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**Tax gap and equity in
Latin America and the Caribbean**
Fiscal Studies No. 16

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65726 Eschborn
T ++49 (0) 61 96 79-0
F ++49 (0) 61 96 79-11 15
E info@gtz.de
I www.gtz.de/public-finance

Division:
State and Democracy
Public Policy – Public Finance, Administrative Reform and Anti-Corruption

Person Responsible:
Dr. Matthias Witt, Head of Section 4222, Public Policy – Public Finance, Administrative Reforms and Anti-Corruption

Authors:
Juan Pablo Jiménez, Juan Carlos Gómez Sabaini, Andrea Podestá

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Tax gap and equity in Latin America and the Caribbean

Juan Pablo Jiménez

Juan Carlos Gómez Sabaini

Andrea Podestá

Prologue

As has been noted on numerous occasions, the Latin American countries are not the poorest nations in the world yet they show the greatest disparity in wealth and income distribution. Consequently, designing public policies aimed at improving social equity is both a moral and intellectual imperative. From this perspective, defining the role of the state and of financial policy is a crucial tool in creating a more equitable society. In pursuing this aim, governments need to use all the fiscal policy tools at their disposal efficiently, alongside both public spending and other economic tools.

It is well known that the state can promote greater social equity through more efficient social spending, which in turn requires a certain level of tax revenue. However, to ensure that government spending achieves the desired redistributive aims, it is fundamental to avoid tax structure reliance on regressive taxes. In other words, the burden of taxation should not fall on the middle and lower sections of society. Precisely for this reason, particular attention needs to be paid to the design and structure of the tax system in order to promote equity. This can be achieved by strengthening taxes that fall on those with greater incomes, such as personal income and property taxes.

Nonetheless, for these measures to be successful in improving equity, compliance levels must also be improved, particularly in relation to progressive taxes, in order to secure the resources to finance public social spending.

Unfortunately, Latin American countries' taxes are low and poorly designed. The low tax burden, the tax structures' bias towards regressive taxes, and the high levels of tax avoidance and evasion characteristic of Latin American countries restrict both the potential to implement fiscal policies and their effectiveness.

In the interests of building a greater understanding of the obstacles to the implementation of more equitable and sustainable tax systems in the region's countries, ECLAC,

with the help of the German Technical Cooperation Agency (GTZ), has carried out two projects on Fiscal Policy and Equity and the Analysis of Tax Systems. As part of these projects, a series of seminars were held with fiscal authorities and experts to debate: (i) the challenges facing Latin American countries in improving income and property taxes; (ii) the effects of direct taxes on social equity and redistribution; and (iii) the difficulties involved in assessing levels of income tax evasion. The case studies focused on Argentina, Chile, Ecuador, El Salvador, Guatemala, Mexico and Peru.

This publication presents a comparative analysis of the seven case studies along with recommendations based on the findings. Starting with a regional analysis that provides an overarching view of the problems associated with direct taxation and tax evasion, it moves on to a detailed analysis of the three crucial elements in implementing a redistributive tax policy: the level of revenue, the tax structure and the level of compliance. It concludes with a discussion of the main factors impeding effective income tax collection in Latin America, with particular emphasis on measuring the degree of non-compliance and on designing mechanisms to reduce income tax evasion.

The aim of this publication is to contribute to the study of an issue that is highly relevant from the point of view of both social and fiscal policies, and yet has received little attention in the region. For this reason, it is hoped that this study will assist the region's governments in designing reforms to develop a tax structure that is not only sustainable but also protects equitable wealth and income distribution, in order to create a fairer future for our region's countries.

Alicia Bárcena
Executive Secretary
Economic Commission for Latin America and the Caribbean (ECLAC)

Foreword

The German Technical Cooperation (GTZ) is a federally-owned enterprise with worldwide operations in the field of international cooperation for sustainable development. Commissioned by the German Federal Ministry for Economic Cooperation and Development (BMZ), GTZ is committed to advance sustainable development in its partner countries. It does so by cooperating with institutions such as ECLAC, which has a leadership role as think tank in the region and functions as a platform for political dialogue. For us, ECLAC is a strategic partner in the region. Through the joint project “Opportunities and sustainability in globalization” Latin American governments are, inter alia, supported in designing pro equity tax systems, as one path to contribute to sustainability, social equity and stability.

Despite various financial and economic crises, most Latin American countries have performed well over the last years and are on track to achieve progress in terms of the Millennium Development Goals. Yet, great challenges – such as the reduction of social inequality – still remain. Fiscal policy plays an important part in mastering this challenge. Thus, on the revenue side the introduction of appropriately designed tax systems can contribute to reduce income inequality. This presents an approach which complements the formulation of budget policies on the expenditure side which are aimed at reducing poverty. The latter approach has been widely used in the past by international cooperation partners. The former presents a

rather new development and is linked to the recognition that Good Financial Governance is indispensable for a sustainable development and poverty reduction.

GTZ pursues the holistic approach of Good Financial Governance that takes into account that public finances consist not merely of technical mechanisms of revenue generation, the execution of public expenditures, public administration and external control. Good Financial Governance considers that the different subsystems of public finances are reinforcing each other and play a role in increasing accountability and reduce social inequity.

This publication reflects the on-going discussions about equity and taxation in Latin America. We consider it highly relevant and we are convinced that more attention should be paid to these issues. With the aim to make this study more accessible for a broader audience we have supported the reprint of a shorter English version. I am convinced that this paper can contribute to the ongoing discussion about mobilizing and strengthening domestic revenues.

Joachim Prey
Deputy Director General
Planning and Development Department
German Technical Cooperation (GTZ)

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This work is dedicated to Hugo N. González Cano who contributed with all its efforts on improving the equity of the tax systems of the countries of Latin America.

Tax gap and equity in Latin America and the Caribbean¹

Juan Carlos Gómez Sabaini, Juan Pablo Jiménez and Andrea Podestá

A. Introduction

One of the most distinctive features of Latin American societies is the highly unequal distribution of income, with a small percentage of the population controlling a large share of the region's wealth while a significant number of people live below subsistence levels. This makes the redistributive policies of the state, through the use of instruments relating to both public spending and taxation, particularly important.

From a spending perspective, the distribution of income can be influenced through programs that are not funded (or are only partially funded) by their beneficiaries. Moreover, income can be further redistributed by raising the level and quality of government spending on social programs. Fiscal policy – through spending on education – can improve the distribution of income by redistributing ownership of the factors of production, making the distribution of human capital more equitable and facilitating the generation of income through employment.

However, in view of the high levels of inequality in Latin American societies, redistribution through public spending is not in itself sufficient. Taxation also plays an important role in ensuring greater equity in the distribution of income. Generally speaking, tax policy can influence the distribution of income in two ways: firstly, by determining the proportion of tax revenues used for social programs; and secondly, tax policy can influence the tax structure through progressive taxes, such as income and property taxes. In order to increase the redistributive impact of tax policy, it is necessary not only to generate sufficient revenues to fund public spending (particularly on social programs), but also to take into consideration the sections of the population that contribute the revenue.

For some time, phrases such as “equal distribution of income”, “equal opportunities” and “universal entitlement

to economic, social and cultural rights” have been a legitimate part of public and fiscal policy discourses². Nevertheless, the quest for greater fairness and equity is not free of ambiguities. As will be explained below, equity is a multi-dimensional, value-laden concept. It is therefore essential to examine the scope of these ideas, in order to understand how they relate to fiscal policy.

This study focuses on three elements which are essential to developing a tax policy that improves equity in the countries of Latin America: the level of revenue, the tax structure and the degree of compliance. Unfortunately, the vast majority of countries in the region suffer from significant weaknesses in each of these areas. The tax burden is low, the tax structure is biased towards regressive taxes and there are significant levels of non-compliance.

ECLAC case studies show that income tax gap is high in the region, hovering at approximately 40% to 65% and creating an average GDP gap of 4.6%. These tax gap levels compromise any redistributive effect which income tax revenues might produce, increasing inequality in the region and casting doubt on their function and purpose as an instrument of economic policy.

This is significant given that, while a tax system may be designed to redistribute income by taxing all earnings at progressive rates, high evasion, avoidance and delinquency levels can distort the impact of tax laws. This affects both horizontal equity, since individuals with the same payment capacity do not bear the same tax burden, and vertical equity, since those with higher incomes have greater access to evasion and avoidance strategies. The purpose of this paper is to make up for a significant lack of studies on taxation in Latin America since, in contrast to developed nations, evasion of direct taxation has not been adequately or systematically studied in the countries in the region.

This paper offers a regional analysis, focusing on the main factors which limit the collection of income tax in Latin America. Special attention is paid to the measurement of non-compliance, as well as the design of mechanisms to reduce evasion. The results of case studies from Argentina, Chile, Ecuador, El Salvador, Guatemala, Mexico and Peru are summarized and compared.

The study is structured as follows. Firstly, the importance and meaning of the concept of equity and its various manifestations are discussed. Special attention is paid to the origin and meaning of the term as it pertains to taxation. This is followed by a discussion of several structural characteristics which bear upon the region's need and ability to enact tax policies that foster greater equity. These characteristics include the following: high

¹ This document is a translation of Chapter I of the book “Evasión y Equidad en América Latina”, by JP. Jiménez, JC. Gómez Sabaini and A. Podestá, editors (LC/W.309), ECLAC, Santiago, Chile, January 2010.

² See Basombrio (2009).

levels of inequality arising from the concentration of wealth in the richest deciles, significant disparities between regions within the same country, and high levels of both poverty and informal economic activity. The potential of Latin American tax systems as instruments of redistributive policy is then examined. The main obstacles in this regard are insufficient tax burden, the small role of direct taxation and high levels of non-compliance. The two sections that follow focus on the tax environment and the characteristics of direct taxation in the seven countries studied. The results of various studies on the distributive impact of tax policies in these countries are then briefly discussed. The following section analyzes and compares the results of the seven case studies in relation to non-compliance with corporate and personal income tax obligations. A number of conclusions and recommendations are then set forth.

