	584,331	520,843	165,079	355,764	125,875	93,292	219,167	91,045	45,552	61,400	27,466	160,600	22,100	182,700	2,088
2004-05	901,976	661,372	619,206	590,387	183,372	407,015	144,845	93,692	238,537	115,374	53,104	26,769	42,166	218,200	22,404	240,604	2,050
2005-06	1,087,242	814,342	766,981	713,442	224,988	488,454	171,445	123,353	294,798	138,384	55,272	50,800	47,361	225,300	47,600	272,900	2,739
2006-07	1,188,082	941,482	880,322	847,236	333,737	513,499	175,908	133,487	309,395	132,299	71,805	29,371	61,162	195,600	51,000	246,600	3,713

Note: FBR Taxes include Direct Taxes, Customs, FED, and Sales Tax. Federal Taxes include FBR Taxes, Surcharges, and Foreign Travel Tax. Total Taxes equal Federal Taxes plus Provincial Taxes; Total Revenues equal Total Taxes plus Non-tax Revenues.

Table AI-2: Revenues and Taxes (percent of GDP)

							Indirect Taxes							Nontax Revenues			
FY	Total Revenue	Total Taxes	Federal Taxes	FBR Taxes	Direct Taxes	Indirect Taxes	ST(I)	ST(D)	ST	CD	FED	Total Surcharges	Total Provincial Taxes	Federal	Provincial	Total	Foreign Travel Tax
1999-00	13.4	10.6	10.1	9.1	3.0	6.1	1.8	1.3	3.1	1.6	1.5	1.0	0.5	2.4	0.4	2.8	0.0
2000-01	13.2	10.6	10.1	9.3	3.0	6.4	2.1	1.5	3.6	1.5	1.2	0.7	0.5	2.2	0.5	2.6	0.0
2001-02	14.0	10.8	10.3	9.1	3.2	5.9	2.1	1.7	3.7	1.1	1.1	1.2	0.4	2.8	0.5	3.3	0.0
2002-03	14.8	11.4	10.9	9.4	3.1	6.3	2.2	1.8	4.0	1.4	0.9	1.4	0.4	2.9	0.5	3.4	0.1
2003-04	14.1	10.8	10.4	9.2	2.9	6.3	2.2	1.7	3.9	1.6	0.8	1.1	0.5	2.8	0.4	3.2	0.0
2004-05	13.9	10.2	9.5	9.1	2.8	6.3	2.2	1.4	3.7	1.8	0.8	0.4	0.6	3.4	0.3	3.7	0.0
2005-06	14.3	10.7	10.1	9.4	3.0	6.4	2.3	1.6	3.9	1.8	0.7	0.7	0.6	3.0	0.6	3.6	0.0
2006-07	13.6	10.8	10.1	9.7	3.8	5.9	2.0	1.5	3.6	1.5	0.8	0.3	0,7	2.2	0.6	2.8	0.0

Note: FBR Taxes include Direct Taxes, Customs, FED, and Sales Tax. Federal Taxes include FBR Taxes, Surcharges, and Foreign Travel Tax. Total Taxes equal Federal Taxes plus Provincial Taxes; Total Revenues equal Total Taxes plus Non-tax Revenues.

Table AI-3: Sectoral Collection of Corporate Income Tax

Sectors	Collection (Rs. millions)		Share (percent)	
	July-June 2006-07	**July-June 2005-06**	**July-June 2006-07**	**July-June 2005-06**
Banking/Financial Institutions	62,407	26,518	25.0	15.5
Petroleum	46,670	29,141	18.7	17.0
Telecom	21,194	17,272	8.5	10.1
Construction	20,227	18,652	8.1	10.9
Edible Oil	12,559	12,531	5.0	7.3
Fertilizers	7,526	5,773	3.0	3.4
Automobile	6,483	5,045	2.6	3.0
Electricity and Gas Distribution	4,988	4,929	2.0	2.9
Wholesale and Retail Trade	4,828	3,969	1.9	2.3
Transport	4,088	4,033	1.6	2.4
Cigarettes	3,636	1,751	1.5	1.0
Textile	3,214	2,970	1.3	1.7
Insurance	2,338	1,548	0.9	0.9
Iron and Steel	2,222	1,508	0.9	0.9
Hotels and Restaurants	1,908	1,290	0.8	0.8
Cement	990	1,224	0.4	0.7
Sugar	759	482	0.3	0.3
Beverages	444	472	0.2	0.3
Others	43,519	31,893	17.4	18.7
Total	**250,000**	**171,000**	**100.0**	**100.0**

