

International Center for Public Policy
Working Paper 13-18
June 2013

**A RETROSPECTIVE ON TAXATION IN
DEVELOPING COUNTRIES: WILL THE WEAKEST
LINK BE STRENGTHENED?**

Roy Bahl

**International Center for Public Policy
Working Paper 13-18**

**A Retrospective on Taxation in Developing
Countries: Will the Weakest Link be
Strengthened?**

Roy Bahl

June 2013

International Center for Public Policy
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: hseraphin@gsu.edu
Internet: <http://aysps.gsu.edu/isp/index.html>

Copyright 2006, the Andrew Young School of Policy Studies, Georgia State University. No part of the material protected by this copyright notice may be reproduced or utilized in any form or by any means without prior written permission from the copyright owner.

International Center for Public Policy Andrew Young School of Policy Studies

The Andrew Young School of Policy Studies was established at Georgia State University with the objective of promoting excellence in the design, implementation, and evaluation of public policy. In addition to two academic departments (economics and public administration), the Andrew Young School houses seven leading research centers and policy programs, including the International Center for Public Policy.

The mission of the International Center for Public Policy is to provide academic and professional training, applied research, and technical assistance in support of sound public policy and sustainable economic growth in developing and transitional economies.

The International Center for Public Policy at the Andrew Young School of Policy Studies is recognized worldwide for its efforts in support of economic and public policy reforms through technical assistance and training around the world. This reputation has been built serving a diverse client base, including the World Bank, the U.S. Agency for International Development (USAID), the United Nations Development Programme (UNDP), finance ministries, government organizations, legislative bodies and private sector institutions.

The success of the International Center for Public Policy reflects the breadth and depth of the in-house technical expertise that the International Center for Public Policy can draw upon. The Andrew Young School's faculty are leading experts in economics and public policy and have authored books, published in major academic and technical journals, and have extensive experience in designing and implementing technical assistance and training programs. Andrew Young School faculty have been active in policy reform in over 40 countries around the world. Our technical assistance strategy is not to merely provide technical prescriptions for policy reform, but to engage in a collaborative effort with the host government and donor agency to identify and analyze the issues at hand, arrive at policy solutions and implement reforms.

The International Center for Public Policy specializes in four broad policy areas:

- Fiscal policy, including tax reforms, public expenditure reviews, tax administration reform
- Fiscal decentralization, including fiscal decentralization reforms, design of intergovernmental transfer systems, urban government finance
- Budgeting and fiscal management, including local government budgeting, performance-based budgeting, capital budgeting, multi-year budgeting
- Economic analysis and revenue forecasting, including micro-simulation, time series forecasting,

For more information about our technical assistance activities and training programs, please visit our website at <http://aysps.gsu.edu/isp/index.html> or contact us by email at hseraphin@gsu.edu.

A Retrospective on Taxation in Developing Countries: Will the Weakest Link be Strengthened? ¹

Roy Bahl

1. INTRODUCTION

Nicholas Kaldor told us in 1963 that developing countries did not know how to tax, Richard Goode told us in 1984 that they still had trouble formulating and implementing tax policies, and Richard Bird tells us in 2011 that tax design and tax administration in developing countries have shown considerable improvement but there is a long way to go before taxation can properly support growth and distribution objectives. All three got it right for the time period they were studying. Some middle income countries have been closing the gap with the industrials in revenue mobilization, good tax policy and efficient administration, but the convergence in most low income countries has been much slower.

It is not an exaggeration to say that taxation is a weak link in the development policies of low income countries. In many countries, revenues are not large enough to provide a basic level of services or to develop infrastructure on which to build an economy that can capture its comparative advantages. Tax bases are narrow because of legal exemptions, poor enforcement, and hard-to-tax economies. This leads to a misallocation of resources that retards growth, perhaps to a significant extent, and to horizontal inequities that erode confidence in the tax system and encourage non-compliance. It is true enough that taxation is especially difficult in poor countries where both the capacity to pay and the capacity to collect are limited. But it is also the case that taxable capacity has grown, even in poor countries, and the path to better tax policy and administration has been more or less well learned. Why then have we not seen more improvements in the tax systems in poor countries?

This paper is about revenue mobilization and tax structure changes in developing countries since the 1970s, the factors underlying this pattern, and what this history suggests for the

¹ I am grateful to Musharraf Cyan for helpful comments and to Pushkaraj Savangaonkar for research assistance.

future. Several distinguished students of taxation have studied this set of questions for different periods of time (Chelliah, 1971, Tanzi, 1987, Bird, 2011a) and their conclusions are more or less in step with those reached here. But the longer time horizon of this study and the different take on some of the questions about the poor tax performance in developing countries may add some new value.²

In the next section of this paper, the evidence on long run changes in revenue mobilization is reviewed, and some explanations for the relatively weak performance in many low income countries are offered. We turn then to the same question for changes in the tax structures. The general conclusions reached here are that the rate of taxation in low income countries has not risen appreciably faster than GDP over this period, that countries have ignored the advice to broaden the tax base as often as they have acted on it, and that administrative improvements have been slow to come on line. The culprits in all of this have been a slow process of economic modernization, too little investment in the tax administration infrastructure and too little commitment to enforcement, and a political economy that often seems rigged against both more taxation and good taxation. In section 4, I suggest that there are underlying factors that might cause this pattern to change during the next decade, and bring about more convergence in tax practices between developing and industrial countries. A final section concludes.

The discussion in this paper is limited to taxation in developing countries. I do not take up user charges or other non-tax revenues, nor do I address the important question of revenue mobilization from natural resources. Tax reform in transition countries is another very interesting study (Bahl, 1999, and Martinez-Vazquez, Rider and Wallace, 2008), but also too different to do justice to it here.

2. REVENUE MOBILIZATION

There is no one correct answer to the normative question about the percent of total output that ought to be diverted to government purposes through the tax system. It depends on the

² See also Bahl (2006) and Bahl and Bird (2008a) which lay the groundwork for this analysis.

scope of responsibilities that is taken on by the public sector, the degree to which non tax sources of revenue are used to finance the delivery of these services, on the costs of taxation and the benefits of expenditures, and on how the tradeoff between growth and redistribution is viewed. Though growth models that treat taxation as endogenous may ultimately lead us to an answer on a country-by-country basis, we are not there yet.³

Anyway, the question is more complicated than economics. The “right” level of taxation also depends on culture and on the views of voters and political leaders about the role of the state. The right level of taxation in the eyes of a Jamaican or a Dane will be very different from that seen through the eyes of a Guatemalan or an American. Tax evasion in one country might be a scarlet letter, but in another it might be a badge of honor. Two things we can count on in developing countries, however, are that taxpaying voters will feel overtaxed, and external advisors will see the level of taxes as too low.

Earlier tax reform studies took on the question of the “right” level of revenue mobilization, but from an economic growth perspective. The Musgrave Commission in Colombia derived a revenue gap from the projections of savings and investment necessary to achieve a target growth rate (Musgrave and Gillis, 1971, Goode, 1993). But few earlier studies started with expenditure needs in setting a revenue target. After the 1980s, most tax studies finessed the normative question. If the government asked the normative question, “How much should we tax”, the (correct) response from the head of the study team was “how much do you want to spend”. This usually led to a revenue neutral approach in the tax study, i.e., i.e., to raise the same amount of revenue as does the present tax system, but in a more efficient and fairer way, and then leave it to the politicians to decide on how much they want to tax this improved base. While all of this is nicely said, and allows the bigger question to be swept under the rug, in the end the tax study usually comes back to making estimates of revenue enhancements that will accompany the structural reform.

³ Some authors have offered opinions about the right level of taxation, based mostly on personal experiences and hunches, and to some extent on historical data. Kaldor speculated that 25 percent of GDP would be about right, but Martin and Lewis (1956) placed the target level at about the current level, 17-19 percent of GDP.

Those who do research on the level of taxation in developing countries have more often raised the positive question, i.e., what share of GDP is taken by taxes? This question does have an answer and can be used as a basis for comparison: on average in the 2000s, tax revenues are equivalent to about 16 percent of GDP in developing countries, a level that is well below that in industrial countries. To the extent there is comfort in averages, this approach has given governments some useful benchmarks and it has led to a large research effort, but still we are without an answer to the normative question.

Empirical Evidence

Comparing tax performance among developing countries is no easy matter. The best comparable data for developing countries are from the IMF data base (International Monetary Fund, 2010), but there are problems with these data, and these problems can compromise the findings of empirical work. In particular, tax revenue data are not reported for several countries and this makes both time series and cross section comparisons hazardous (see Box 1).

The ratio of tax revenue collections to GDP is the indicator of the level of taxation used in most comparative studies. But, there are important limitations on how this measure can be used in comparative analyses. It excludes non tax revenues such as user charges, so it will less accurately reflect the total revenue mobilization for public uses than it will reflect the choice of a financing method. It also does not make adjustment for inter-country differences in the scope of government, i.e., for the choice to deliver a service through government or through the private sector, or for different rates of nationalization of key industries.

Matters are further complicated by several measurement issues. The only comprehensive data base that allows international comparison of all countries is the International Monetary Fund's *Government Finance Statistics* (2010). However, there are shortcomings in these data. Among these shortcomings are missing data for some countries for some years, some debatable dis-aggregation by type of tax, the failure to report all subnational government revenues, and a change in the classification of taxes that makes it impossible to exactly compare tax structures before and after 1990 (Martinez-Vazquez, Vulovic, and Liu, 2011; Ebel and Yilmaz, 2003). Still, the IMF data offer the best comparative fiscal information, and should provide a reasonably accurate picture of changes in total tax revenue mobilization and changes in broad categories of tax structure. With all of these caveats in mind, the results presented in this paper are based on these data.

Box 12.1: Measuring the Level of Taxes

Table 1. Tax Revenues as a Percent of GDP in Developing Countries

Decade	Average Percent
1970s	14.8
1980s	17.0
1990s	16.9
2000s	16.0

Note: includes social security taxes. Source: IMF (2010), with selected countries deleted from the series because of data problems (See box 12.1).