B. Equity and tax policy³

Equity is a multi-dimensional, value-laden term. It is applied to the relationship between the powers of state and citizenry, and implies the basic equality of citizens, at least before the law. Tax policy is one of the most important factors in the application and enforcement of the principles of equity determined by a society, a point that is emphasized throughout this study. While there are other aspects of government action that have repercussions in this regard, budgetary decisions made on the basis of revenues and public expenditure are key to determining the distribution of income in a society. The scope of these concepts should therefore be examined, in order to understand how they relate to fiscal policy.

In the first place, equity should be distinguished from other similar terms (such as justice or equality), and understood from the perspective of the actions taken by the state to ensure that citizens are treated equally and fairly. The etymological proximity that exists between the terms “equity” and “equality” has led to some confusion, although they are closely related, and belong to the family of concepts that make up the discourse of justice – which is, after all, the core issue. The idea of a just society has changed over time, as has the meaning of equity and equality. The main difference between these two concepts may be that, while equity includes a normative component, equality is more of a descriptive term, used to explain differences between persons, groups or territories.

Although it is a subject which has been thoroughly studied, and on which there is an abundance of literature, the main

schools of thought regarding equity can be divided into three broad categories. According to the first view, equity can be related to primary conditions. This includes formally ensuring equality of rights, opportunities and capabilities. The notion of equal rights presupposes formal equality as a prerequisite for a just society. It implies a need to determine which rights should be protected, as well as to ensure that those rights are effectively enforced. It also requires an assessment as to whether or not formal equality, in and of itself, makes a society equitable or just. The idea of equity based on equality of opportunities and capabilities is simply a result of the absence of formal equality – a situation in which the state must strive to promote equality.

The second school of thought links equity with the processes whereby resources are assigned and distributed through economic mechanisms such as the market, or with the importance of labor vis-à-vis other factors of production. In the first case, the “moral virtue” of the market is derived from its ability to reward the hard-working and efficient, while punishing the lazy and inefficient (Von Hayek). Since the market occasionally fails to function adequately, perfect competition is viewed as a means to avoid the restrictions and limitations which occur in the marketplace. This explains the emergence of laws and institutions designed to protect competition. A different perspective is offered by David Ricardo, and later Karl Marx, who argue that labor is a morally superior factor, which (given their views on the concept of added value) requires special protection from other factors of production.

The third school of thought focuses on equality of results. It includes advocates for maximizing the utility of the members of society – sometimes expressed as “ensuring the greatest happiness for the largest number” – and those who favor maximizing the position of the least advantaged. This is the “maximin rule” put forth by J. Rawls (1971) and which can, in a sense, be interpreted as extreme risk aversion, inasmuch as every citizen at the bottom of the income scale would support its use.

Having thus reviewed the notions of equity which are most frequently debated in the political and social arena, it should be noted that equity is not limited solely to the realm of taxation. It is also relevant to other areas of state action, such as the provision of public services or regulatory activities. In terms of public spending, equity requires that resources be expended in a manner befitting the circumstances of the population, in order to meet socially accepted standards of well-being. In the field of economics, a number of efforts have recently been made to apply the criteria and techniques of classical analyses of tax equity to public spending. Similarly, the overall results of state action – particularly in terms of the various types of revenue and expenditures

³ This section is based on Jiménez and Ruiz Huerta (2009).

reflected in national budgets – have become increasingly relevant⁴.

Nevertheless, one of the key issues discussed in this study is the fact that equity is clearly connected to the tax system, and has been closely studied in this regard. The principle of tax equity is rooted in two basic ideas employed to justify the collection and distribution of taxes: (i) benefit (as understood by the utilitarian school), which requires individuals to pay taxes in exchange for the benefits they receive from the state, and is thus closely linked to spending; and (ii) payment capacity, which focuses on the economic ability of individuals to shoulder the tax burden. This concept is rooted in theories of equal sacrifice, which have themselves been employed to justify the application of progressive criteria. Much of the literature on tax equity focuses on payment capacity.

The principle of tax equity or justice is, without question, the most important issue when discussing tax reform or analyzing the characteristics of a tax system. According to this principle, the tax system must be equitable in the distribution of the tax burden among the members of a society, adjusting to the different circumstances of each individual. It calls for the realization of an idea of justice with regard to taxation, through the redistribution of income and wealth by the public sector.

This principle may be expressed as follows: “all persons must shoulder the burden of public expenditure equally.” This leads immediately to the two criteria traditionally employed to apply the principle: horizontal equity (“equal treatment for those in equal circumstances”) and vertical equity (“appropriately unequal treatment for those in differing circumstances”). Equity may be said to summarize the political/social or ethical principles referred to by Neumark in his celebrated work “The Principles of Taxation”: generality, equality, proportionality and redistribution. It should be noted that implementing these principles is difficult, given that ‘equal’ and ‘unequal’, ‘treatment’ and ‘circumstances’ are notions which must be defined, and the degree to which the tax system will be expected to achieve redistributive goals must be determined. After the consolidation of synthetic income taxes, the concept of proportional taxation (taxing everyone in proportion to their income) was superseded by that of progressive taxation (establishing proportionally higher taxes for those who earn more or have greater payment capacity). Having adopted this approach, legislators will have to determine the appropriate degree to which progressive taxation will be reflected in their country’s tax system in relation to the aforementioned goals and policies.

In any case, generality in the distribution of the tax burden

remains important, given its implications for the concept of citizenship. All individuals fund public services through a variety of taxes. Some are highly visible (income tax, property tax), others less so (indirect taxation in general). Citizens should be made aware of this fact. Only then can they demand quality services, as well as a firm commitment to social and economic stability on the part of the government. Individuals who knowingly bear a significant tax burden are able to demand adequate services, and feel themselves to be active members of society.

With regard to personal income tax, the rise of tax-exempt minimums may create the false impression that part of the population enjoys a tax exemption. This may create a social divide (some pay while others do not). In truth, all individuals pay income tax. Efforts by the tax authorities to raise awareness in this regard are a modern realization of the principle of generality; their aim is to create more cohesive, “inclusive” societies.

The other great principle of taxation – sufficiency – is the basic premise which must underlie any tax reform process. Questions of equity lack meaning if the revenue generated by the tax system is insufficient. Resources are needed to finance the goods and services provided by the public sector, and the tax system must allocate them appropriately. The problem that always arises in this context is the relative nature of the concept of ‘sufficient revenue’. Tax revenue is subordinated to a given objective or set of goals. Since resources are needed to finance public services, this principle causes attention to shift from income to expenditure. Which expenditures are to be funded? Are they all justified? Are public services being managed efficiently? Are effective control and evaluation mechanisms in place to ensure the effectiveness and efficiency of public spending?

Perhaps the main issue to bear in mind with regard to this principle is that the tax system must finance quality services. In higher-income societies, the high tax burden makes citizens increasingly aware of the taxes they pay, although the same phenomenon is now occurring in societies with a lower tax burden. Concern over public services and their quality has thus become a basic feature of modern societies. In societies where the tax burden is lower, however – as is the case in most countries in the region – the principle of sufficient tax revenue takes on a different meaning. The limited availability of resources makes it difficult to provide public services, and the need to obtain such resources becomes a prerequisite for equity. The state usually lacks the ability, in terms of both income and expenditure, to achieve any significant redistributive goals. In this regard, ensuring sufficient tax revenue serves as a means to justify the search for resources to meet minimum standards of quality in the provision of public services.

These considerations, as well as the concepts of equity

⁴ See J. Martín (1997).

discussed above, reflect the importance of justice in the activities of the state, as well as the need to establish socially agreed standards of equality. These standards are developed through properly funded state policies which modify the distribution of income produced by the market in accordance with the social preferences of citizens.

C. Some structural features of equity in Latin America

As explained above, equity is a multi-dimensional concept. This section will explore some of these dimensions, paying special attention to the sharp differences observed in personal and regional income levels, as well as to the region's high level of informal economic activity. It will shed light on a number of issues which clearly reveal the need to improve equity and cohesion through tax policy. It will also identify factors which limit the

effectiveness of redistributive policies, pinpointing those which could be mitigated in order to improve the distributive impact of fiscal policy.

Factors which shape the relationship between inequality and fiscal policy – either by limiting the ability of governments to generate resources or by highlighting the need for redistributive policies – include the following: high inequality in the distribution of income, characterized by a strong concentration of wealth in the richest decile of the population; significant disparities between regions within the same country; high poverty and indigence levels; and significant informal economic activity.

High distributive inequality is one of the distinguishing features of the social environment of Latin America. Inequality in the distribution of personal income is significantly higher in the region than it is elsewhere, with an average Gini coefficient of 0.53. The country with the least unequal distribution in the region is nonetheless characterized by greater inequality than any member of the OECD, or any Middle-Eastern or North-African country.

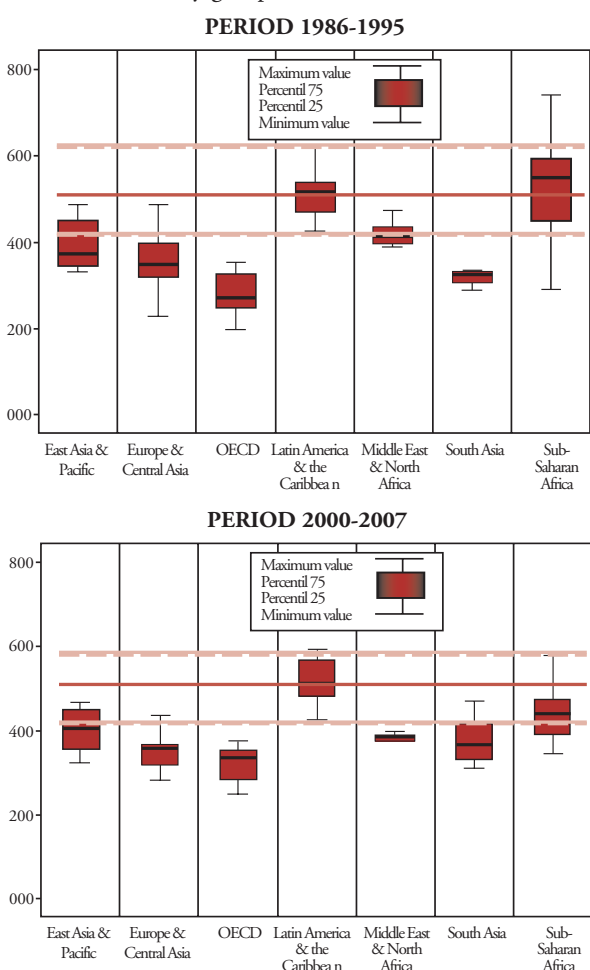
Moreover, Latin America is not only the most unequal region in the world, but also the region which has made the least progress in this regard over the last twenty years, as shown in figure 1.