Annex II: Calculating the Marginal Effective Tax Rate[27]

The marginal effective tax rate (METR) measures the impact of a tax system on an incremental unit of capital investment. It incorporates the effects of not only statutory tax rates and related tax treatments (e.g., tax depreciation, tax credit, tax deductibility, tax holidays) but also various economic factors interacting with these tax treatments (e.g., financial costs, the inflation rate, the structure of investment). The METR is a summary indicator of the overall tax burden imposed by a tax system on an investment.

We calculate effective tax rates based on the assumption of profit-maximization. Profit-maximizing firms base their investment decisions on the present value of foreseeable incremental net revenues. Taxes reduce the portion of the profits accruing to the investor, while tax allowances mitigate such a reduction in accrued profits. Owing to the interaction between these statutory tax provisions and actual economic/industrial conditions, METRs can vary by industry even under the same tax regime. Furthermore, for a cross-jurisdiction comparison, differences in effective tax rates may reflect not only national variations in tax regimes but also different economic and financial climates in the various countries. For profit-maximizing firms, the gross rate of return on capital (net of economic depreciation) must be equal to the financing cost of capital, adjusted for taxes. The size of this adjustment for taxes on a new investment is the effective tax rate on capital. For example, if the gross-of-tax rate of return to capital is 20 percent and the net-of-tax rate of return is 10 percent, then the effective tax rate on capital is 50 percent.

It should be noted that the analysis of effective tax rates in this study deals only with 'profitable' firms. "Profitable" means that the firm has taxable income and is not in a loss-carry-over position. Calculating METR for "tax-loss" firms would require data on average number of years for these firms to written off their losses and become taxable, which is beyond our policy concern at the current stage.

The standard method used to estimate effective tax rates has been extensively documented (Boadway, Bruce, Mintz, 1984; King and Fullerton, 1984). The formula based on this method has been modified by incorporating some miscellaneous taxes such as capital tax, property tax, and tax on transfer of property (Chen and Mintz, 1993). The following are general formulas used in this study.

Analytical Framework

Marginal Effective Tax Rate (t)

The marginal effective tax rate (t) on a given type of capital is defined as the proportional difference between the gross-of-tax rate of return required by a firm (r^G) and the net-of-tax rate of return required by an investor (r^N). r^G is the difference between the marginal revenue product (or user cost, in equilibrium) and economic depreciation. The after-tax

[27] This section is based upon Martinez-Vazquez (2006).

rate of return is the weighted average of the return to debt and equity securities held by the investor. Thus, the effective tax rate (t) is defined as:

$$t = (r^G - r^N)/r^G \,. \qquad (1)$$

Real Cost of Financing (r^f)

For domestic investors, the real cost of financing (r^f) is defined by

$$r^f = ßi(1-U)+(1-ß)\rho-\pi, \qquad (2)$$

with $ß$ = debt to assets ratio, i = cost of debt, U = the statutory corporate income tax rate, ρ = cost of equity, and π = inflation rate. That is, the cost of financing for an investor is the weighted-average cost of financing net of the inflation rate.

For foreign investors, the real cost of financing (r^f) is defined by

$$r^f = [ß'i'(1-U')+(1-ß')\rho'](1-\gamma)/(1-x)+\gamma[i(1-U)-\pi+\pi']-\pi', \qquad (2')$$

with $ß'$ = debt to assets ratio in home country, i' = cost of debt in home country, U' = the statutory corporate income tax rate in home country, ρ' = cost of equity in home country, γ = the ratio of debt raised in host country to total investment fund, x = weighted average withholding tax rate in host country, i = cost of debt in host country, U = statutory corporate income tax rate in host country, π' = inflation rate in home country, and π = inflation rate in host country. The cost of financing to a foreign investor is the weighted-average of costs of its investment fund taken from the home country and the debt raised in host country. The former is the weighted average cost of financing at home net of withholding tax payable in host country, and the latter is the cost of debt in host country adjusted by income tax deductibility and difference in inflation rate between home and host countries.