The results reported in Table 1 show decade averages for the 1970s, 1980s, 1990s and 2000s.^{4,5} These results show that tax revenues rose by only about one percent of GDP over these four decades, from 14.8 percent in the 1970s to 16 percent in the 2000s. This finding is roughly comparable to that of the IMF (2011) which supplemented the GFS data base with information gathered by other agencies and with their own country reports. The results from similar analyses for earlier periods (but still using IMF data) were not very different (Burgess and Stern, 1993; Tanzi, 1987; Bahl, 2006).

What to make of this finding? One impressionistic reaction is that holding revenues at a level as low as 16-17 percent of GDP over a 40 year time period did not enable the financing of an adequate level of government services. This proposition is not a new one. Adolph Wagner, writing at the turn of the century, used data on the expenditures of European countries to argue that the normal course of things is for government expenditures to rise proportionately faster than total output.⁶ The “right” growth of course will depend on the long run income and price elasticities of demand for government expenditures, but Wagner’s guess, based on the performance of European countries, was that this will surely be greater than unity. Wagner’s “law” does square with the increasing tax ratio observed in industrial countries since the 1950s (Pryor, 1985, Tanzi, 2011).

⁴ For each decade, we compute the arithmetic mean of the tax ratio, ignoring all years where data are not reported. The IMF (2011) used medians to correct for this. Martinez-Vazquez, Vulovic and Liu (2011) used five year moving averages to do time series comparisons. Decade averages have the advantage of taking the longer view of the trend in tax performance, but they miss the upward and downward movements within a decade

⁵ Because of an absence of data, or incomparability in the data, we dropped 17 countries from the analysis.⁵ Clearly the choice of countries included in the sample can make a difference in these results. Chelliah (1971) found that the average tax ratio increased from 11.3 percent in 1953-55 to 13.8 percent in 1966-1968. Only 8 in his sample of 27 less developed countries showed a decrease in the tax ratio during this period.

⁶ For a discussion of “Wagner’s Law”, which in fact was not very precisely described by Wagner, see Peacock and Wiseman (1961).

We might expect the same pattern from developing countries as they graduate to higher levels of development. A tax revenue growth roughly equivalent to that of GDP (as found here) was used to maintain the present level of services (pay salaries, cover running costs, maintain capital assets, etc.), repay debt, deal with emergencies, and to provide some upgrades to services and infrastructure. The lower the tax ratio, the less has been available for upgrades. User charges and other non-tax revenues, and foreign aid, may have provided additional resources to cover some of this financing gap, but this has varied from country to country. The more likely scenario is that the infrastructure gap and the shortfall in the quality of public expenditures have continued to grow

The situation in India might illustrate the point. The ratio of taxes to GDP averaged 12.8 percent in the 1970s but rose to 13.6 percent in the 2000s. A government-appointed commission recently estimated that the needed increase in urban infrastructure investment and maintenance expenditures to cover the existing gap is equivalent to 1.1 percent of GDP per year (High Powered Expert Committee, 2011). Neither recurrent public service needs nor rural development needs are included in this amount.

We might summarize by saying that the growth in tax revenues in developing countries, on average, kept pace with or bettered the growth in GDP during the 1970s and 1980s, but it has since been flat. However, it likely has been slow relative to the demand for public expenditures and the need to repair and expand infrastructure. Many low income countries find themselves in almost as difficult a position at the end of the first decade of the 21st century as they did in the 1970s. This is partly what has prompted the UN (2005) to call for an increase in taxes equivalent to 4 percent of GDP. However if this historical revenue performance continues, the millennium development goal of an increase in domestic revenues equivalent to four percent of GDP would not be reached until the 2040s.

Why so Little Revenue Mobilization?

A lot went on during this forty year period: two oil shocks, a financial crisis in East Asia, the dramatic growth in the Chinese economy, and more recently the great recession. All had important fiscal impacts. In addition, individual countries dealt with natural disasters, debt

obligations that could not be repaid, spending that was not adequately controlled, and inflation. Revenue mobilization efforts in developing countries during this period sometime were the result of crisis response to budget deficits. These were quick fix programs and often were either rate increases or “available” levies such as a bank debit tax, an export tax, or a new surcharge on imports. Sometimes they were given appealing names to make them appear to be earmarked for something acceptable, e.g., the “education tax” in Jamaica. As recently as the early 2000s, Colombia was forced into an emergency deficit reduction program that included a temporary surcharge on the individual income tax, a one-time tax on net wealth, some broadening of the VAT base, and a tax on bank transactions (Bird, Echavarria, Poterba and Slemrod, 2005). Deficit reduction was often in step with advice and pressure from the IMF.

In other cases, the governments initiated a more structured tax reform effort, aimed at rationalizing the tax system, but the goal of raising more revenue was usually not too far in the background.⁷ These revenue actions were more driven by heavy debt burdens and fiscal deficits in the 1970s and 1980s but since the 1990s there also has been more of a response to the need to upgrade public services and to remove distortions in the tax structure. The revenue packages adopted during this period, and there were many, as well as the failures to act – and there were a lot of these also -- have helped to keep the average rate of taxes somewhere between 15 and 17 percent of GDP for most low income countries.

A number of different factors were at work to slow revenue growth over this time period. Some had to do with economics, some with management problems, and some with the preferences of voters for smaller governments. Most important of all were the political factors which showed up as unwillingness to tax. I would identify the following as the most important of these dampening influences on tax revenue growth.

First, a steep learning curve. Membership in the UN grew from 39 to 93 between 1950 and 1969. Most of these new countries wanted to develop their tax systems, but local expertise

⁷ For discussion of various tax reform projects during this period, see Thirsk (1991); Tanzi (1987a) and Harberger (1989). Some of the country studies include Indonesia (Gillis, 1989), Jamaica (Bahl, 1991, and Bahl and Wallace, 2007), South Africa (South African National Treasury), and Colombia (McLure and Zodrow, 1997; Bird, Poterba and Slemrod, 2005, Musgrave and Gillis, 1971).

was limited (Goode, 1993, p2-3). Few developing countries had a tax system that had a base that was broad enough to be both revenue productive and fair, and relatively free of distortions, and a weak tax administration compounded the problems. This held back revenue growth.

Since that time, countries, bi-lateral donors and international agencies have invested a great deal of effort and funding to assist countries with the task of strengthening their revenue systems. More than 40 years of this kind of advice, and government efforts to upgrade the capacity of the tax administration machinery, have led to significant growth in the knowledge about how to build a better tax system, and about what to do when revenue growth gets off course. Moreover, the present leadership in Ministries of Finance is in most cases well trained and able to lead modern reform efforts. Countries have learned but they have been slow to apply these lessons, and this partly explains the continued limited growth in revenue mobilization. Apparently, there remains a gap between the practice in developing countries and best international practice, and technical assistance is still needed to close this gap.⁸

Second, narrow tax bases. The tax net in many developing countries does not include some of the faster growing segments of the economy, and this has led to a weak automatic revenue-income elasticity of the tax system. Significant parts of the fast growing service sector are not covered by VAT (Bird and Gendron, 2007), the self-employed and small businesses escape payment of the individual income tax (Engelschalk, 2004), a significant amount of corporate profits are taken back in incentives, the progressivity in individual income tax rate structures has been reduced (Bird and Zolt, 2005), some excises are levied under specific rates (Cnossen, 2005), and capital gains on real estate are usually not taxed (Bahl and Martinez-Vazquez, 2008). The lowered automatic response of tax revenues to GDP growth has forced governments to rely more on discretionary tax increases which are highly visible to voters and opposition politicians.

Third, taxpayer resistance. The narrow tax base meant that the burden of taxes fell disproportionately on large taxpayers and on those in the formal sector. On this part of the

⁸ The Fiscal Affairs Department of the International Monetary Fund has been the most prominent in this area. In 2011 alone they reported 35 headquarters-led missions on tax policy issues and 61 in revenue administration (IMF, 2011, p46)

population, the “easy to tax”, the effective rate was much higher. The predictable result was that businesses complained that increased taxes were harming their competitive position and were unconvinced that further increases in taxes would buy better public services. Wage earners tracked their PAYE deductions but also knew that the self-employed were getting a free pass on the individual income tax. Some businesses faced a full tax burden under the corporate income tax and value added tax, but watched others enjoy incentives and holidays. The general public did not see much evidence that evaders were being caught and harshly punished. In this setting, taxpayer morale is low, which erodes confidence in government and further dampens the compliance rate and the willingness to accept higher levels of taxation (Bird, Martinez-Vazquez and Torgler (2006). This resistance was no doubt a factor that held down the growth in tax revenues.

Fourth, a changing fiscal world. Increased taxation during this period was constrained by a changing world economic order that closed down some of the tax handles that developing countries made use of in earlier years. Trade liberalization brought a flattening of tariff rates on imports and customs duties have been declining as a share of GDP. The revenue loss was recovered by increased domestic taxes in middle income countries, but this was much less the case in low income countries (Baunsgaard and Keen, 2010). Customs duties will continue to decline in importance in the revenue structures of low income countries. The problem is particularly acute in some low income countries that continue to rely heavily on taxes on international trade, and in some very small countries that have little by way of a domestic commerce or manufacturing sector. For example, Lesotho and St. Kitts derive nearly one half of revenues from customs duties.

Increased capital mobility has dampened interest in taxing corporations and high income individuals at higher effective rates. This poses an especially difficult problem for revenue mobilization in developing countries that depends heavily on collections from large taxpayers. Big companies have long been a good target for taxation, and the corporate income tax is a more important component of the revenue structure in developing than in industrial countries. But with global capital markets, there is an increased threat of capital flight and more pressure

to reduce corporate income tax rates and provide stronger incentives. In order to attract foreign direct investment in more competitive markets, developing countries have given in to the pressures.

Fifth, globalization and competition. Economic development and more recently globalization has meant that economies in all countries have become more complicated. This makes the job of building the right tax structure reform much harder to do and strains the ability of the tax administration to collect from some of the new types of economic activity. The temptation, often not resisted during this period of globalization, was to simply raise the tax rate. This generated a revenue bump but usually did not increase the automatic revenue-income elasticity.

The consumption of services, electronic commerce, complicated partnership and corporate arrangements, small businesses and foreign investors all have become a more important part of the potential tax net. Engelschalk (2004) gives an interesting example of the magnitude of the problem with small business. Nearly two million small businesses were established in Poland in the 1990s, placing an enormous burden on the tax administration both because of the magnitude of the task and because the new small businesses had little time to organize proper books of account and develop good compliance habits.