The average Gini coefficient of 0.53 which characterizes the region, conceals great differences between countries. In some cases, for example, the Gini coefficient is close to 0.6. This is true of Brazil, Guatemala, Colombia and Honduras. Figure 2 confirms the severe inequality which afflicts the region. All Latin American countries display a Gini coefficient above 0.4. In most cases, it exceeds 0.5. This stands in contrast to OECD countries, where the average Gini coefficient is 0.3.

One feature that stands out is the high share of income concentrated in the hands of the highest stratum – the

Figure 1

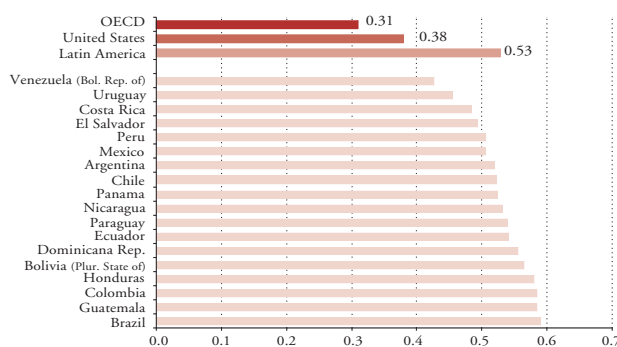
Gini coefficients by groups of countries



Source: Economic Commission for Latin America and the Caribbean (ECLAC).

Figure 2

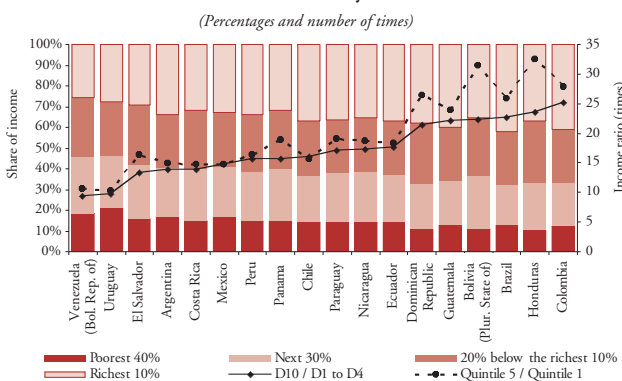
Gini coefficients in the OECD and in Latin America, 2003-2007



Source: ECLAC and OECD.

richest 10% of households, as shown in figure 3. On average, this group accounts for 35% of all income, albeit with significant variations across the region. While the richest 10% of households of the population account for less than 28% of all income in Uruguay and Venezuela, this figure exceeds 40% in Brazil and Colombia. At the other end of the spectrum, the poorest 40% of households accounts for an average of 15% of overall income. This figure is lowest in Honduras, the Dominican Republic and Bolivia, where it does not exceed 11%⁵. While gaps between the intermediate deciles are not as pronounced, the difference between the highest-income decile and the one immediately following is significant. While in European countries the income of the tenth decile is 20% to 30% higher than that of the ninth decile, in Latin America, the gap usually exceeds 100%, even approaching 200% in some cases. Such inequality stands in contrast to the marked weakness of Latin American tax systems with regard to taxation based on payment capacity.

Figure 3
Structure of income distribution by deciles, around 2007



Source: ECLAC (2008a).

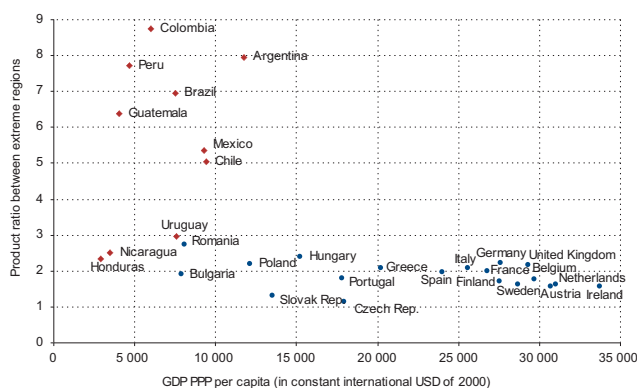
Note: households arranged in order of per capita income.

Another aspect of inequality in Latin America – one which is especially relevant to the design and financing of decentralized public policies – is the region's territorial inequality. Unlike more developed regions, Latin America is characterized by high income gaps between regions within the same country – an issue which bears examining. By way of illustration, the gaps in GDP per capita between the highest and lowest value in subnational jurisdictions for several countries in the region have been considered.

Figure 4 shows the relationship between this indicator and per capita GDP for a number of European and Latin American countries. With the exception of the smaller

Central American countries and Uruguay (a country with better equity indicators and a markedly centralized structure), gaps between rich and poor jurisdictions are very pronounced, and exceed those found in any European country. For example, while in Europe, the per capita GDP of a country's richest region is around twice that of its lowest-income region, in Latin America this ratio is, on average, six to one. This highlights the difficulty in improving equity and cohesion – particularly through decentralized policies, since the poorest regions are precisely those with the smallest tax base for financing local public spending priorities (for example, infrastructure, health and education).

Figure 4
Comparison of the regional gaps of GDP per capita between the highest and lowest value and of GDP per capita in Latin America and Europe



Source: Cetrángolo (2007).

Poorer jurisdictions lack a tax base strong enough to finance local expenditures. Hence, the ability of subnational governments to provide public services varies, adding an additional difficulty to the design of public policies aimed at improving distributive equity in the region.

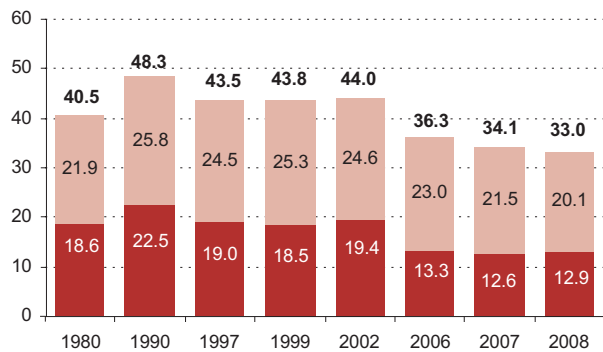
Poverty levels are another variable which plays an important role in understanding the ability of Latin American countries to generate sufficient revenue to satisfy the needs of their populations and design public policies that improve equity.

According to the ECLAC Social Panorama of Latin America (2009), the latest figures available for the region suggest that, as of 2008, 33% of the population was living in poverty, while 12.9% was living in extreme poverty or indigence. The poor population stood at 180 million, of which 71 million were indigent. According to the study, poverty and indigence rates fell respectively by approximately 11 and 6.5 percentage points between 2002 and 2008. However, 2008 was the last in a series of

⁵ For details, see ECLAC Social Panorama of Latin America, 2008.

six years to witness a reduction in poverty and inequality. Forecasts suggest that poverty and indigence may rise by 1.1 and 0.8 percentage points respectively in 2009. This would increase the poor population by around 9 million, half of which would be comprised of indigent persons.

Figure 5
Poverty and indigence in Latin America
(Percentages of population)^a



Source: Economic Commission for Latin America and the Caribbean (ECLAC 2009), based on data from special tabulations of the household surveys in selected countries.

a Estimate corresponding to 18 countries in the region, and Haiti. Numbers above the columns represent the percentage of poor people (indigents plus non-indigent poor).

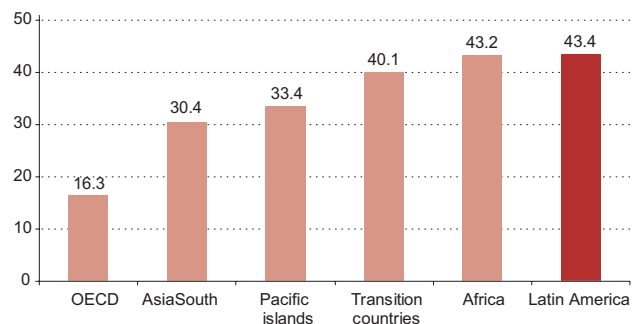
Poverty in the region is a highly diverse phenomenon. The lowest poverty rates are found in Argentina, Chile, Uruguay and Costa Rica, where it is less than 22%. Indigence in those countries ranges between 3% and 7%. The countries with the highest poverty and indigence rates, in excess of 50% and 30% respectively, are Bolivia, Guatemala, Haiti, Honduras, Nicaragua and Paraguay. These substantial differences between countries in terms of poverty and indigence have a significant impact on the ability of governments to collect revenue. Yet the poorest countries are precisely those which need the most resources to cover the basic needs of their most deprived citizens.

An additional factor to consider is the high level of informal economic activity in the region. Estimates of underground or informal activity can be used to gain a general understanding of tax evasion in the region, since they measure earnings not included in national income, arising as they do from unreported activities. Nevertheless, such broad assessments do not fully measure tax compliance: they fail to measure evasion in legitimate sectors of the economy, while at the same time, not all informal income is taxable (tax exemptions may apply, for example).