Net-of-tax Rate of Return on Capital (r^N)

For domestic investors, the net-of-tax rate of return on capital is defined by

$$r^N = ßi+(1-ß)\rho-\pi. \qquad (3)$$

This is the rate of return on capital required by supplier of investment funds.

For foreign investors, the formula is defined by

$$r^N =[ß'i'(1-U')+(1-ß')\rho'-\pi'](1-\gamma)+\gamma(i-\pi). \qquad (3')$$

This is the net-of-tax rate of return on capital required by fund suppliers including foreign investors themselves and the creditors in host countries.

Applying (3) and (3') to equation (1), respectively, results in the effective corporate tax rate on capital for domestic investors and for foreign investors.

Gross-of-tax Rate of Return on Capital (r^G)

For domestic investors, the gross-of-tax rate of return is given by

$$r^G = (1+tm)(r^f+\delta)(1-k)[1-A+\tau(1-U)/(\alpha+r^f+\pi)]/[(1-U)(1-tp-tg)]-\delta\ , \qquad (4)$$

with tm = tax on transfer of property, or transaction tax (e.g., import duty) on capital goods where is applicable, δ = economic depreciation rate, k = investment tax credit rate, A = present tax value of the accumulated capital cost allowance, τ = capital tax rate, α = tax depreciation rate, tp = property tax rate, and tg = gross receipts tax rate, or presumptive tax.

For foreign investors, the gross-of-tax rate of return is given by

$$r^{G\prime} = (1+tm)(r^{f\prime}+\delta)(1-k)[1-A+\tau(1-U)/(\alpha+r^{f\prime}+\pi)]/[(1-U)(1-tp-tg)]-\delta. \qquad (4')$$

Inventory

Calculations for inventory are modified. For domestic investors, the gross-of-tax rate of return is given by

$$r^G = (1+tm)(r^f+U\pi\zeta)/[(1-U)(1-tg)]+\tau, \qquad (5)$$

with tm = sales tax on inventory where it is applicable, and ζ = 1 for FIFO accounting method and 0 for LIFO.

For foreign investors, the formula is the same except that the financing cost must be the one relevant to the foreign investors, so that r^f is replaced by $r^{f\prime}$.

Land

Calculations for land are also modified. For domestic investors, the gross-of-tax rate of return is

$$r^G = r^f(1+tm)[1+\tau(1-U)/(r^f+\pi)]/[(1-U)(1-tp-tg)]. \qquad (6)$$

For foreign investors, the formula is the same except that the financing cost must be the one relevant to the foreign investors, so that r^f is replaced by $r^{f'}$.

Aggregation

The effective tax rate for a given industry is the proportional difference between the weighted average of before-tax rate of return by asset type and the after-tax rate of return, which is the same across asset type within the industry. The marginal effective tax rate for industry *i* (t_i) is calculated as following:

$$t_i = (\Sigma_j r^G_{ij} w_{ij} - r^N{}_i)/\Sigma_j r^G_{ij} w_{ij} \quad , \qquad (7)$$

where *j* denotes asset type (i.e. investments in buildings, machinery, inventories, and land), w_{ij} denotes the weight of asset type j in industry *i*.

Specific Assumptions and Data Sources

In order to calculate the METRs, it is essential to have several sources of data. However, it is difficult to get all the required multifaceted information. In this regard, some assumptions have been made. The basis of such assumptions, along with the sources of data, is explained below.

1. **Expected inflation rate:** The reported data in Table 8.4, pp. 1-3, *Economic Survey of Pakistan 2006-2007*, Ministry of Finance, Government of Pakistan have been used to arrive at a value for expected inflation. The current inflation rate of 7.90 percent is quite high, so a lower rate of 4.57 percent has been assumed. For Canada and the U.S., the inflation rates given in the World Development Indicators (2007) have been used.

2. **Nominal interest rate:** This information is taken from Table 6.11, pp. 95, *Economic Survey of Pakistan 2006-2007*, Ministry of Finance, Government of Pakistan.

3. **Expected real interest rate:** The expected real interest rate is calculated by subtracting the expected inflation rate from the nominal interest rate.