Multinational companies pose a particularly difficult challenge because of their ability to avoid or defer taxes by using intra-group transactions. While industrial countries have the wherewithal to deal with these changing features of the tax net, developing countries generally do not (McLure, 2006). The failure to fully capture the potential tax base was another factor that held back revenue growth.

Sixth, the hard-to-tax sector. Particularly difficult sectors of the economy to bring into the tax net are small and medium size firms, self-employed professionals, farmers, and individual proprietorships. These so-called “hard-to-tax” may be in both the formal and informal sectors of the economy (Alm, Martinez-Vazquez and Schneider, 2004). Exact measurement of the revenue loss attributable to the hard to tax sector is difficult. Estimates of the size of the “shadow economy” – the market-based production of goods and services that is not counted in

GDP – have been made (Schneider, 2002). These estimates show the shadow economy to be considerably larger in developing countries than in OECD countries, e.g., an average of 41 percent in Africa vs. 18 percent in OECD countries in 1999/2000. Using these estimates of inter-country variations in the size of the shadow economy as a proxy for the “hard to tax” sector, Alm, Martinez-Vazquez and Schneider (2004) have estimated an average revenue cost equivalent to 25 percent of total potential revenue collections.

Sixth, corruption. Corruption has slowed the growth in revenue collections. The dampening effect on revenues has taken place in several ways. A bribe paid to a tax official in return for less than full collection of the amount due reduces the effective rate of taxation. Another impact was more indirect. The presence of corrupt government officials drove some activities to the informal sector of the economy and outside the tax net, and dissuaded investment (Martinez-Vazquez, Boex and Arze, 2007). A third issue is that the population who paid the bribes may have viewed this payment as a substitute for taxation, and the end result may have been to further stiffen the resistance to increased government taxes. Finally, corruption also took the form of favor-trading or outright bribery of political leaders who were in a position to influence tax legislation to benefit certain parties.

Though there is not conclusive evidence about the revenue costs of corruption, there is a growing body of research on this question. Martinez-Vazquez, Boex and Arze (2007, p.6) argue that it is a “poor country disease” and calculate the simple correlation between the transparency international corruption perception index and per capita GDP at 0.85 . Using the Transparency International index, Bahl (2006) found that the increase in the tax ratio over the 1970-2000 period was about half as much in the 15 most corrupt developing countries as in the others. In cross-section regression analyses, Gupta (2007) and Bird, Martinez-Vazquez and Torgler (2006) found that higher rates of corruption dampened the level of revenue mobilization.

Finally, politics. Revenue growth was held back and revenue structures weakened by the politics of taxation. Democratic governance grew significantly over this period, and relatively short election cycles gave politicians a high discount rate and therefore an aversion to tax

increases. Moreover, politicians (elected or not) are driven to varying extents by interest groups who may push hard for more preferential treatments in the tax regime, and for less draconian enforcement measures. If politicians are swayed by the demands of these interest groups, the net result is a less buoyant tax system. It would be the rare external tax review during this period that has not commented on the unwillingness of the government to undertake necessary structural reforms or administrative improvements. It would not be too far off the mark to say that good politics has trumped good taxation during this period.

Inter-country variations

The discussion above was based on the average tax revenue performance in low income countries. But averages sometimes lie. It paints with too broad a brush to conclude that the tax ratio in all developing countries increased by only 1.2 percent of GDP between the 1970s and the first decade of the 2000s. For example, we can note that the tax ratio increased by a significant amount in Brazil, and South Africa during this period. However, in India the increase was smaller, and in Mexico and Pakistan there was a decrease.

The IMF (2011) examined a time series of data on the ratio of taxes to GDP for various groupings of developing countries. They found a general relationship between income level and tax ratio growth during the period, with upper middle income countries showing some growth, especially in the 2000s, but with other developing countries showing little or no growth between 1980 and 2008. Their analysis of performance by region suggests long term growth in tax revenue mobilization only in Latin America.

This variation in tax revenue mobilization has been examined in a more systematic way with statistical analyses. The dependent variable to be explained is the ratio of tax revenue to GDP. These analyses are not strictly comparable because the samples, time periods, specification of the estimating equations, and estimation methods differ, but most are cross-section analyses. A representative sample of these studies is Lotz and Morss, 1967; Bahl, 1971; Tait, Gratz and Eichengreen, 1979; Tanzi, 1992; Bird, Martinez Vazquez and Torgler, 2006, and Pessino and Fenochietto, 2010). There is some consistency in the results of this research, and this may help us explain why some developing countries increased their tax ratio while others did not. Higher

levels of per capita GDP and more openness in the economy seem to have driven higher tax ratios, larger shares of GDP in the mining sector and lower shares in agriculture are associated with higher tax ratios, and corruption has dampened revenue mobilization. Inferring a time path for the tax ratio for a country is tricky business. But these results suggest that the tax ratio will rise with per capita GDP.

3. THE STRUCTURE OF TAXATION

How a country taxes is as important as how much it taxes. Tax structure choices can lead to faster vs. slower rates of economic growth, more or less redistribution, and more revenue volatility over the business cycle. The tax structure also affects fairness, the extent to which certain sectors or activities are singled out for preferential treatment. There is by now a substantial literature that shows that taxes do matter, at least in the industrial countries. The results are more ambiguous in developing countries.⁹

The mix of taxes, as between direct and indirect taxes, or by type of tax, is one way to describe tax structure. The coverage of the tax base and the rate regime is another. The latter can give a richer answer to the questions about how taxes affect economic behavior, fairness and revenue flows, but it is very difficult to work with inter-country variations in tax and rate base details in an econometric analysis.

Tax Mix

At least in theory, there is an answer to the normative question about the best tax mix. Atkinson and Stiglitz' (1976) path breaking work led us to a statement of the conditions under which a tax on wages is a Pareto-efficient tax structure. Various researchers have expanded on this work to show how real world conditions (e.g., the cost of administration, the presence of tax evasion, horizontal equity considerations) could lead to an optimal tax structure that would include indirect taxes. While this work has been useful in setting a research framework, its implications have not been so easily absorbed by those responsible for the formulation of tax policy in developing countries.

⁹ This literature is reviewed in Martinez-Vazquez, Vulovic and Liu (2011).

The tax structure choices made by political leaders are pragmatic decisions driven by current circumstances in a country, by external events, and by politics. Overtime, the tax mix might change in response to a deficit in the budget, as when a country adopts a revenue enhancement measure. Or, it might be changed in bigger ways when it comes out of a comprehensive reform program. Lessons from the theory about how taxes affect the economy are less likely to lead tax reform in the case of annual budget adjustments than in the case of comprehensive reform. What is commonly referred to as “best practice” sometimes is copied, and it is here that theory may have an important indirect effect. The widespread adoption of the value added tax and its more or less careful implementation is a case in point.¹⁰

Long run changes in tax mix may be linked to economic development in a more or less systematic way. The “tax handles” explanation, originally developed by Hinrichs (1966) and more fully developed by Musgrave (1969) explain tax structure choices and until recently seemed to square with evidence on choices that have been made. The argument goes that at lower levels of development, countries will tax those bases that can be reached with least administrative effort, such as agricultural land, imports and exports, and the largest companies. As the domestic economy begins to modernize, indirect taxes are imposed, initially as turnover taxes that are limited to importers, manufacturers and large distributors, and excises.¹¹ At the next stage they impose a more modern sales tax (VAT) alongside excises, and begin to move away from customs duties. Company income taxes play a role in revenue mobilization before individual income taxes and social security payroll taxes, which come later, with upper middle income and industrial status.

Actual changes in the tax mix over the past 40 years have pretty much followed this progression.¹² The growth in tax revenues as a percent of GDP in the industrial countries

¹⁰ Sometimes, more questionable practices are also copied, e.g., “keep your VAT payment receipts to receive some form of tax credit reward”, improve tax compliance by giving amnesties, or tax bank deposits.

¹¹ For a good discussion of indirect taxes at this stage of development, see Due (1970).

¹² In this update, I use the IMF dis-aggregation of taxes: taxes on income, profits and capital gains; taxes on goods and services; and taxes on international trade. The computations discussed here are mine, based on GFS data, and those made by Tanzi (2011), Martinez--Vazquez, Vulovic and Liu (2011), and IMF (2011). An important caveat to interpreting these results (when based on IMF data) is that the decade averages for the 1970s and 1980s are not comparable with those for the 1990s and 2000s, because of changes in the GFS classification of taxes. Within the comparable twenty year periods (1970s to 1990, and 1990s to 2000s), however, we can pull out some patterns.

since the 1970s has been driven by VAT and social security contributions.¹³ While the traditional personal and corporate income taxes seemed to have maxed out as a share of total taxes after the 1970s, the combination of income taxes and social security taxes now accounts for about 60 percent of tax revenues (Tanzi, 2011; Martinez-Vazquez, Vulovic and Liu, 2011; and Bahl, 2006).

The reliance on direct taxes by industrial countries fits the “tax handles” explanation for tax structure choices in the development process. However, the rapid growth of VAT revenues and the flat growth rate of income taxes suggest a growing preference for consumption taxes, perhaps in response to the greater importance placed on economic growth, and the fear of capital flight. A good test of the tax handles theory of tax structure development in industrial countries must wait until economic growth resumes at normal rates and the objectives of tax policy change are more broadly focused.

Developing countries have steadily moved their mix towards domestic indirect taxes. The reliance on taxes on international trade has fallen and the share of income taxes has remained about the same since the 1970s. By the 2000s, developing countries raised about 40 percent of their tax revenues from domestic indirect taxes and about one-fourth from income taxes. While per capita GDP has increased in low income countries in the past four decades, and the graduation to more modern general sales taxes is evident, the move toward a heavier reliance on direct taxes has not happened. Reliance on the corporate income tax has increased in recent years but this is not likely to be sustainable, and there has been little if any growth in the individual income tax. The IMF (2011, p31) characterizes the individual income tax in developing countries as “stagnant”.