As noted by Schneider and Enste (2000), attempts to measure the shadow economy first face the problem of

defining it. These authors point out that the shadow economy, also known as the underground, informal or parallel economy, includes not only illegal activities but also unreported income from the production of legal goods and services, either from monetary or barter transactions. The first group includes trade in stolen goods, drug dealing and manufacturing, smuggling, etc. Legal informal activities include unreported income from self-employment, wages, salaries and assets from unreported work related to legal services and goods, employee discounts used to avoid taxes, barter of legal goods and services, household labor, etc. Thus, the shadow economy includes all the economic activities which would ordinarily be taxable if they were reported to the tax authorities. According to estimates by these authors regarding the size of the shadow economy in developed and developing countries, using methods such as the physical input or electricity consumption approach, the currency demand approach and the latent variable or DYMIMIC model, Latin America possesses the largest shadow economy in the world, surpassing even other regions of the developing world⁶.

Figure 6
The Informal Economy in the World - Average 2002/2003
(Percentage of GDP)



Source: prepared by the author on the basis of Schneider (2006).

Shadow economies have been expanding in every region of the world. Latin America is no exception to this trend, as shown in the figure above.

⁶ The physical input approach estimates the growth of the shadow economy by subtracting the rate of official GDP growth from the rate of overall electricity consumption growth. The currency demand approach estimates the growth of the shadow economy by correlating it to the demand for currency, assuming that underground transactions are undertaken in the form of cash payments, and that an increase in the shadow economy will increase the demand for currency. The latent variable or DYMIMIC (Dynamic multiple-indicators multiple-causes) model calculates the size of the shadow economy as a function of observed indicators (for example, tax rates, government regulation, etc.), as well as variables in which traces of informal economic activity can be observed, such as currency demand, the official work day, unemployment, etc. For a detailed description of these methods, see Schneider and Enste, "Shadow Economies: Size, Causes, and Consequences", *The Journal of Economic Literature*, 2000, 38/1, pp. 77–114.

The size of the shadow economy is, without question, a significant issue when analyzing tax evasion in the region and its possible solutions, as will be discussed below. Underground economic activity reduces revenues, limiting public spending. Unrestricted tax increases could also encourage further informal activity by driving companies and workers from the formal to the informal sector, making it even more difficult for governments to generate revenue.

D. Taxation as a distribution policy instrument

As already noted, Latin America has the highest levels of

inequality in the world. Given the many problems associated with fragmented societies, in which a wealthy few coexist with a vast majority living below subsistence levels, one might ask what role public policy – and, more specifically, tax policy – plays in the distribution of income.

In this regard, one school of thought still holds that a fairer distribution of wealth can be achieved through sustained economic growth, and that efficiency must therefore take precedence over equity, since the objectives linked to equity are often viewed as “harmful” to investments and output. This has been the prevailing view in the region for the last 30 years in various areas of public policy – and particularly tax policy. Thus, the

Table 1. The Size of the informal economy in Latin American and the Caribbean countries
(Percentage of GDP using the DYMIMIC and Currency Demand Method)

Country	Average 1990/91	Average 1994/95	Average 1999/2000	Average 2001/02	Average 2002/03
Argentina	22.1	24.8	25.4	27.1	28.9
Bolivia (Plurinational State of)	55.0	60.4	67.1	68.1	68.3
Brazil	32.5	36.4	39.8	40.9	42.3
Chile	13.6	16.4	19.8	20.3	20.9
Colombia	33.4	36.2	39.1	41.3	43.4
Costa Rica	22.0	24.2	26.2	27.0	27.8
Dominican Republic	28.4	30.4	32.1	33.4	34.1
Ecuador	28.9	31.4	34.4	35.1	36.7
El Salvador			46.3	47.1	48.3
Guatemala	41.4	45.9	51.5	51.9	52.4
Haiti			55.4	57.1	58.6
Honduras	40.7	44.3	49.6	50.8	51.6
Jamaica	31.4	33.2	36.4	37.8	38.9
Mexico	24.1	27.1	30.1	31.8	33.2
Nicaragua	40.1	43.2	45.2	46.9	48.2
Panama	51.4	58.2	64.1	65.1	65.3
Paraguay			27.4	29.2	31.4
Peru	47.1	52.3	59.9	60.3	60.9
Puerto Rico			28.4	29.4	30.7
Uruguay	41.3	45.3	51.1	51.4	51.9
Venezuela (Bolivarian Republic of)	27.4	30.4	33.6	35.1	36.7
Simple average	34.2	37.7	41.1	42.2	43.4

Source: Schneider (2004 and 2006).

main objective of taxation – the one which explains the current design of tax policy in the region, as well as its impact on the well-being of Latin American societies – has been to generate revenue without compromising investment opportunities or affecting the “neutrality” of the economy.

Since the late 1990s, a shift has occurred in both the priorities of governments in the region and the recommendations of international organizations, and the idea of equitable economic growth has begun to take hold. Thus far, however, this paradigm shift does not seem to have produced concrete policies. This is attributable to both technical and political limitations, the lack of political will to confront interest groups being one such example. In terms of tax policy, the reforms of the 1980s and 1990s were chiefly intended to increase revenue by simplifying the tax system. Efforts were made to ensure greater neutrality and to modernize the tax system and the tax administration. Personal income taxes were cut without expanding the tax base, and taxes on foreign trade were reduced. To offset this measure, VAT rates were increased, and the base of that tax was expanded, making it the government’s primary source of revenue⁷.

During this period, the concept of progressiveness that characterizes direct taxation was largely abandoned in favor of neutrality and efficiency. The results of this approach can be observed in the current design of the region’s tax structures, whose defining characteristic, unlike those of more developed countries, is their markedly regressive nature. Consequently, most Latin American countries experience an increase in the concentration of income after tax revenue has been collected.

A little-known fact mentioned in several studies⁸ is worth noting: a comparison of inequality levels prior to state intervention in Latin American and more developed nations shows that inequality was similar; and in many cases, it was actually higher in developed countries. However, as noted by Chu, Davoodi and Gupta⁹, while industrialized economies effectively improve income distribution through taxation and spending, developing countries lack adequate redistribution policies with which to achieve a degree of equality comparable to that of developed nations.

In this regard, fiscal policy, in terms of both income and spending, is one of the most important tools with which

the state can influence the distribution of income. The characteristics of fiscal policy determine its impact on cohesion and equity, on the one hand, and fragmentation and inequity, on the other.

Tax policy can influence the distribution of income in two ways. Firstly, it can be used to finance public spending aimed at creating and strengthening human capital through health care, education and sanitation programs, among others. Tax policy thus contributes to the formation of human capital. By improving market income, it improves “primary distribution,” or the distribution of income before resources are taxed and transferred. Secondly, it can establish progressive taxes that modify “secondary distribution,” or the distribution of income after taxes. Income tax and property taxes, among others, play a key role in this regard¹⁰.

What are the factors that limit the redistributive role of the state in Latin America? Three main issues have been identified: a low tax burden, regressive taxation and poorly targeted public spending¹¹. There is disagreement, however, as to whether these factors should be modified. There is broad consensus regarding the need to ensure greater progressivity in public spending. As for the need to increase the tax burden, agreement is substantial, but more limited. There is less agreement regarding the need to implement reforms to increase progressive taxation. The general attitude among experts regarding the structural limitations facing direct taxation in the region is one of resignation. These limitations include the expansion of informal sectors, the absence of a large middle class, inefficient tax authorities, a lack of political will and high tax evasion and avoidance. These factors, coupled with a discourse which favors economic neutrality and efficiency, have created an environment in which concrete efforts to develop direct taxes are conspicuously absent, and tax policy is focused on consumption. This explains why the main instrument of redistributive policy – personal income tax – generates an average of only 1.5% of GDP in Latin America, compared to 9 % in OECD countries.

There is clear disagreement among experts regarding the potential of taxation as a redistributive tool. Nevertheless, the persistence of a regressive tax structure over the years reveals that the dominant view – at least among those in a position to influence tax policy – is that redistribution can be achieved most effectively through social spending, while tax policy should focus on efficiency¹².

Hence, one might ask why income tax revenues in the

⁷ Gómez Sabaini (2006) “Tributación en América Latina: En busca de una nueva agenda de reformas”.

⁸ IDB (2006) “La Equidad Fiscal en los Países Andinos”; Gómez Sabaini (2006) “Cohesión social, equidad y tributación. Análisis y perspectivas para América Latina”.

⁹ Chu, Davoodi and Gupta (2000) “Income distribution and tax and government social spending policies in developing countries”.

¹⁰ Gómez Sabaini (2006) op.cit.

¹¹ Goñi, López and Servén, World Bank (2008) op.cit.

¹² Jorratt (2009) “La tributación directa en Chile: equidad y desafíos”.

region are so low. To answer this question, one must begin by noting two salient characteristics of income tax in Latin America: low tax rates (and even lower effective rates) and a narrow tax base.

Small tax bases and low effective rates, among other factors, cause high tax evasion, as do the tax privileges and loopholes that characterize tax systems in the region. In such an environment, the basic prerequisites of equity – namely, that those with the same payment capacity be taxed equally (horizontal equity) and those with greater payment capacity pay higher taxes (vertical equity)¹³ – go unfulfilled.

Equity, both horizontal and vertical, faces significant practical challenges in the countries of Latin America. The resulting injustices seriously compromise the legitimacy of the region's tax systems, and ultimately affect their ability to collect revenue. Thus, the countries of the region find themselves trapped in a vicious circle of regressive taxation and scant resources, unequal distribution of income and delegitimization of public institutions and of the role of the state¹⁴.

Direct taxation must therefore be strengthened, and the balance between direct and indirect taxation must be improved. As noted by Jorratt (2009) in his study of taxation in Chile, if the redistributive impact of the tax system is to be increased, income and property taxes must be redesigned to ensure that they account for a greater share of overall revenue. They must also be made more progressive.

Jorratt also points out that curbing tax evasion and avoidance is key, as these practices are clearly among the chief causes of inequity. Evasion jeopardizes horizontal equity, since evaders pay fewer taxes than those with the same payment capacity who meet their obligations. It also reduces vertical equity, particularly where progressive income taxes are concerned, since the incentive to evade becomes stronger as tax rates increase. Moreover, wealthier individuals have greater access to professional advice, which often includes avoidance strategies or reduces the risks of non-compliance.