4. **Composition of assets:** The shares of assets by type of industry have been assumed, based on the assumption that a more capital intensive industry holds a higher fraction of its asset value in machinery. In some cases, depending on the type of industry, comparatively higher shares have been assigned to buildings and a higher fraction of assets has been assumed for inventory as in the case of automobiles. Details of the industry-wise composition of assets are highlighted in Annex II, Table 1.

Table AII - 1: Composition of Assets by Industry (percent)

	Sector	Building	Machinery	Inventory	Land
1	Automobile	20	45	25	10
2	Beverages	20	45	15	20
3	Cement	25	45	20	10
4	Cigarettes	30	50	10	10
5	Edible Oil	20	50	20	10
6	Fertilizers	25	40	25	10
7	Iron and Steel	20	40	15	25
8	Petroleum	15	60	20	05
9	Sugar	30	50	10	10
10	Textile	15	60	15	10
11	Chemicals	20	40	30	10
12	Telecom	12	65	05	18
13	Banking/Financial Institutions	53	15	02	30
14	Insurance	53	15	02	30
15	Hotels and Restaurants	50	10	10	30
16	Transport	08	65	05	22
17	Construction	05	60	15	20
18	Gas	20	50	15	15

5. **Debt raised abroad to home capital:** This ratio (40 percent) is based on the value used in Martinez-Vazquez (2006), Table A.5, p. A-11.

6. **Debt to asset ratio by industry:** This ratio (40 percent) is based on the value in Martinez-Vazquez (2006), Table A.5, p. A-11.

7. **Cost of equity:** For Pakistan the reported value from Estrada (2000) is used. The same value has also been assumed for the other countries.

8. **Sales tax:** This is the standard rate of 15 percent. We assume that the same rate applies to all types of sales.

9. **Transfer of property tax:** This is assumed to be 5 percent.

10. **Capital gains tax rate:** Currently, capital gains are exempted except for banks (at 10 percent).

11. **Gross receipt tax rate:** This is levied at a 0.5 percent rate (i.e., minimum tax) on gross receipts. There are a number of withholding taxes. A uniform rate for incidence of withholding taxes on each industry is assumed, at 10 percent.

12. **Statutory corporate income tax rate:** Currently, a 35 percent corporate income tax rate is levied on companies in Pakistan (other than "small businesses" for which a statutory rate of 20 percent is applicable). For Canada and the U.S., the rates have been taken from *Doing Business 2008,* The World Bank, Washington, D.C.

13. **Economic depreciation rates:** These rates are based on calculations that use in part the depreciation rates in "Depreciation Rates (Consumption of Fixed Capital)" (2002), Federal Bureau of Statistics, Government of Pakistan.

14. **Tax depreciation rates:** These rates come from the Income Tax Ordinance, 2001.

15. **FIFO/LIFO:** FIFO is applicable in Pakistan and Canada, and we assume a value of 1 for each country; LIFO, with a value equal to 0, is assumed for the U.S. investor.

16. **Present tax value of accumulated capital cost allowance:** These have been separately calculated for machinery and building for each industry by applying the relevant tax depreciation rates/investment allowance. In the case of petroleum (underground installation), 100 percent expensing has been used for the capital cost of machinery.

Annex III: Withholding Taxes under the Income Tax Ordinance, 2001[a]

Monthly Statements to be filed under Rule 44(2), Annual statements to be filed under Rule 44(1), and Section 165