If the tax handles explanation is correct, the ratio of direct to indirect taxes should rise with per capita GDP. Martinez-Vazquez, Vulovic and Liu (2011) cannot find a significant relationship in their econometric analysis of 161 countries. They do find, however, that the direct tax share is higher where the overall level of taxation is higher, suggesting a covariation with the stage of

¹³ For an interesting tracking and interpretation of changes in the mix of taxes in Industrial countries, using OECD data, see Tanzi (2011).

development. Their result (page 54) is a powerful one: a 10 percentage point higher tax to GDP ratio is associated with a 2.1 to 3.7 percentage point higher direct to indirect tax ratio.

Where we find things in the second decade of the 2000s is that countries lie all along the tax handles continuum. Some of the lowest income countries, particularly in Africa, continue to rely heavily on customs duties and excise taxes (e.g., Mozambique and Congo DR), many developing countries raise more than half of tax revenues from domestic indirect levies (e.g., Costa Rica), some middle income countries are graduating to a heavier use of direct taxes (e.g., Brazil), and the tax structures of most OECD countries are dominated by direct taxes. There does not appear to be a great deal of convergence in the way that high and low income countries tax, but there does seem to be a strong trend toward de-emphasis of income taxation and toward emphasis of consumption taxes.

Indirect Taxes

The major change in the tax mix in developing countries over the past four decades has been the continuing shift toward domestic indirect taxes (general sales taxes including VAT). The share in total taxes continued to increase in the 1990s and 2000s and now accounts for more than 40 percent, twice the share in industrial countries. Several factors explain this shift. Trade liberalization has led to a reduction in revenues from customs duties, with the replacement largely by domestic sales taxes. This has increased the premium on “getting it right” with the structure of domestic sales taxes.

Another explanation is that governments in low income countries see sales taxes and excises as a better way to protect revenue than income taxes. Some of the income that escapes the individual income tax net via self-employment or small business activity will be captured by a broad-based consumption tax. Moreover, while no tax is an easy political sell, consumption tax increases that do not include necessities might be more palatable than an increase in the PAYE or the corporate income tax rate.

The shift to indirect taxes is partly due to what some would see as the irresistible advantages of the VAT. In 1980, only about 15 non-industrial countries levied a VAT, but by 2000 this number

had risen to about 80 (IMF, 2011). Few would argue that the VAT has not improved the tax structures in low and middle income countries.¹⁴ It led to eliminating the cascading effects of turnover taxes, the tax treatment of exports was significantly improved and it is perceived to be friendlier to economic growth than an equal yield income tax. It is also the case that the VAT was strongly urged by international agencies, and its successful implementation was greatly assisted by the IMF (Keen and Lockwood, 2010).

The shift toward indirect taxation could also be a result of the general sales tax having a greater elasticity than the rest of the tax system. However, the jury is still out on whether the adoption of VAT has led to higher rates of revenue mobilization in low income countries (Bird and Gendron, 2007, pp 194-196). In some middle income and developing countries the revenue bonanza was realized, but in others the revenue performance of the VAT did not meet the high expectations. Most of the revenue disappointments were of countries own making, i.e., narrow tax bases, “exemption creep”, and weak enforcement.

The other major component of the indirect tax system is selective sales taxes or excises. The distinguishing feature of these levies is selectivity in coverage and discrimination in intent (Cnossen, 2005). In their basic form they focus on a few products, use physical controls and in some cases use specific rates. In low income countries, excises are levied against large tax bases (petroleum products, liquor, beer and tobacco products) which are relatively price inelastic in demand, and which impose some social costs. The two principle objectives of excises are (a) revenue, and (b) deriving compensation from consumption that generates social costs. The revenue function has always been more important in developing countries. The importance of the externality objective in poor countries is more that it can provide good political cover for increases in excise tax rates.

Excises are the classic example of a tax handle. Because of their ease in administration, they were used especially heavily in countries at the lowest level of development. They continue to account for a significant share of tax revenue mobilization: 16 percent in Latin America, 15 percent in Asia, and 11 percent in Africa (Bird and Zolt, 2005). Even as countries moved to

¹⁴ For a good discussion of the VAT in practice in developing countries, see Bird and Gendron (2007).

higher levels of development, they often held on to excises to protect revenues, e.g., the current 25 percent of total tax revenues in Singapore. In ASEAN countries, excises contribute more to total revenues than do import duties (Cnossen, 2011). However, excises are declining in importance as a tax source in developing and developed countries, because of the specific rates that are used in some countries, and because of the gradual migration of the excise tax base to general sales taxes.

Has the more intensive use of indirect taxes led to stronger economic growth and to distribution outcomes that match up with government objectives? The evidence on this point is not all that clear. Several empirical studies report that replacing an income tax with an equal yield consumption tax would lead to a higher rate of economic growth, but the results are robust only for industrial countries (Martinez-Vazquez, Vulovic and Liu, 2011). Much the same result holds for the impact of the direct/indirect tax ratio on macroeconomic stability, redistribution and foreign direct investment. One explanation for this result is that there is no impact, that a general consumption tax dampens economic growth about as much as an equal yield income tax. A more plausible explanation is that a tax mix indicator, such as the direct/indirect tax ratio, hides the great inter-country variation in the rate and base structure and obscures the statistical result for developing countries.

Potentially, the VAT probably does lead to better economic growth outcomes than the income tax. But the full promise of the VAT has not been realized because countries have not been willing to structure it in the broad-based form that advocates have argued, i.e., a tax with exemptions limited to necessities and zero rating limited to exports, and the nominal rate set at “a reasonable level”. In fact, many low income countries have chosen multiple rates, narrowed the base with numerous exemptions and zero ratings, and allowed rates to rise to levels that have encouraged avoidance. Perhaps even more important is the efficiency with which the VAT is enforced, which varies widely from country to country. The IMF (2011, p25) estimates that the C-efficiency of the VAT (the ratio of VAT revenue to the product of the standard VAT rate and consumption) is about 56 percent in high income countries but only 38 to 47 percent in low income and lower middle income countries.

Taxes on International Trade

In the early stages of development, imports can be more easily taxed than income or domestic consumption, because the tax base is so easily identified. Customs duties can be collected without lag with a simple rate increase, and because they can be highly targeted and easily used to protect domestic industry. Eventually, customs duties give way to taxes on domestic consumption as interest in protection wanes, as the formal sector of the economy grows and income taxes take on more of a revenue role, and, as we have recently seen, as the international community take an interest in reducing restrictions to trade. But passing through these stages has been a long process for some countries.

Chelliah (1971) reports that the share of import duties fell for the 35 developing countries he studied for the 1953-55 to 1966-68 period. The rate of decline seems to have accelerated in the past two decades, arguably due to the effects of trade liberalization in general and to adherence to WTO rules and to new inter-country trade agreements. The impact of this decline on total revenue mobilization is less clear and seems to vary by the development level of the country. For most industrial countries trade revenues were not been very important during this 40 year period. For low income countries that have long depended on customs duties, the declines have been much greater. Ideally, the revenue loss due to tariff reduction would be replaced by a broadening of the sales tax base and an increase in excises. In practice, the revenue losses in middle income countries have been recaptured, but with a variety of tax instruments. In most low income countries, there has been less success (Baunsgaard and Keen, 2010).

Taxes on Income

Income taxes have long been an appealing source of revenue in the industrial countries. The attraction to the ability to pay argument for distributing tax burdens, and the possibility of introducing a progressive rate structure for the individual income tax, seemed to be in step with notions about equity, at least up to the 1980s. The corporate income tax has held on, continuing to account for about 10 percent of tax revenues since the 1970s, despite many good arguments to scrap it. Together the individual and corporate income taxes, and social security

contributions account for about the same percent of total tax revenue in the 2000s as in the 1970s (Tanzi, 2011).

The story in low income countries is a little different. The appeal of the corporate tax is that large corporations are relatively few in number, easily identified and especially foreign firms generally comply with the law. The corporation income tax accounts for a greater share of tax revenue in developing countries than in industrial countries.

Because the revenue yield is so important in low income countries, some of the problems have been ignored or assumed away. It has been popular to assume this to be a tax on capital that is either paid by higher income residents or exported to foreigners. The alternate view, that in small open economies it will be borne by labor, is sometimes dismissed (Echavarria and Zodrow, 2005). Another problem is the pressure from powerful interest groups to lower the tax, which often leads to a complicated incentive regime. This leads to a national industrial policy where politicians, rather than markets, pick the winners.

There are several reasons to question the sustainability of the corporation tax as a continuing productive revenue source in developing countries. If the practice and the results in the industrial countries is a guide, the corporate tax may lead to a slower rate of economic growth. International capital mobility raises concerns about taxing away the mobile base, and transfer pricing possibilities for large multinationals pose tax administration challenges that many low income countries cannot meet. The response to the capital mobility concern has been a reduction in income tax rates, though not as steep as in industrial countries, and a continued proliferation of incentives.

The individual income tax is of a lesser order of importance in developing countries, accounting for about half as much revenue as the corporate income tax. The appeal of an individual income tax in low income countries is that it provides an easy target for the tax net – PAYE wage earners. It also offers the possibility for adding some progressivity to the tax system, though this is often overblown as an advantage because of the exemptions and deductions allowed, because of a low compliance rate by high income earners who are outside the formal

sector, and because of the low effective rate at which individual income taxes are levied (Bird and Zolt, 2005).

Individual income taxes pose numerous problems for developing countries. Most developing countries levy the individual income tax as a payroll tax on withholdings on large formal sector firms. The coverage is usually quite narrow. A large proportion of the self-employed and small businesses are either outside the tax net or they underreport. This leaves a considerable horizontal inequity with PAYE sector workers, erodes confidence in the system, and drives some activity to the informal sector. The effects on the economy are an issue. For one, a PAYE system taxes labor in a labor-surplus economy. More important is the question of whether the findings from studies in industrial countries – that high marginal tax rates dampen investment – carry over to developing nations.

4. WHAT HAPPENS NEXT?

The gains in revenue mobilization over the past 40 years have been modest in low income countries, and have fallen far short of what many estimate to be needed levels. There have been some favorable changes in the mix of taxes used, in particular the widespread introduction of VAT and a declining reliance on import duties and specific rate excises, but the tax bases remain far too narrow in many countries, statutory rates tend to be high, and compliance rates are too low. The tax administration efficiency in most low income countries still has much room for improvement. Though this general description does not fit all developing countries, it probably is a reasonable description for most.