Along the same lines, Roca (2009) points out that, while personal income taxes may be designed to produce a given redistributive effect, they will not achieve their objective if evasion significantly reduces revenue¹⁵. As for tax rates, he notes the dichotomy surrounding corporate income tax in most Latin American countries: though nominal tax rates are high (28% on average as of 2006), effective

rates are significantly lower, due to a variety of tax benefits. Thus, fewer resources are available for progressive social spending; horizontal inequity increases, and opportunities for evasion and avoidance multiply.

In summary, the three key success factors for a redistributive tax policy are as follows: (1) level of revenue; (2) tax composition or structure; (3) degree of compliance.

D.1 Level of revenue

Several studies have shown that the region's potential tax burden is significantly higher than its effective burden¹⁶. Resources for social spending could therefore be increased. This would not only improve the redistributive capacity of the state by providing more revenue; as noted by Musgrave, a high, moderately progressive tax burden can have a greater impact on the distribution of income than a low, strongly progressive one.

Thus, the countries of Latin America not only suffer from the world's highest inequality levels, but also generate little revenue to spend on policies to reduce regional disparities, poverty and indigence levels and improve the distribution of income.

Differences between countries notwithstanding, Latin American states generally have a low tax burden compared to both countries in other regions and to their own level of development. The most developed countries generally possess a larger public sector, and therefore have a higher tax burden. Figure 7 compares 121 countries, using a cross-section regression analysis which focuses on the relationship between tax burden and the per capita GDP logarithm¹⁷.

As shown in figure 7, only four of the nineteen Latin American countries studied are above the regression line. The tax burden of Argentina, Bolivia, Brazil and Nicaragua may be described as high in comparison to their per capita GDP. Uruguay and Costa Rica are very close to the regression line; their tax burden appears to be adequate in relation to their level of development. The tax burden of the remaining thirteen countries is clearly lower than it should be according to their level of development. This simple exercise shows that most of the countries surveyed could increase their tax burden. In aggregate terms, given the level of economic development of the region, the tax burden could be increased by an average of three points of GDP. If the four countries above the

¹³ Musgrave R. and Musgrave P. (1992) "Hacienda pública: teórica y aplicada".

¹⁴ Gómez Sabaini and O'Farrell (2009) "La Economía política de la política tributaria en América Latina".

¹⁵ Roca (2009) "Tributación directa en Ecuador: evasión, equidad y desafíos de diseño".

¹⁶ Perry and others (2006) for Latin America: "Poverty Reduction and Growth: Virtuous and Vicious Circles"; Agosin and others (2004) for Central America: "Recaudar para crecer. Bases para la reforma tributaria en Centroamérica".

¹⁷ It should be noted that this simple exercise is not intended as an analysis of the determining factors of the tax burden in each country. In order to develop such a model, other important variables would have to be examined.

Figure 7
Tax burden compared to GDP per capita PPP



Source: prepared by the author on the basis of ECLAC, OECD and WDI World Bank.
 Note: for countries in Latin America, the coverage corresponds to the central government, except for Argentina, Brazil, Bolivia (Plurinational State of), Chile and Costa Rica, where it refers to the general government.

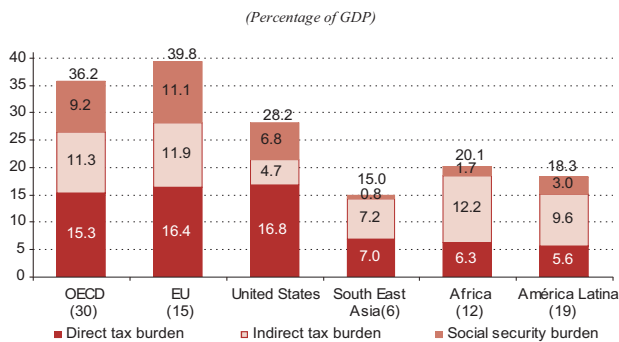
regression line are excluded, however, this average rises to five points of GDP.

The average gap between potential and effective tax burden hides significant differences between countries. The case of Mexico is particularly striking as, given its level of economic development, its tax burden is less than half its potential tax revenue. Other countries that could increase their tax burden to make it more consistent with their GDP per capita, include Venezuela, Guatemala, Panama and Ecuador, which could increase their burden by 6 to 8 points of GDP. With the exception of Guatemala, these countries generate significant revenues from other sources (oil or the Panama Canal, for example), which partially offset their low tax burden.

Another simple way of demonstrating the low tax burden in Latin America is to compare it with the tax burdens in other regions around the world. Figure 8 shows that the average tax burden of Latin American countries is virtually half that of OECD countries.

However, the graph also clearly shows that the region's low tax burden is primarily a result of low direct tax collection (income and property taxes) in terms of GDP. On average, the direct tax burden in developed countries is ten GDP points above that of Latin America. Moreover, revenue from income and property taxes (in relation to GDP) in Latin America is the lowest in the world. Even African countries generate higher revenues from such taxes, on average, than do Latin American countries. Another significant difference in relation to developed countries lies in the low social security burden in Latin America. Taxes on goods and services in Latin America are comparable to those in OECD countries. As mentioned earlier, one way of improving the distribution of income is through the level of tax revenues invested in social programs. It is telling that the three countries with the highest tax burden are also those with the highest level of social spending. Moreover, countries such as Bolivia, Venezuela, Paraguay and Mexico spend

Figure 8
International comparison of the level and structure of the tax burden

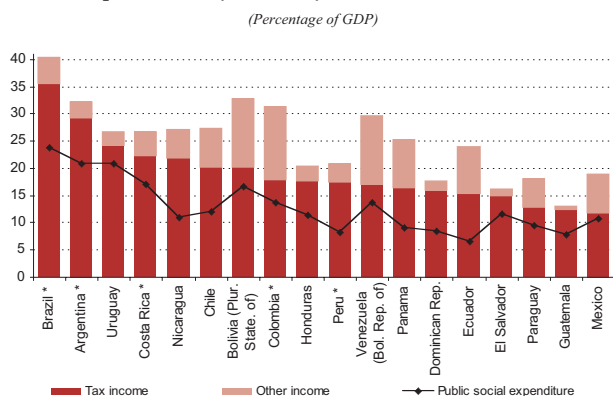


Source: ECLAC, OECD and IMF.

Note: the average for Latin America covers the central government, except for Argentina, Brazil, Bolivia (Plurinational State of), Chile and Costa Rica, where it refers to the general government.

more on social programs than other countries with a similar tax burden – perhaps because they receive income from other sources, namely natural resources. In Chile, Panama and Ecuador, on the other hand – countries which also receive significant revenues from other sources – social spending does not exceed that of other countries in the region with a similar tax burden. However, the tax burden is not the only factor which influences the distribution of income in a country. The tax structure is also important. In other words, it is not simply a question of how much revenue is collected in Latin America, but also how it is collected, an issue that is discussed in the following subsection.

Figure 9
Latin America and the Caribbean: Fiscal Revenue and Public Social Expenditure by Country, 2007



Source: elaboration of the author on the basis of ECLAC.

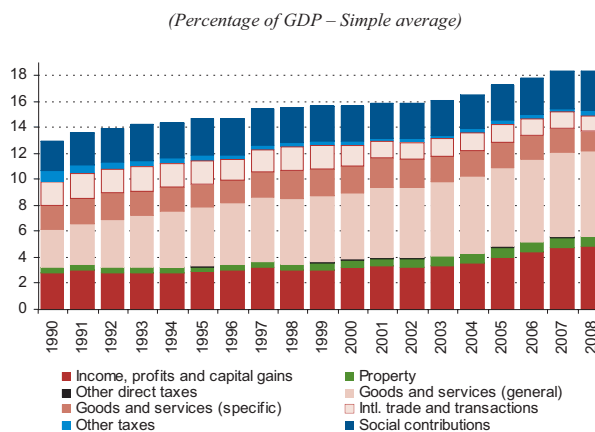
Note: (*) In these countries government coverage is broader because it incorporates public companies.

D.2 Tax structure

The second factor to be examined is the origin of the revenues used to increase social spending in an equitable manner. Studies by Perry et al. (2006), Agosin et al. (2004) and Gómez Sabaini (2006) have noted that the main cause of the gap between potential and effective revenue is a shortfall in direct taxation – more specifically, personal income tax. Virtually no such gap exists with regard to consumption taxes in most of the countries in the region.

Figure 10 illustrates the general evolution in the region's tax structure, which has been characterized by the following: (i) a sustained growth in general taxes on consumption (VAT-type taxes); (ii) a significant reduction in taxes on international trade; (iii) a reduction in selective taxes on goods and services; (iv) growing income taxes in recent years; and (v) low, stagnant property taxes. It is important to mention that the low revenue from property taxes occurs in spite of the existence of a wide variety of taxes in the region that target property in some way¹⁸. The strengthening of these taxes is a pressing challenge, particularly at the level of subnational governments. The improvement of cadastral records is a key factor to ensuring the equity and efficiency of property taxes.

Figure 10
Latin America and the Caribbean: tax structure 1990-2008



Source: Economic Commission for Latin America and the Caribbean (ECLAC).