Withholding Tax Section	Title of Section		Rate of Deduction (Charging Section / Clause)	Taxability
148	**Imports**			
	• Collected by Collector of Customs for value of goods imported	5 %	Part II of First Schedule	Adjustable
	• Collected by Collector of Customs for value of goods specified	1 %	[Cl (9),(13),(13A),(13C), (13G), (13E)	Adjustable
	• Collected by Collector of Customs for value of goods specified	2 %	Part II 2nd Schedule]	Adjustable
	• On import of Urea fertilizer and Pulses	1 %	[Cl (13B), (13H) Part II 2nd Schedule] Clause (23), (24) Part II of Second Schedule	Adjustable
149	**Salary**	Slab Rates	Part I of First Schedule	Adjustable
150	**Dividends**			
	Dividends paid by a Resident Company	10 %	Division III Part I of First Schedule	Adjustable
	Dividends paid by a Non-Resident Company in mining operations	7.5 %	Clause (16) Part II of Second Schedule	Adjustable
	Dividends distributed by purchase of power project privatized by WAPDA	7.5 %	Clause (17) Part II of Second Schedule	Adjustable
	Dividends distributed on shares of power generation company	7.5 %	Clause (19) Part II of Second Schedule	Adjustable
151	**Profit on Debt**		Division I Part I of First Schedule	
	u/s 150(1)(a)-Paid on deposit/certificate under National Savings or Post Office	10 %		Final
	u/s 150(1)(b)-Paid by baking company/financial institution on account/deposit	10 %		Final
	u/s 150(1)(c)-Paid on a security issued by Federal/Provincial Government or a Local Authority	10 %		Adjustable
	u/s 150(1)(d)-Paid on bond/debenture/certificate/security/instrument issued by a banking company or a financial institution	10 %		Final
152	**Payments to Non-Residents**	15%	Division IV Part I of First Schedule	Adjustable
153	**Payment of Goods and Services**		Division III Part IIII of First Schedule	
	(a) Sales of Goods-Sale of rice, cotton seed, or edible oil	1.5 %		Final
	Sale of other goods	3.5 %		Final
	(b) Rendering of Services-Transport services	2 %		Final
	Other ervices	6 %		Final
	Sub-section (1A)-Payment by an exporter to a non-resident	0.5 %	Division IV Part III of First Schedule	Final
	For Companies	2 % & 6 %	Division III Part IIII of First Schedule	Adjustable
	(c) Execution of Contracts	6 %		Final

Annex III: Withholding Taxes under the Income Tax Ordinance, 2001a (continued)

Withholding Tax Section	Title of Section		Rate of Deduction (Charging Section / Clause)	Taxability
154	**Exports**			
	Sub-section (1)-On realization of foreign exchange proceeds on export of goods	1 %	(1) Division IV Part III of First Schedule	Final
	Sub-section (3)- On proceeds on inland back-to-back LC/other arrangement		-do-	Final
	Sub-section (3A)-By EPZ at the time of export of goods		-do-	Final
	Sub-section (3B)]-Deducted by a direct exporter on payment to indirect exporter		-do-	Final
	[Sub-section (2)]-On realization of foreign exchange proceeds on sale of goods	5 %	(2) Division IV Part III of First Schedule	Final
155	**Income from Property**	5 %	Division V Part III of First Schedule	Final
156	**Prizes and Winnings**			
	Prizes and winnings (prize bonds)	10 %	(1) Division VI Part III of First Schedule	Final
	Prize and winnings (raffle, lottery, prize, cross-word puzzle)	20 %	(2) Division VI Part III of First Schedule	Final
156A	**Petroleum Products**	10 %	Division VIA Part III of First Schedule	Final
156B	**Withdrawal of Balance under Pension Fund**	---	Sub-section (6) of Section 12	Adjustable
231A	**Cash Withdrawal from a Bank**	0.2 %	Division VI Part IV of First Schedule	Adjustable
231B	**Purchase of Motor Cars**	2.5 %	Division VIII Part IV of First Schedule	Adjustable
233	**Brokerage and Commission**			
	Brokerage and Commission – General	10 %	Division II of Part IV of First Schedule	Final
	Brokerage and Commission – Advertising Agents	5 %	Clause (26) of Part II of Second Schedule	Final
233A	**Collection of Tax by a Stock Exchange Registered in Pakistan**		Division IIA of Part IV of First Schedule	
	Under Sub-section 1(a)-On purchase of shares	0.01 %		Final
	Under Sub-section 1(b)-On Sale of shares	0.01 %		Final
	Under Sub-section 1(c)-On Trading of shares	0.01 %		Adjustable
	Under Sub-section 1(d)-On financing of carryover trades (Badla) in shares	10 %		Adjustable
234	**Transport Business**	Slab Rates	Division III of Part IV of First Schedule	Final
234A	**CNG Stations**	4 %	Division VIB of Part IV of First Schedule	Final
235	**Electricity Consumption**	Slab Rates	Division IV of Part IV of First Schedule	Minimum/ Adjustable
236	**Telephone Users**			
	Telephone Users (bill subscriber)	Slab Rates	Division V of Part IV of First Schedule	Adjustable
	Telephone Users (prepaid cards)	10 %		

[a] Imports at 5 percent are adjustable for industries, while commercial imports are taxed under the presumptive tax regime.