In light of this history, we might speculate about what is likely to come next for taxation in low income countries. The question raised here is whether there are reasons why developing country governments might renew their interest in tax revenue mobilization, and in modernizing tax structures and enforcement regimes. One answer to this question is that there are such forces in play. The most important are pressing public expenditure needs, especially the need to deal with a badly deficient infrastructure. This could call out increases in tax revenue mobilization that will be greater than the historical rate. There also are structural responses to external factors (trade liberalization and international capital mobility) that need

to be made, some longstanding problems with preferential tax treatments that might supplant statutory rate increases to generate more revenues, and tax administration improvements that have been put off for too long. But before significant improvements can take place, the political stance toward tax increases and tax structure changes must soften.

Muddling Through

A pessimistic view about the future is that it will not be much different from the past in terms of revenue mobilization and tax structure change. Reform will continue to be tough going in developing countries. The anti-tax group wraps itself in the flag of higher taxes discouraging economic growth, and the existing tax structure is often protected by those who are dug in around their entitlements under the present system. Technocrats in developing countries, who understand the situation very well, are usually a step or two removed from the decision making process. External advisors, who are not encumbered by real world political economy considerations, are usually among the few who will stick their necks out for technically good tax reform.

Political inertia is difficult to overcome, especially when the subject is taxation. One course for the coming decade is more of what the history reviewed here has shown. The rate of revenue mobilization will creep up on average, but political forces will hold it to about the same rate of growth as GDP. If total output in the poor countries grows enough, this may produce revenue sufficient to allow marginal upgrades in public services, but not enough to make the progress with infrastructure needs that the 4 percent of GDP target that the millennium development goals have identified.

This is not to attribute every slow rate of revenue mobilization entirely to forces of darkness. There may be a perfectly rational explanation. If finance really does follow function in developing countries, then the low rate of revenue mobilization may be a reflection of a weak demand for government services and a weak ability of the government to deliver quality public services. Politicians and voters in some countries may feel that the size of government is about right, and that additional spending (beyond the growth rate of GDP) will not produce benefits that will outweigh the costs of the necessary taxation. This might explain, for example, the case

of Mexico where the ratio of tax to GDP has been held at a low rate even by comparison with countries at the same income level.

Lindblom's "muddling through" implies gradualism but not the absence of change. The tax rate and base structure will change under a gradualism approach, but the changes will be mostly marginal. Preferential treatments will be added and subtracted, but big bang efforts at base broadening will not be brought to the table. Periodically, when some of the excesses are deemed to be too great, a commission will be appointed to examine the tax structure and some changes will be made, but these will not typically involve the big entitlements on the tax or the expenditure side of the budget.

Even if gradualism is the strategy adopted by most countries, there will be outliers, i.e., countries that do undertake major reforms that involve significant increases in the rate of revenue mobilization and significant base changes. These countries will close the gap with industrial countries, at least in terms of the share of GDP allocated to the government sector. For the period under study here, Brazil, China, and South Africa are among the countries that have significantly closed the revenue gap.

Expenditure Needs and Revenue Mobilization

There is an alternative to the gradualism scenario. Developing countries might be pushed into an increased rate of revenue mobilization by the weight of the expenditure needs that they will face. Current levels of public services are deficient in most developing countries, and there are wide disparities among regions inside these countries. The infrastructure gap is large and likely to grow further. Most developing countries have come to realize that an internationally competitive economic structure requires a higher quality infrastructure than is presently in place. In addition, there is the pressing problem of the woeful level of services and infrastructure that is available to slum dwellers. Almost all who have studied this problem argue that a significant part of this gap between needed and existing public services must be filled by increased tax revenue mobilization.

Estimates of the needed amounts are staggering, as the following discussions suggest:

- The United Nations (2005) estimates that taxes in developing countries should rise by 4 percent of GDP to meet the Millennium Development Goals. This would move the average tax ratio in developing countries up to about 21 percent of GDP. It is worth emphasizing that the average tax ratio in developing countries increased by only 1.2 percent of GDP in the last 40 years.
- In developing countries, about 1 billion people lack clean water and perhaps 3 billion lack access to adequate sanitation facilities. The annual infrastructure expenditure required to meet simply this one essentially local need has been estimated at 2.0 percent of GDP in Sub-Saharan Africa and 1.7 percent in South Asia, with about 40 percent of these amounts required for new investment and the balance for operation and maintenance (Estache 2010).
- Ingram, Liu and Brandt (2013) estimate that that annual urban infrastructure costs will be equivalent to about 3 percent of GDP for new infrastructure and 2 percent for maintenance. On average, subnational governments in developing countries raise only about 2.5 percent of GDP in taxes.

Structural Reform

Revenue structures in most low income countries are saddled with a narrow tax base. In some cases the tax structure was badly designed when the system was implemented, in some cases it was not expanded to capture new activities that grew as part of the modern economy, in other cases the base was narrowed by deductions and exemptions as various pressure groups got their way, and in yet other cases some bad taxing choices were made. The base has been made even more narrow by poor tax administration practices. On this subject, Casanegra de Jantscher (1990, p179) spoke volumes in a phrase, “tax administration is tax policy”.

In fact, the timing may be quite right for significant base broadening in developing countries in the next decade. The VAT has become the mainstay of the indirect tax system in most countries, and this gives the right foundation on which to build. Both excise taxes and customs duties are declining in importance. A start has been made on putting a viable administrative structure in place in most countries, and has advanced quite far in some. Perhaps more

important, many of the undesirable options for revenue enhancement have been more or less closed off. VAT rates are high in many countries, international mobility of capital will head off increased income tax rates, and higher import duties are crowded out by trade liberalization.

This leaves base broadening under the general sales tax as arguably the most open alternative for structural tax reform. Of the perennials for revenue enhancement, only excise tax rates would appear to be still in play. Rolling back incentives under the corporation income tax is called for, but the revenue gains from this would almost certainly be offset by statutory rate reductions. The other options for base broadening all have to do with strengthening the tax administration.

Tax Administration¹⁵

An improved tax administration can lead to a significant broadening of the tax base and an increase in the effective tax rate for the system as a whole. In most countries, the focus needs to be on all components of the administration: increasing the registration of taxpayers, narrowing the gap between reported and true tax liability, and increasing the collection rate. The (hypothetical) results of gaining full compliance with the tax laws will vary from country to country, but easily would exceed the mdg target of 4 percent of GDP.

The first step to improving administration is to design a tax system that can be administered at reasonable cost. This means that the laws should be clear, and it also means that the system should be as free of complications as possible. This is a lot easier said than done. Economies are modernizing with globalization and this requires more complexity in the tax code. But countries often make the situation worse with a plethora of exemptions, deductions and special treatments that forces the tax authority into allocating time to verify deductions that could be better spent on activities that are closer to the collection phase of administration.

The formula for strengthening tax administration is complicated, and has many variables, but by now it is well known. The IMF (2011, pp. 19-23) provides a summary of the needed core reforms: creating a specialized and highly professional institution to lead tax administration;

¹⁵ For overviews of the current state of tax administration in developing countries, see Bird (2011) and IMF (2011).

segmentation of the taxpaying population, especially large taxpayers, so as to get a better allocation of audit effort; improved business processes; and adopting practices that can facilitate improved compliance. Underneath all of this is (a) the need to invest in higher quality staff and support services to get the job done, and (b) the need for a strengthened resolve to enforce the tax code.

It would be incorrect to say that no progress has been made, because there are many examples of significantly improved tax administration practices in some developing countries. But it would be equally wrong to say that most developing countries do not have the technical know-how to get the job done. The IMF and other technical assistance providers have been helping with tax administration for nearly a half century. And, the favorable benefit-cost ratios from investing in tax administration improvements are well known. The major constraint has long been, and still is an unwillingness of governments to enforce their tax system. Bird (2011, p41) puts it well: "If the political will is there, the techniques needed for effective tax administration are not a secret".

One might even empathize with government officials and political leaders who face many political constraints, varying from the problems of bending civil service rules to support an efficient tax administration cadre, to the inability to resolve inter-agency disputes in the allocation of tax administration responsibilities, to the unhappy prospect of forcing tax payments from voters and special friends. Matters are complicated further in some countries because of a culture of non-payment where tax evasion is not a matter for great shame, and where corruption is sometimes accepted as being an inevitable part of things. Still, until government acts on a resolve to demand full compliance, the need for improved administration will continue to be high on the list of needed reforms in developing countries.

Taxing the Hard to Tax

The informal sector, which accounts for perhaps as much as one half of the population in some countries, might be thought of as a below-poverty group with limited if any taxpaying capacity, and a non-poor group. The poor are for the most part outside the property tax and individual income tax base, have no capital income, consume only limited amounts of imported goods,

and concentrate their consumption spending on goods that are generally outside the VAT (housing, necessities and unprocessed foodstuffs). But the non-poor in the informal sector also escape the individual income tax (and payroll taxes). It is the non-poor in the informal sector that can become important objects of taxation. As Alm, Martinez-Vazquez, and Schneider (2004) show, if this sector could be fully taxed, it would constitute an important component of the tax base.

Should the effort be made to broaden the base by taxing the HTT sector? There are a lot of good arguments to leave it alone. For one, we do not even know who they are, though we believe they include small businesses, self-employed professionals, and the agriculture sector. The HTT might also be thought of in terms of their characteristics: great in number, many have small incomes, many do not reveal adequate books of account to the tax authority, and most transactions take place in cash (Thuronyi, 2004). These characteristics suggest that the HTT will be costly to tax. In describing the difficulty for the tax authority to get a fix on their activity, Bird and Wallace (2004) call them 'ghosts' (the tax authority does not know who they are) and 'icebergs' (the tax authority can only see the tip of their activities).

On the other hand, there are important reasons to bring the HTT into the tax net (Bahl, 2004). Fairness tops the list. This is perhaps clearest in the case of the individual income tax. PAYE sector workers generally fall within the tax net because they are easily withheld at source but informal sector workers usually escape income taxes because they are hard to catch. This creates a major unfairness, sends a message to society that non-compliance is acceptable behavior, erodes confidence in the tax system, and forces up effective rates on those who do pay income taxes. A tax administration that could catch the self-employed would appreciably improve the horizontal equity of the system and reduce excess burdens.