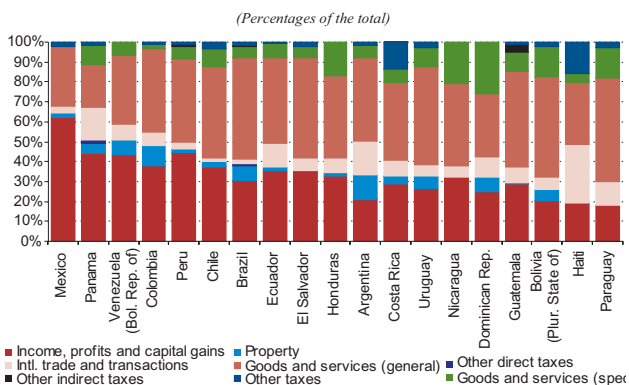
Figure 11 ranks the region's countries according to the role of direct taxation in overall revenue (excluding social security contributions). Mexico is the only country that obtains 60% of its revenue from income tax. This stands

¹⁸ For a detailed analysis of property taxes in Latin America, see De Cesare and Lazo Marín (2008).

in contrast to the country's negligible VAT revenue, which is the second lowest in Latin America (in proportion to GDP). Mexico is followed by a group of countries which obtain 40% to 50% of their overall revenue from income and property taxes. These include Panama, Venezuela, Colombia, Peru and Chile – all of which specialize in the exploitation of natural resources. The large role played by income tax in their revenue scheme is attributable to corporate income taxes paid by companies engaged in such activities. At the other end of the spectrum are Paraguay and Haiti, where direct taxation accounts for less than 20% of overall revenue. As previously mentioned, these countries are among the poorest in the region – a factor which clearly limits their direct tax base.

While Argentina is below the regional average in terms of direct taxation as a proportion of revenue, if export duties are classified as direct taxes – as suggested by Cetrángolo and Gómez Sabaini (2007) – the combined share of income tax, property tax and export duties would be equivalent to approximately 43% of overall revenue. Income tax revenue grew by more than 70% across the region between 1990 and 2008, rising from 2.8 to 4.8 points of GDP, on average, during that period (see figure 10). As mentioned above, however, this figure remains low by international standards, and is not enough to improve the region's income distribution. The low relative importance of income taxes is apparent in almost every country in the region. Only four countries – Brazil, Chile, Peru and Venezuela – succeeded in generating revenue equivalent to 6 to 8 points of GDP from such taxes in 2008. Income tax revenue in Argentina, Colombia, Mexico and Nicaragua is also above the regional average, hovering at approximately 5% of GDP.

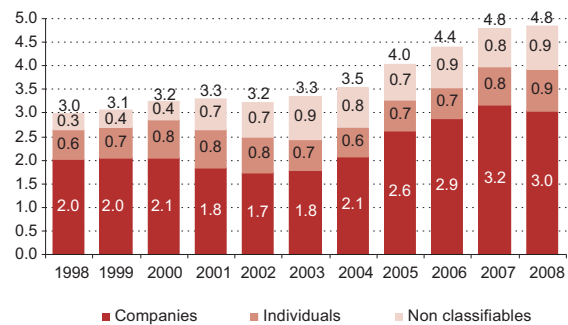
Figure 11
Latin America and the Caribbean: tax structure by country (excluding social contributions), 2008



Source: Economic Commission for Latin America and the Caribbean (ECLAC).

Corporate income tax has also shown increased growth over the past few years, mainly as a result of a significant increase in revenue from mining and oil companies (see figure 12). Such taxes offer greater transfer possibilities than personal income tax. Consequently, their distributive impact is lower.

Figure 12
Latin America: income tax: corporations and individuals (Percentage of GDP)



Source: Economic Commission for Latin America and the Caribbean (ECLAC). Note: "Non classifiable" corresponds to data where official figures do not make a difference between persons and companies.

As shown in the table below, the region is close to the average for developed countries in terms of corporate income tax (3.4 and 3.9 points of GDP, respectively). With regard to personal income tax, however, Latin America lags far behind OECD countries. Latin American countries generate only 1.5% of GDP, on average, from personal income taxes (even the country with the best performance in this regard generates only 2.6 GDP points from such taxes), compared to OECD countries, which generate in excess of 9 points. Moreover, most personal income tax revenue in the region is obtained from wage earners. This is probably attributable to the fact that self-employed persons have greater access to evasion and avoidance strategies; it is also a result of the preferential tax treatment accorded to returns on capital in most countries.

Consequently, Latin American countries are the exact opposite of their OECD counterparts; the former obtain 70% of their revenue from corporate income tax, whereas OECD countries obtain the same percentage of their revenue from individuals¹⁹.

In short, the structure of the region's tax systems is a contributory factor to the region's on-going problems in

¹⁹ According to Cetrángolo and Gómez Sabaini (2007), two factors explain why families or physical persons account for a larger share of income tax revenue in developed countries than do corporations. Firstly, the tax authorities of those countries have a greater capacity to track large numbers of taxpayers. Secondly, per capita (or family) income in developed countries is higher. Consequently, a larger percentage of the population is subject to income tax. In Latin America, on the other hand, a large portion of the population falls below the minimum tax threshold.

Table 2. Latin America and the Caribbean: average revenue of income tax by country
(Percentages)

Country (year)	Companies	Individuals	Total	Companies/ Individuals	Income/ Consumption
	(% of GDP)	(% of GDP)	(% of GDP)	(%)	(%)
Argentina (2007)	3.6	1.6	5.4	2.3	0.4
Bolivia (Plurinational State of) (2007)	3.0	0.2	3.3	14.4	0.3
Brazil (2007)	5.1	2.6	7.7	2.0	0.5
Chile (2007)	7.3	1.2	8.4	6.3	0.9
Ecuador (2006)	2.3	0.8	3.1	3.1	0.5
El Salvador (2007)	2.7	1.9	4.6	1.4	0.6
Guatemala (2007)	2.9	0.3	3.4	8.5	0.5
Honduras (2004)	3.7	1.6	5.3	2.3	0.5
Haiti (2006)	1.0	1.1	2.1	0.9	0.6
Mexico (2005)	2.4	2.2	4.6	1.1	1.2
Nicaragua (2001)	3.1	2.0	5.1	1.6	0.5
Panama (2006)	2.9	2.0	5.0	1.5	1.8
Peru (2007)	5.9	1.4	7.2	4.2	1.0
Dominican Republic (2002)	1.3	1.8	3.1	0.7	0.4
Latin America (14)	3.4	1.5	4.9	2.3	0.7
OECD (2006)	3.9	9.2	13.0	0.4	1.2
USA (2006)	3.3	10.2	13.5	0.3	2.9

Source: compiled by the author on the basis of data from ECLAC, the OECD, J. Roca (2009) for Ecuador, M. Cabrera (2009) for El Salvador and Guatemala, D. Álvarez (2009) for Mexico and Cetrángolo and Gómez Sabaini (2007) for Honduras, Nicaragua and the Dominican Republic.

resolving disparities in income distribution. As discussed below, reforms in this area must focus on increasing the impact of tax policy on income distribution, raising the tax burden on wealthier sectors of society. This can be accomplished, for example, through personal income taxes.

D.3 Degree of compliance

Compliance is the third indispensable component of a redistributive tax policy. Without low delinquency and evasion levels, neither the level of revenue nor the tax structure is sustainable. Curbing evasion generates greater resources for social spending. It is therefore a crucial element in developing an equitable and progressive tax structure, for reasons set out in previous sections. Keeping evasion under control is therefore a key factor when considering ways to improve the distributive impact

of the region's tax systems.

Accordingly, this paper makes a significant effort to estimate the level of income tax non-compliance in seven Latin American countries. Direct taxation has also been thoroughly analyzed, and the main issues which affect distributive equity have been identified. Both of these subjects are discussed in the following sections. Finally, it should be noted that, with regard to taxation, there are no absolute rules to ensure greater equity. Possible approaches to the issue are somewhat ambiguous, since they may have both a positive and a negative effect on the equity of a tax system. To quote Musgrave, "tax policy is no less an art than a science; equity must be pursued more as a question of degree than as an absolute standard"²⁰.

²⁰ Musgrave (1992) op.cit.

E. Characteristic features of the tax situation in seven Latin American countries

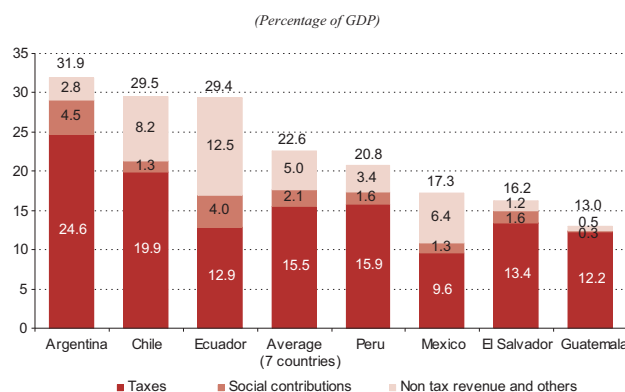
The case studies discussed below reveal a number of facts regarding the level and structure of public revenue in the countries studied. These findings confirm the results of previous studies on the subject²¹. Following is a brief review of their most salient aspects:

- From the early 1990s until 2007, current revenue as a proportion of GDP rose in every country. Growth rates differ, however. The countries studied can be divided into two groups: Argentina, Chile and Ecuador, which, for a variety of reasons, generated revenue in excess of 25% of GDP; and Peru (with 20.8%), Mexico, El Salvador and Guatemala, which are below this mark (see figure 13).
- The first issue that comes to light when observing the composition of current revenue is the relative importance of non-tax revenue in each country. Whilst the overall average across the seven countries studied is 22% of total revenue, Ecuador, Mexico and Chile are above average; with non-tax revenues of 42%, 37% and 28% of total revenue, respectively. In Mexico and Ecuador non-tax revenue –from oil and other sources– offsets their low tax revenue, whereas non-tax revenue in Chile –primarily from copper– supplements the country’s already considerable tax revenue. Among countries with low non-tax revenue, a distinction should be made between Argentina, with its high tax burden, Peru, with an average tax burden, and El Salvador and Guatemala with low tax burdens.

The evolution of tax revenue in the seven countries studied reflects their differing circumstances. On the one hand, revenue in Argentina, Ecuador, Peru, El Salvador and Guatemala displayed strong growth between 1991 and 2007, albeit with a different starting point in each case. Historically, the tax burden in the last four of these countries has been low. The growth achieved by Argentina between 2001 and 2007 is particularly noteworthy, as the tax burden grew by 8.2% of GDP over a six-year period, which represents a 30% increase. The tax burden of the remaining countries grew by approximately 4% during the entire period, although the levels achieved differ considerably. While tax revenue in Guatemala hovered at approximately 12.5 points of GDP, revenue in Chile reached 21.3 points. Mexico has been the exception, since revenue first became stagnant and then declined (see figure 14).