The possible revenue impacts are an especially interesting question. In practice, the taxation of this sector might be a revenue loser. The use of presumptive methods has generally led to a lower tax liability than the income tax or VAT systems (Engelschalk, 2004). For example, if a presumptive tax regime were adopted, setting the threshold too high could induce firms to migrate to this system and would provide an incentive to avoid graduation to the normal tax

system. On the other hand, a presumptive regime might stimulate employment generation by the small business sector, and therefore boost revenues from consumption taxes. Either way, the small business sector would now be part of the formal economy and a member of the taxpaying community.

The case for going after self-employed professionals is clearer cut. They are usually registered to practice (doctors, lawyers and the like), and have significant taxable income. The revenue yield could be significant. Professional self-employed individuals should be relatively easy to identify, but as in the case of small businesses, will be costly to assess and audit.

Fiscal Decentralization

The assignment of more taxing powers to subnational governments could result, at least in some countries, in measureable increases in revenue mobilization. Provincial and local governments in developing countries raise 2.4 percent of GDP in taxes, which is about one-third the rate in industrial countries.

The involvement of subnational governments in the fiscal system in developing and transition countries varies widely from country to country. Comparative analyses show that the share of government expenditures made by provincial and local governments tends to be higher in large countries, in those with a higher level of per capita GDP, and in those with a more heterogeneous population (Bahl and Wallace, 2005; Boadway and Shah, 2009). But in only a few countries does taxation by subnational governments figure prominently in national revenue mobilization.

The low level of revenues raised by subnational governments in developing countries is cited often as a failing of the intergovernmental fiscal system (Bahl and Bird, 2008; Martinez-Vazquez, 2013). In most developing countries, subnational governments have only limited taxing power, but it is also the case that they often underuse the taxing power that they do have. Central (state) governments are loathe to give up their control over the tax base for fear that their own revenue mobilization efforts will be harmed by the competition, and elected local government leaders are not always anxious to have the accountability that comes with

increased taxing powers. There also is a more pure political dimension. Increased local taxing power may enhance the success and hence visibility of local politicians, who may be present or future political rivals.

There are good prospects for significantly more revenue mobilization by subnational governments (Bahl, Linn and Wetzel, 2013). Three reasons might be cited. First, revenue targets such as 4 percent of GDP as laid out in connection with mdg are very large and passing some of this responsibility to lower level governments might be a more viable political strategy now than has been the case in the past. Second, much of the new expenditure pressure is coming from infrastructure and slum development needs in urban areas, and more financing from local sources could give a better match with benefits received.

Third, experience with subnational government revenue mobilization in recent years suggests good prospects for success. Though several types of non-property taxes can meet the revenue test and can satisfy efficiency norms to a reasonable extent, these options are not widely used in developing countries. Where they are used, they are often badly designed. This said, it should be noted that some metropolitan area local governments in developing countries have adopted broad-based taxes (Martinez-Vazquez, 2013). Where metropolitan local governments have provincial status, the assignment of sales and payroll taxes has been more easily done. The local business tax accounts for one-third of city and provincial revenues in China, and the gross receipts tax accounts for 70 percent of revenues in the capital district of Buenos Aires. Various forms of local sales tax have also done well in Bogota and Sao Paulo where they account for about one-third of revenues.

A missing element in most tax structures in developing countries is the property tax. The average rate against GDP in developing countries is about 0.6 percent, by comparison with 2.2 percent in OECD countries (Bahl and Martinez-Vazquez, 2008). There is ample space for a property tax revenue increase in most countries, from a combination of structural and administrative reforms. The major structural reforms needed are to eliminate the widespread preferential treatments that are given to various sectors, and to implement regular revaluations to give the property tax base some elasticity. On the administrative side, there is much to be

done, including increasing the rate of property registrations, reducing the gap between assessed values and market values by improving valuation methods, and improving collection efficiency. It is not uncommon to find an average ratio of assessed to full market value of less than 50 percent, and collection rates that are even lower (Bahl, 2009; McCluskey and Franszen, 2013).

Property tax reform might be extended to the property transfer tax, the tax levied on the value of exchanges of real property. In principle, the property transfer tax is an attempt to capture a portion of the gain in property value realized by the seller, i.e., a capital gains tax on real estate. In fact, in most countries, it is a badly structured revenue measure. Usually, it is as a gross sales tax on declared value of the transfer, which leads to a great understatement of the actual value of the property. Converting the transfer tax to a capital gains levy may seem a step too far for most developing country tax administrations, but one might consider that the present transfer tax is mostly levied on a notional basis (Bahl and Wallace, 2010). The merger of the administrations of the property transfer tax and the annual property tax would seem a natural step and could lead to significant improvements in the revenue mobilization from both taxes.

Finally, there is the case of the rural land tax. In most developing countries, the agricultural sector goes largely untaxed, even though an agricultural income tax may be in the tax code, as in Pakistan. A land tax, based on potential yield, has been discussed as a solution (Ahmad and Stern, 1989; Rajaraman, 2004). The difficult job of assessment might be manageable if the rural land tax were assigned to local governments, who have the advantage of familiarity.

Tax Reform or Fiscal Reform?

Differential incidence is the analytic framework used for most evaluations of tax structure change. Concern about effects on the economy has usually centered on tax impacts rather than expenditure impacts, equity dealt with the regressivity of the tax system rather than also include consideration of the distributional impacts of the expenditures made with this money, and the administrative dimension was focused on efficiency in assessing and collecting taxes independent of the efficiency of government spending.

The next decade might be the right time to ask the broader question about net fiscal benefits, i.e., an analysis that also takes account of the expenditure side of the budget. This would be a more difficult job, would require more resources and time, and will raise many more controversial issues, but it will allow the government to get a better picture of the overall implications of the financing reform under consideration. After all, it is increased expenditures that one is trying to sell, not increased taxes.

What would be the advantages of a balanced budget approach to studying tax incidence? Certainly it would open the door for a far-ranging analysis and for considering many more reform options. A few examples of the broader questions that might be asked are:

- The vertical equity question could be broadened to consider both tax burdens and expenditure benefits. The differential tax incidence approach to comprehensive reform often leaves the issue with a statement such as “the distributional effects are better dealt with on the expenditure side of the budget.” The comprehensive fiscal reform would build this directly into the analysis.
- The revenue target of the financing reform could be identified in terms of the projected elasticity of desired expenditures. This would be a far better method of defining revenue needs than the “revenue neutrality,” used in differential incidence analysis.
- A balanced budget incidence analysis would allow exploring the impacts of funding an expenditure program with a combination of taxes and user charges.

If the expenditure side of the budget were taken more directly into account, the case for greater rates of revenue mobilization probably would be more easily made. This would involve factoring in the positive economic development effects of increased spending for pro-development infrastructure and services; the progressive effects of expenditure benefits, and even the political favor that comes with increased public expenditures.

Equity

If developing countries buy into the need to increase their rate of revenue mobilization and to make structural reforms, it will provide a good setting for revisiting the question of vertical equity in taxation. This is much needed. There is not much question about redistribution being an important role for government. Nor is there much debate about the need for fiscal redistribution in developing countries where the gap in living standards between the rich and the poor is so great. Nor has there been much debate about what policy makers would like to measure in evaluating a tax proposal – the change in effective tax rates across family income levels.

Unfortunately, those who must make the tax structure decision have not usually gotten the information they wanted to make the decision. Unfortunately, the equity discussion is sometimes confused, and often is not fact-based. Too often, a specific proposal for reform is simply declared to be regressive, based on impressionistic reasoning. To the extent there is a science in tax policy design, the analysis of vertical equity is arguably the weakest part.

The empirical work that is usually done in tax burden studies is heavily driven by assumptions about the final incidence of each tax. Once the question of who bears the burden is assumed, the distribution of this burden across income classes is estimated, usually by consumer expenditure surveys that are often limited in terms of the number of consumption categories reported, by data of asset wealth by income class (if such data exist), and by data taken from the tax files. The effects of evasion on vertical equity are usually not factored in, nor are the impact of the proposed tax change on the pre-tax distribution of income. As a result of all of this, it may be the case that empirical burden studies, well-meaning though they might be, are so flawed that they are not helpful at all.

For these reasons, it can be argued to make vertical equity a secondary issue in tax reform, i.e., that vertical equity cannot be the driving force behind a comprehensive tax reform program in a developing country (Bahl, 1991). In part, this is because most developing countries cannot implement progressive tax systems, and in part it is because the costs of moving to a higher level of vertical equity are very high. These costs might include the revenue loss due to

exemption of low income families from tax, the efficiency costs associated with the higher rates imposed elsewhere to make up for the revenue loss, and possibly the displacement effects that might result from the introduction of “progressive” measures such as high marginal personal income tax rates. Finally, note that the tax instrument with the most potential for targeting on the wealthy, the individual income tax, does not weigh heavily in the tax structure of most developing countries (Bird and Zolt, 2005).

A better approach to the vertical equity issue is to concentrate on the impact on the bottom deciles of the income distribution, as was done in the Indonesia tax reform (Gillis, 1989). This might be a more manageable task because these groups are sometimes below the threshold for certain taxes, and because the major components of their consumption basket usually are reported in consumer surveys. If they are not, special surveys of the consumption habits of the poorest may be feasible (Bird and Miller, 1989).

Finally, the next generation of burden studies would do well to consider tax changes in a broader context, including the effects of the tax change on the pre-tax distribution of income, and on the expenditure benefits purchased by the increase in tax revenues. What really matters is the fiscal incidence on poor families. But this will call for an entirely new approach to studying fiscal equity, because so little is known about the impact of either taxes or expenditures on poverty reduction (Bird (1992, chapter 5). And, it might lead to a stronger case for increased revenue mobilization, than does the present approach that considers only the cost side of tax reform.

Willingness to tax

The major constraint to the successful reform of tax regimes in low income countries is the absence of a willingness of the government to make tax choices that are politically unpopular, and to enforce its tax regime. The underlying problem is a combination of the not being able to resist the temptation to choose reforms that take the path of least political resistance rather than reforms that would lead to a more efficient tax structure, the failure to muster the political courage to tax powerful (and tax-favored) groups in the economy, the propensity to try and curry favor with voters with well-intentioned but misguided tax structure decisions, and an

unwillingness to enforce the tax regime that is in place. In some developing countries, the result has been a minimal growth in tax revenue mobilization and a level of public services that has continued to fall behind. The result has been the small increase in the average tax rate in developing countries, and the failure to significantly broaden the tax base.

Arguably the action that has held back increased revenue mobilization and structural reform, more than any other, is the special tax preferences that have been given to favored groups and the refusal to remove these entitlements once they are given. Economic development incentives have been given to targeted industries, arguably as part of a national industrial policy. But it is well known that these incentives are sometimes given on a basis of political considerations, without careful cost benefit analysis of the proposals. More often than not, incentives carry no sunset provision, under which review of the impacts would be required as a condition for continuation.

Exemptions from sales and individual income taxes are often justified on equity grounds, but just as often these incentives benefit the non-poor as well as the poor. Governments sometimes believe that they can identify social goods that ought to receive preferential tax treatment.¹⁶ However, rarely is there a hard analysis of whether this targeting achieves its purposes. In some cases, sectors or consumption items or even firms have been targeted for special treatment for such a long time that the preferences become institutionalized. This strengthens the case for a regular re-evaluation of exemptions.

The other part of the willingness problem is the failure of governments to strictly enforce the tax regime that is in place. The problem is often cast as the administrative capacity not being adequate to do a strict enforcement of the tax regime. But governments in developing countries have had ample time to put the administrative capacity in place and to move it up the learning curve. The more likely explanation for poor revenue performance is that countries either are quite satisfied with low levels of public services and infrastructure, or that political

¹⁶ Bird and Gendron (2007, pp. 126-129) give a number of examples – school bags, noodle soup in aluminum cans, basketballs – and emphasize the burden this places on the tax administration.

leaders are not willing to address the tough enforcement decisions required, including dealing harshly with corruption and evasion.

Another shade of this problem is bureaucratic politics, i.e., the internal hassling that can slow or stop desirable fiscal measures. Tanzi (1987, pp234) recites a good example: "... in one country the recommendation to reduce the role of excise taxes and to expand that of broader taxes was blocked mainly because the head of the excise department would lose power as a consequence of loss of personnel assigned to these taxes." Everyone working taxation can recite similar stories. We cannot calculate the costs of bureaucratic politics, but enough anecdotes like Tanzi's might add up to a serious problem.

4. CONCLUSIONS

On average, the tax revenue share of GDP in developing countries has not increased substantially since the 1970s. Whatever revenue enhancement advantages there were in the structural changes that did take place – the adoption of the value added tax and the decreased reliance on customs duties – were weakened by measures that narrowed the tax base. The estimate here is that the average tax ratio was 14.8 percent for the 1970s, and 16 percent for the 2000s.

One scenario for the next decade is that countries will continue to muddle through, i.e., the combination of automatic and discretionary revenue growth will be just large enough to keep pace with the growth in GDP. The implication of this future is that government expenditures will be held to an income elasticity of about unity. As in the past forty years, some countries will exceed this growth in tax revenues and some will fall short of it. The most important thing to note about this scenario is that it does not allow the uptick in revenues necessary to finance the growing infrastructure and public servicing gap. If historical trends are extrapolated, the target suggested by the United Nations to meet millennium development goals – an increase in tax revenues equivalent to 4 percent of GDP – will not be reached until the 2040s.

Another scenario is that developing countries will respond to growing expenditure needs and ratchet up their tax efforts considerably. The target suggested by the United Nations to meet millennium development goals is ambitious but within the reach of many countries over the next decade. To reach this level, a strategy of structural reforms that involve base broadening, administrative improvements, and revenue decentralization could both generate much of the needed revenue while increasing the efficiency and fairness of the tax regimes.

As in the past four decades, the biggest roadblock to increased revenue mobilization in developing countries will be the unwillingness of governments to make the difficult political decisions necessary to improve taxation. A displacement in the thinking about the need to put in place a more revenue productive tax system must come out of the political process, and more specifically, must reflect a change in thinking on the part of political leaders who come to believe that higher taxes to fund infrastructure and services will lead to a higher rate of economic growth.

References

Ahmad, Ehtisham and N. Stern (1989). "Taxation for Developing Countries" in T.N. Srinivasan and H. Chenery (eds) *Handbook of Development Economics: vol. II* (Amsterdam: North Holland) pp 1006-1087.

Alm, James, Jorge Martinez-Vazquez and Friedrich Schneider (2004). "Sizing the Problem of the Hard-to-Tax" in *Taxing the Hard-to-Tax: Lessons from Theory and Practice*, edited by James Alm, Jorge Martinez-Vazquez and Sally Wallace (Amsterdam: Elsevier) pp 11-76.

Atkinson, A.B. and Joseph Stiglitz (1976). "The Design of Tax Structure: Direct vs. Indirect Taxation" *Journal of Public Economics*, 6(1-2), pp55-75

Bahl, Roy, Johannes Linn and Deborah Wetzel (2013). "Governing and Financing Metropolitan Areas in the Developing World" in (2013). *Financing Metropolitan Governments in Developing Countries*, ed. by Roy Bahl, Johannes Linn and Deborah Wetzel, (Cambridge: Lincoln Institute of Land Policy), pp 1-30.

Bahl, Roy and Sally Wallace (2007). *Tax Policy and Economic Development* (Kingston: Planning Institute of Jamaica).

Bahl, Roy (2004). "Reaching the Hardest to Tax: Consequences and Possibilities" in *Taxing the Hard-to-Tax: Lessons from Theory and Practice*, edited by James Alm, Jorge Martinez-Vazquez and Sally Wallace (Amsterdam: Elsevier) pp.337-355.

Bahl, Roy (1971) "A Regression Approach to Tax Effort and Tax Ratio Analysis" *International Monetary Fund Staff Papers*, Vol 18. No. 3.

Bahl, Roy (1999). *Fiscal policy in China: Taxation and intergovernmental fiscal relations*. (San Francisco: 1990 Institute and University of Michigan Press).

Bahl, Roy (2006). "How to Approach Comprehensive Tax Reform: Have the Rules of the Game Changed?" pp 447-471. In *The Challenges of Tax Reform in a Global Economy*, edited by James Alm, Jorge Martinez-Vazquez and Mark Rider (New York: Springer).

Bahl, Roy W. (1991). "The Economics and Politics of the Jamaican Tax Reform" in *The Jamaica Tax Reform*, Roy Bahl (ed), pp. 587-600. (Cambridge, MA: Lincoln Institute of Land Policy).

Bahl, Roy (2009). *Property tax Reform in Developing and Transition Countries* (Washington D.C.: USAID).

Bahl, Roy and Richard Bird (2008). "Subnational Taxes in Developing Countries: The Way Forward" *Public Budgeting & Finance*, Volume 28, Number 4, pp1-25.

Bahl, Roy and Richard Bird (2008a). "Tax Policy in Developing Countries: Looking Back – and Forward" *National Tax Journal*, Vol. LXI, no. 2, pages 279-302.

- Bahl, Roy, and Jorge Martinez-Vazquez (2008). "The Property Tax in Developing Countries: Current Practice and Prospects" in *Making the Property Tax Work: Experiences in Developing and Transitional Countries*, ed. by Roy Bahl, Jorge Martinez-Vazquez and Joan Youngman. (Cambridge: Lincoln Institute of Land Policy), pp 35-57.
- Bahl, Roy and Sally Wallace (2005). "Public Financing in Developing and Transition countries," *Public Budgeting & Finance*, Silver Anniversary Issue, pp 83-98.
- Bahl, Roy and Sally Wallace (2010). "A New Paradigm for Property Taxation in Developing Countries" in *Rethinking the Conventional Wisdom about the Property Tax* edited by Roy, Bahl, Jorge Martinez-Vazquez and Joan Youngman (Cambridge: Lincoln Institute of Land Policy).
- Baunsgaard, Thomas and Michael Keen (2010). "Tax revenue and (or?) trade liberalization" *Journal of Public Economics* 94, 563-577.
- Bird, Richard (2011). "Tax Challenges facing Developing Countries: A Perspective from Outside the Policy Arena" background paper prepared for DfiD, (<http://ssrn.com/abstract=1393991>).
- Bird, Richard (2011a). "Tax System Change and the Impact of Tax Research" in *The Elgar Guide to Tax Systems*, ed. By Emilio Albi and Jorge Martinez-Vazquez (Northampton, Ma: Edward Elgar) pp. 413-456.
- Bird, Richard. (1992). *Tax Policy and Economic Development*. (Baltimore: Johns Hopkins Press).
- Bird, R.M. and P.P. Gendron (2007) *The VAT in Developing and Transitional Countries* (Cambridge University Press).
- Bird, Richard, Jorge Martinez-Vazquez and Benno Torgler (2006). "Societal Institutions and Tax Effort in Developing Countries" in *The Challenges of Tax Reform in A Global Economy*, ed. by James Alm, Jorge Martinez-Vazquez and Mark Rider (New York: Springer), pp 283-338.
- Bird, R.M. and E.M. Zolt (2005) "Redistribution via Taxation: The Limited Role of the Personal Income Tax in Developing Countries," *UCLA Law Review*, 52 (6, 2005): 1627-95.
- Bird, Richard and Sally Wallace (2004). "Is it Really so Hard to tax the Hard to Tax? The Context and Role of Presumptive Taxes" in *Taxing the Hard to Tax: Lessons from Theory and Practice*, edited by James Alm, Jorge Martinez-Vazquez, and Sally Wallace (Amsterdam: Elsevier) pages 121-158.
- Bird, Richard, James M. Poterba and Joel Slemrod (2005). *Fiscal Reform in Colombia: Problems and Prospects*. (Cambridge: MIT Press)
- Bird, Richard, Juan Jose Echavarria, James Poterba and Joel Slemrod (2005). "Introduction" in *Fiscal Reform in Colombia: Problems and Prospects* edited by Richard Bird, James M. Poterba and Joel Slemrod (Cambridge: MIT Press).
- Bird, Richard M. and Barbara D. Miller (1989) "Taxation, Pricing and the Poor," in Bird and Susan Horton, eds., *Government Policy and the Poor in Developing Countries* (Toronto: University of Toronto Press), 49-80.