²¹ Cetrángolo and Gómez Sabaini (2006), “Tributación en América Latina”; Cetrángolo and Gómez-Sabaini (2007) “La tributación directa en América Latina y los desafíos a la imposición sobre la renta”.

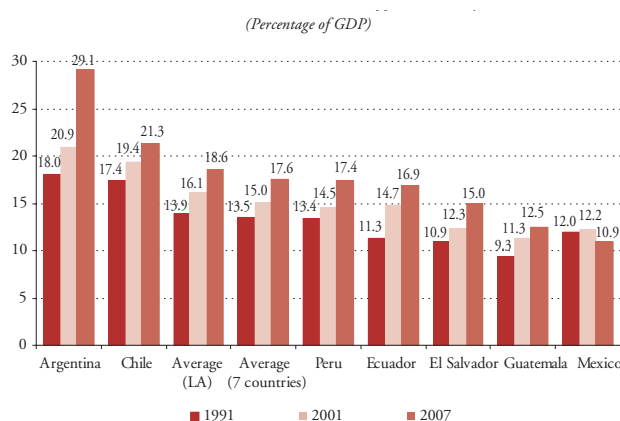
Figure 13
Composition of current revenue, 2007



Source: compiled by the author on the basis of data from ECLAC, Cetrángolo and Gómez Sabaini (2009), Roca (2009), Cabrera (2009) and Arias Minaya (2009).

Note: the scope of the data refers to the general government for Argentina, Chile and Peru, to the Non Financial Public Sector for Ecuador and to the central government for El Salvador, Guatemala and Mexico (however, in the last two countries the tax income from sub-national governments was incorporated).

Figure 14
Tax revenue in the years 1991-2001-2007



Source: compiled by the author on the basis of data from ECLAC, Roca (2009), Cabrera (2009), and Arias Minaya (2009).

- As for tax structure, save for a few exceptions which will be discussed below, the performance of the countries studied was remarkably homogeneous (see table 3). The declining share of foreign trade revenue in the tax structure is particularly noticeable. Only Argentina, which began taxing commodity exports in 2002, has escaped this trend²². Similarly, the growth of revenue from taxes on goods and services seems to have peaked; and in some countries (Chile, Ecuador and Mexico), it has even decreased slightly in relation to GDP. In Mexico, however, there is still room for improvement in VAT revenue; as noted by

²² Export taxes generated 2.6 points of GDP in 2007.

Álvarez (2009), “its underperformance as a source of revenue is attributable to a structure rife with tax privileges that facilitate evasion and avoidance”. In relation to social security revenue, most of the countries studied maintained the levels reached during previous years, although Ecuador has experienced substantial changes over the last few years. Finally, property taxes remain an insignificant source of revenue (less than 1% of GDP on average for the region), partly because not all of the information compiled includes data from local governments, and partly because, at the level of central government, such taxes have not been given serious consideration as a policy tool. The higher property tax revenue levels observed in Argentina (3.2% of GDP) are the result of a classification issue, as revenue from taxes on bank debits and loans (representing 1.9% of GDP) are classified as property taxes, in accordance with international classification practices.

d. How has income tax revenue performed? This issue merits special attention. The studies show that income tax was the fastest-growing form of revenue in the region between 2001 and 2007, though growth rates vary from country to country. In Mexico, income tax revenue grew by only 6% while at the other end of the spectrum, Peru displayed a growth rate of 109% (in GDP terms), rising from 3.5 points of GDP in 2001 to 7.2 points in 2007 (see table 4). The reasons explaining how Peru managed to more than double its income tax revenue in only six years will be examined later on.

Value-Added Tax – the dominant player in the tax landscape in Latin America during the 1990s – appears to have reached its peak as a source of revenue (with the exception of Mexico). Further increases in this tax as a means of financing public spending may become increasingly difficult, particularly since the growth of the last seven years seems to have been driven by export growth

Table 3. Tax structure in years 1991-2001-2007
(Percentage of GDP)

Country	Year	Income	Social contributions	Property	Goods and Services	International trade	Others	Total
Argentina	1991	1.3	4.7	2.5	8.1	1.0	0.4	18.0
	2001	4.0	3.2	2.6	10.0	0.6	0.5	20.9
	2007	5.4	4.5	3.2	12.1	3.4	0.4	29.1
Chile	1991	3.7	1.4	0.6	9.2	2.1	0.5	17.4
	2001	4.6	1.4	0.7	10.7	1.2	0.7	19.4
	2007	8.4	1.3	0.6	9.9	0.4	0.7	21.3
Ecuador	1991	1.5	2.7	1.0	3.9	2.1	0.1	11.3
	2001	2.7	2.1	0.5	7.6	1.7	0.2	14.7
	2007	3.8	4.0	0.4	7.0	1.6	0.1	16.9
El Salvador	1991	2.3	1.4	0.6	4.5	1.5	0.6	10.9
	2001	3.1	1.8	0.1	6.2	1.1	0.0	12.3
	2007	4.6	1.6	0.1	7.6	1.0	0.0	15.0
Guatemala	1991	3.3	...	0.1	3.8	1.6	0.4	9.3
	2001	2.6	0.3	0.1	6.6	1.5	0.1	11.3
	2007	3.3	0.3	0.1	7.5	1.1	0.2	12.5
Mexico	1991	4.3	1.7	0.4	4.5	1.0	0.2	12.0
	2001	4.7	1.4	0.4	5.1	0.5	0.1	12.2
	2007	5.0	1.3	0.5	3.7	0.3	0.2	10.9
Peru	1991	0.9	2.0	0.9	7.1	1.3	1.2	13.4
	2001	3.5	1.7	0.5	7.1	1.5	0.2	14.5
	2007	7.2	1.6	0.5	7.2	0.7	0.2	17.4
Average (7 countries)	1991	2.5	2.3	0.9	5.9	1.5	0.5	13.5
	2001	3.6	1.7	0.7	7.6	1.1	0.3	15.0
	2007	5.4	2.1	0.8	7.9	1.2	0.3	17.6
Average (Latin America)	1991	3.0	2.6	0.5	5.2	1.9	0.7	13.9
	2001	3.4	2.8	0.6	7.8	1.3	0.3	16.1
	2007	4.9	2.9	0.8	8.4	1.3	0.3	18.6

Source: compiled by the author on the basis of data from ECLAC, Roca (2009), Cabrera (2009) and Arias Minaya (2009).

Note: the scope is of the general government, except for El Salvador (central government) and for Ecuador (Non Financial Public Sector).

– largely attributable to higher commodity prices, improved terms of trade and, in some cases, a growth in the export of semi-manufactured goods. The slowdown in VAT revenue growth is also attributable to tax refunds granted to exporters. As is well known, the Destination Principle followed by all the countries in the region requires them not only to grant exemptions to exporters, but also to refund VAT payments collected at earlier stages, including those paid at the time of importation. Another development common to all seven countries is the declining role of foreign trade taxes as a source of revenue, coupled with a sustained increase in the importance of income taxes. It should be noted, however, that foreign trade taxes began to decline during the 1980s, whereas income taxes only began to gain momentum in the 1990s. In most of the countries studied, their rise began in earnest at the beginning of this century. With the exception of Argentina, income taxes were the

fastest-growing form of revenue in the countries studied. The highest growth rates were observed in Peru and Chile. One peculiarity of the Argentinian tax system should be noted, however: export duties in the country may be absorbing a significant portion of resources which would otherwise increase the income tax revenue, as is the case in countries which apply income taxes to copper, gas, oil or other commodities. Finally, it should be noted that the rising role of income taxes has little to do with changes in tax rates or taxable bases. Rather, it is a function of growing exports and rising international commodity prices. In this regard, surging exports have had a positive economic impact, producing significant growth in income tax revenue, as shown in table 4 and figure 15. During the 2001-2007 period, while GDP and consumption (both private and public) grew by 26.7% and 27.2%, respectively, exports of goods and services grew by 47%²³, a fact that supports this observation.

Table 4. Explanatory causes for variations in tax revenue between 2001 and 2007 (Percentages)

Country	Year	Income	Social contributions	Property	Goods and Services	International trade	Others	Total
Argentina	Absolute Var. ^a	1.5	1.3	0.6	2.2	2.8	-0.1	8.2
	Growth rate ^b	36.4	39.4	23.6	21.6	433.1	-14.0	39.1
Chile	Absolute Var.	3.8	-0.1	-0.2	-0.7	-0.8	0.0	1.9
	Growth rate	81.9	-6.6	-21.5	-7.0	-69.9	-5.3	10.0
Ecuador	Absolute Var.	1.1	1.9	0.0	-0.6	-0.1	-0.1	2.2
	Growth rate	41.0	88.6	-3.4	-7.9	-5.6	-56.6	14.7
Mexico	Absolute Var.	0.3	-0.1	0.0	-1.4	-0.2	0.1	-1.3
	Growth rate	6.4	-8.5	10.9	-27.8	-36.2	44.8	-10.6
Peru	Absolute Var.	3.8	-0.2	0.01	0.1	-0.8	0.01	2.9
	Growth rate	109.0	-9.3	1.9	1.3	-55.6	5.1	20.1
El Salvador	Absolute Var.	1.5	-0.2	0.0	1.4	-0.1	0.04	2.7
	Growth rate	46.7	-11.3	22.6	22.8	-5.3		21.7
Guatemala	Absolute Var.	0.7	-0.03	0.01	0.9	-0.4	0.04	1.2
	Growth rate	26.3	-10.5	9.1	13.0	-24.2	39.3	10.9
Average (7 countries)	Absolute Var.	1.8	0.4	0.1	0.3	0.1	0.0	2.5
	Growth rate	49.9	21.2	10.7	3.3	5.9	-3.9	16.9
Average (Latin America)	Absolute Var.	1.5	0.2	0.2	0.7	0.04	0.03	2.6
	Growth rate	44.4	6.4	27.8	8.5	3.4	9.9	16.0

Source: compiled by the author on the basis of data from ECLAC, Roca (2009), Cabrera (2009) and Arias Minaya (2009).