Boadway, Robin W. and Anwar Shah (2009) *"Fiscal Federalism,"* (Cambridge University press).

Burgess, Robin and Nicholas Stern (1992). "Taxation and Development" *Journal of Economic Literature* XXXI, number 2, pp 762-830.

Casanegra de Jantscher, Milka (1990). "Administering the VAT" in M. Gillis, C.Shoup, and G.P. Sicat (eds) *Value Added Taxation in Developing Countries* (Washington DC: World Bank).

Chelliah, Raja J (1971). "Trends in Taxation in Developing Countries", *International Monetary Fund Staff Papers*, vol. 18, pp. 254-331.

Cnossen, Sijbren (2011). "The Role and Rationale of Excise Taxes in ASEAN Countries" *Bulletin for International Fiscal Documentation*, volume 59, no. 12, pp 503-513.

Cnossen, Sijbren (2005). editor, *Theory and Practice of Excise Taxation: Smoking, Drinking, Gambling Polluting and Driving* (Oxford: Oxford University Press).

Due, John F. (1970). *Indirect Taxation in Developing Economies* (Baltimore: Johns Hopkins University Press).

Ebel, Robert and Serdar Yilmaz (2003). "On the measurement and impact of fiscal Decentralization" in *Public Finance in Developing and Transitional Countries: Essays in honor of Richard Bird*, edited by Jorge Martinez-Vazquez and James Alm (Cheltenham, UK: Edward Elgar) pages 101-120.

Echavarria, Juan Jose and George Zodrow (2005). "Foreign Direct Investment and the Business Tax in Colombia" in *Fiscal Reform in Colombia: Problems and Prospects* edited by Richard Bird, James M. Poterba and Joel Slemrod (Cambridge: MIT Press), pp 153-190.

Engelschalk, M. (2004). "Creating a Favorable Tax Environment for Small Business" in *Taxing the Hard to Tax: Lessons from Theory and Practice*, edited by James Alm, Jorge Martinez-Vazquez and Sally Wallace (Amsterdam: Elsevier) pp 275-312.

Estache, Antonio (2010) "Infrastructure Finance in Developing Countries: An Overview," *EIB Papers*, 15 (2): 61-88.

Gillis, Malcolm. (1989). "Tax Reform: Lessons from Postwar Experience in Developing Nations." Chapter 14, in Malcolm Gillis, ed, *Tax Reform in Developing Countries*. (Durham: Duke University Press).

Goode, Richard. (1984). *Government Finance in Developing Countries*. (Washington: The Brookings Institution).

Goode, Richard (1993). "Tax Advice to Developing Countries: An Historical Survey" *World Development*, vol 21, no 1 pp 37-53.

Gupta, Abhijit Sen (2007). "Determinants of Tax Revenue Efforts in Developing Countries" IMF Working paper 07/184 (Washington: International Monetary Fund).

Harberger, Arnold C. (1989). "Lessons of Tax Reform from the Experiences of Uruguay, Indonesia, and Chile" Chapter 2 in Malcolm Gillis, editor, *Tax Reform in Developing Countries*. (Durham: Duke University Press).

High Powered Expert Committee For Estimating the Investment Requirements for Urban Infrastructure Services (2011). *Report on Indian Urban Infrastructure and Services* (Delhi: Government of India).

Hinrichs, Harley H. (1966). *A General theory of Tax Structure change During Economic Development* (Cambridge: Harvard University Law School).

Ingram, Gregory, Zhi Liu, and Karin Brandt (2013) "Metropolitan Infrastructure and Capital Finance" in *Financing Metropolitan Governments in Developing Countries Metropolitan Areas in Developing Countries* edited by Roy Bahl, Johannes Linn and Deborah Wetzel, (Cambridge: Lincoln Institute of Land Policy), pp. 339-366.

International Monetary Fund (2010). *Government Finance Statistics* (Washington DC: International Monetary Fund)

International Monetary Fund (2011). "Revenue Mobilization in Developing Countries", Paper prepared by the Fiscal Affairs Department (Washington, D.C.: IMF).

Kaldor, N. (1963). "Will Underdeveloped Countries Learn to Tax?" *Foreign Affairs*, 41: 410—419.

Keen, Michael and Ben Lockwood (2010) "The Value Added Tax: Its Causes and Consequences" *Journal of Development Economics*, Vol 92, pp 138-51

Lindblom, Charles (1959). "The Science of Muddling Through" *Public Administration Review*, 19, pp79-88.

Lotz, Jorgen and Elliott Morss (1967). "Measuring Tax Effort in Developing Countries" *International Monetary Fund Staff Papers*, Volume 14, no. 3, pp 478-499.

Martin, A. and W.A. Lewis (1956). "Patterns of Public revenues and Expenditures" *Manchester School of Economic and Social Studies*, 24: 203-44.

Martinez-Vazquez, Jorge (2013). "Local non-property tax Revenues" in *Financing Metropolitan Governments in Developing Countries* edited by Roy Bahl, Johannes Linn and Deborah Wetzel, (Cambridge: Lincoln Institute of land Policy), pp. 183-212.

Martinez-Vazquez, Jorge, Violeta Vulovic and Yongzheng Liu (2011). "Direct vs. indirect taxation: trends, theory and economic significance" in *The Elgar Guide to Tax Systems*, ed. By Emilio Albi and Jorge Martinez-Vazquez (Northampton, Ma: Edward Elgar) pp 37-92.

Martinez-Vazquez, Jorge, Mark Rider and Sally Wallace (2008). *Tax Reform in Russia* (Cheltenham, UK: Edward Elgar).

Martinez-Vazquez, Jorge, Javier Arze del Granado and Jameson Boex (2007). *Fighting Corruption in the Public Sector* (Amsterdam: Elsevier).

Mathur, Om Prakash, Debdulal Thakur and Nilesh Rajadhyasksha (2009). "Urban Property Tax Potential in India" (New Delhi: National Institute of Public Finance and Policy).

McCluskey, W.J. and Riel Franzsen (2013). "Property taxes and Land Taxes" in *Financing Metropolitan Governments in Developing Countries* edited by Roy Bahl, Johannes Linn and Deborah Wetzel, (Cambridge: Lincoln Institute of land Policy), 159-182.

McLure, Charles (2006). "Transfer Pricing and Tax Havens: Mending the Revenue Nets of Developing and Transition Countries" In *The Challenges of Tax Reform in a Global Economy*, edited by James Alm, Jorge Martinez-Vazquez and Mark Rider (New York: Springer). pp77-136.

McLure, Charles and George Zodrow (1997). "Thirty Years of Tax Reform in Colombia" in Wayne Thirsk, editor, *Tax Reform in Developing Countries*. (Washington: World Bank).

Musgrave, Richard (1969). *Fiscal Systems* (New Haven: Yale University Press).

Musgrave, R. A. and Gillis, M., (eds.) (1971). *Fiscal Reform for Columbia: Final Report of the Colombian Mission on Tax Reform*. (Cambridge: Harvard Law School).

Pessino, Carola and Ricardo Fenochietto (2010). "Determining Countries' Tax Effort" *Revista de Economia Publica*, 195-4, pp. 65-87.

Peacock, Alan and Jack Wiseman (1961). *The Growth in Public Expenditure in the United Kingdom*, National Bureau of Economic Research General Series Number 72 (Princeton, New Jersey: Princeton University Press).

Pryor, Frederic L. (1985). *A Guidebook To The Comparative Study of Economic Systems* (Englewood Cliffs, New Jersey: Prentice Hall).

Rajaraman, Indira (2004). "Taxing Agriculture in a Developing country: A Possible Approach" in *Taxing the Hard-to-Tax: Lessons from Theory and Practice*, edited by James Alm, Jorge Martinez-Vazquez and Sally Wallace (Amsterdam: Elsevier) pp245-268.

Schneider, Friedrich (2002). *The Value Added of Underground Activities: Size and Measurement of the Shadow Economies of 110 Countries all over the World*, Mimeo.

South African National Treasury Webpage. Katz Commission Reports, 1994-1999. (<http://www.treasury.gov.za/publications/other/katz/default.aspx>).

Tait, Alan, Barry Eichengreen and Wilfrid Gratz (1979). "International Comparisons of Taxation for Selected Developing Countries, 1972-1976" Staff Papers, International Monetary Fund, Vol. 26, pp. 123-156.

Tanzi, Vito (2011). "Tax Systems in the OECD: Recent Evolution, Competition, and Convergence" in *The Elgar Guide to Tax Systems*, ed. By Emilio Albi and Jorge Martinez-Vazquez (Northampton, Ma: Edward Elgar) pp.11-36.

Tanzi, Vito (1987). "Quantitative Characteristics of the Tax Systems of Developing Countries" in *The Theory of Taxation for Developing Countries*, ed. by David Newbery and Nicholas Stern (New York: Oxford University Press).

Tanzi, Vito (1987a). "A Review of major Tax Policy Missions in Developing Countries" in *The Relevance of Public Finance for Policy-Making*. Proceedings of the 41st Congress of the International Institute of Public finance, Madrid, 1985, pp 225-236.

Tanzi, Vito (1992). "Structural Factors and Tax Revenue in Developing Countries: A Decade of Evidence.," I. Goldin and L. A. Winters, *Open Economies: Structural Adjustment and Agriculture*. Cambridge: Cambridge University Press, 267–81.

Thirsk, Wayne, (1991). "Lessons from Tax Reform: An Overview" in *Tax Policy in Developing Countries*, edited by Javad Khalilzadeh-Shirazi and Anwar Shah, pages 57-70 (Washington: The World Bank).

Thuronyi, Victor (2004), "Presumptive Taxation of the Hard-to-Tax" " in *Taxing the Hard-to-Tax: Lessons from Theory and Practice*, edited by James Alm, Jorge Martinez-Vazquez and Sally Wallace (Amsterdam: Elsevier) pp 101-120.

United Nations (2005). *Investing in Development* (New York: United Nations).

World Bank (1991). *Lessons of Tax Reform*. (Washington, D.C.: World Bank.).