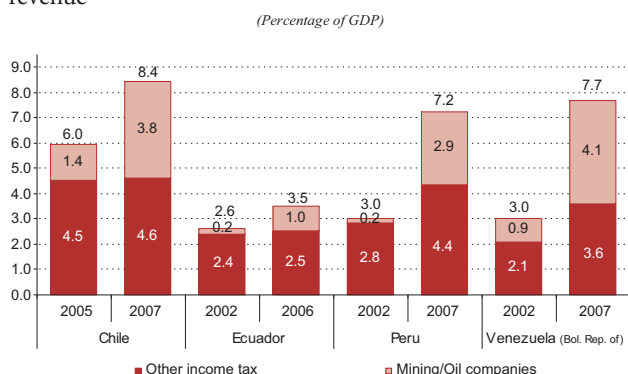
Note: the scope of data is for the general government, except for El Salvador (central government) and for Ecuador (Non Financial Public Sector).

^a In percentage of GDP.

^b In percentages.

²³ ECLAC (2008b), 2008 Statistical Yearbook, Santiago de Chile. In millions of dollars in year 2000 prices.

Figure 15
Importance of mining and oil companies in income tax revenue



Source: compiled by the author on the basis of data from ECLAC.

F. Direct taxation in selected countries

F.1 Composition of taxes on income

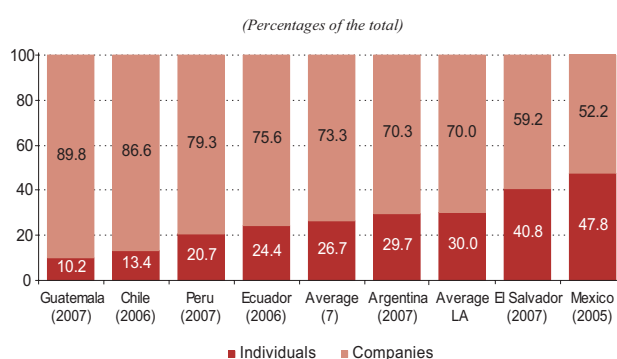
The statistics compiled paint a bleak picture of the progress achieved thus far in creating tax systems that provide for a higher degree of distributive justice and a stronger balance between direct and indirect taxation, as is the case in more developed countries.

Income tax revenue has increased, rising from 2.5% of GDP in 1991 to 3.6% in 2001 and 5.4% in 2007, on average across the seven countries studied. As can be seen in table 3, income tax revenue grew by 119% between 1991 and 2007, while the tax burden rose by 30%. This highlights the elasticity of income tax over this period. Performance across the region's 19 countries was similar to that of the seven countries studied, although income tax revenue rose by only 61%, while the tax burden increased by 34%. While the strong performance of income tax has, to a certain extent, narrowed a structural gap in the region's tax structures²⁴, a particular feature in the composition of income taxes in Latin America should not be overlooked. As shown in figure 16, which employs data from 2007, 73% of income tax revenue was obtained from corporations, whereas only 27% was obtained from physical persons. Guatemala and Chile –which respectively obtain 89% and 86% of their overall income tax revenue from corporations– are at one end of the spectrum, while Mexico and El Salvador, with 52% and 59%, respectively, are at the other. Thus, even in countries where physical persons account for a larger share of revenue, personal income tax revenue remains far too small to substantially affect the distribution of income.

²⁴ This gap is mentioned by Gómez Sabaini (2006), op.cit.

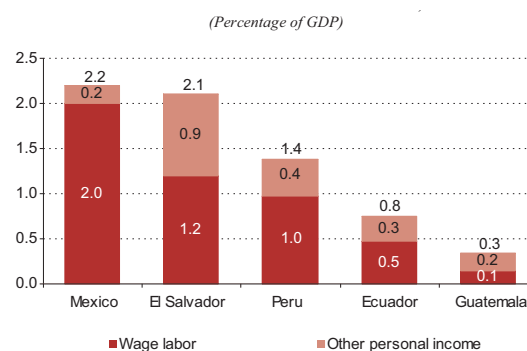
Moreover, most personal income tax revenue in these countries is obtained from wage earners, as shown in figure 17. This is attributable to the fact that taxable bases are comprised primarily of wages, due to the tax privileges granted to returns on capital. Such privileges include exemptions or special treatment for bank loans, interest on government bonds, earnings from investment funds and capital gains on real property and stock shares. Several countries also grant special treatment to profit reinvestment.

Figure 16
Income tax structure, 2007



Source: compiled by the author based on data from Cetrángolo and Gómez Sabaini (2009), Jorratt (2009), Roca (2009), Cabrera and Guzmán (2009), Cabrera (2009), Alvarez Estrada (2009), Arias Minaya (2009) and ECLAC.

Figure 17
Structure of personal income tax, 2007



Source: compiled by the author based on data from Roca (2009), Cabrera and Guzmán (2009), Cabrera (2009), Alvarez Estrada (2009), Arias Minaya (2009) and ECLAC.

F.2 Some characteristics of income taxes

Over the last twenty years, Latin American tax systems have been moving toward the development of a general consumption, VAT-type tax based, to varying degrees, on the European model set forth in the Sixth Community Directive.

Today, few countries employ any approach other than the debit-minus-credit system, which provides for the deduction of credits for business investments and recognizes the

destination principle with regard to foreign trade (exempting exports and granting refunds for the inputs employed, as well as taxing imports).

The application of this principle may vary from country to country in certain areas, such as the duration of exemptions for goods and services and the aliquots applied.

In short, Latin American countries have applied a “model” characterized by the general taxation of consumption. The systems employed to that effect are so similar that the term “model” does indeed apply.

The same cannot be said of income tax. As this section will show, the cases studied reveal that there is no standard approach to the taxation of income in the region. On the contrary, from the very inception of such taxes, as well as over time, the approaches adopted by different countries have differed, either in the assessment criteria used or the aliquots employed.

First of all, as noted above, Latin America differs from developed countries in that its income tax revenue is derived mainly from corporations. This is true not only because the role of personal income taxes in the region is almost incidental, but also because no reforms have been enacted to modify its composition. Thus, it continues to focus primarily on wage earners.

As noted above, this makes income tax in the region substantially different from that of developed countries in terms of its economic impact. Corporate income tax can be transferred to prices or factors, transforming it into an “indirect” tax, whereas personal income tax cannot, save for exceptional cases.

Secondly, over the years many countries have enacted reforms to improve their corporate income tax systems, reformulating jurisdictional principles, expanding the definition of taxable income and adopting international tax rules – particularly with regard to the application of transfer prices.

This push toward modernization is absent from the taxation of individuals. On the contrary, the approach adopted with regard to personal income tax has become increasingly divorced from that applied to its corporate counterpart, with the establishment of rules which exclude share dividends from overall personal income. This fracturing of personal income can also be observed with regard to income derived from all types of financial investments. For a variety of reasons, these investments are tax-free in many countries, or are subject to special rates.

This has had a negative impact on the equity of the system, creating ways for tax evasion, encouraging arbitrage maneuvers, impeding the effective administration of the system and robbing it of transparency and generality. At one end of the broad spectrum of income tax policies one finds Chile, where “three basic principles ... must be taken

into account to understand its current structure. Firstly, tax subjects must ultimately be physical persons; taxes paid by corporations are deductible from personal income taxes, in order to avoid the double taxation typical of the classical system. Secondly, the taxable base must include all of the income received by an individual during the tax year. This is known as the principle of global income taxation. Thirdly, taxes must be employed as a redistributive tool, accomplished through a progressive scale of tax rates”²⁵.

At the other end of the spectrum is Guatemala with a tax system in which some of its most relevant features are the ones that follow: “businesses are taxpayers; territorial income is taxed; income is treated on a disaggregated basis; and returns on capital receive special treatment. In addition, there are two tax regimes applicable to corporations and individuals engaged in corporate activities. These are known as the general regime and the optional regime. Under the general regime, corporations and individuals pay 5% of their gross income. Under the optional regime, they may choose to pay 31% of their net income”²⁶.

As noted by Cabrera (2009), “the incipient development of the Guatemalan financial system, coupled with current bank secrecy rules and the lack of expertise on the subject on the part of the Superintendencia de Tax Administration (Superintendencia de Administración Tributaria), significantly restrict the ability of the authorities to track taxpayers and enforce current legislation. Moreover, the differential treatment accorded to returns on capital, in its various forms (dividends, capital gains, interest, royalties) encourages arbitrage, reducing revenue and hampering its administration”.

El Salvador also deals with income on a disaggregated basis, as do several other countries. In this regard, Cabrera and Guzmán (2009) note that “though they are classified as income, returns on capital are treated more favorably than labor income”. These authors also note that “this distinction between returns on capital and labor income entails an element of inequality between persons who obtain their income from employment and those who obtain it from other sources. As in any society, savings and access to financial assets or real property are concentrated in the hands of the higher-income section of the population, therefore increasing the inequality of the tax system”²⁷. Table 5 compares the approaches of the countries studied to financial income and capital gains. Both are clearly granted favorable treatment in most countries, with the above-mentioned results.

25 Jorratt (2009), op.cit.

26 Cabrera (2009), “La tributación directa en América Latina, equidad y desafíos: el caso de Guatemala”.

27 Cabrera and Guzmán (2009), “La tributación directa en América Latina, equidad y desafíos: el caso de El Salvador”.

Table 5. Comparison of income tax rates, 2007
(Percentages)

Country	Income of corporations	Capital gains	Branches abroad	Stock dividends
Argentina	35	35	35	0
Chile	17	17	35	35
Ecuador	25	0	25	0
El Salvador	25	25	25	0
Guatemala	5 or 31	10	31	0
Mexico	28	28	28	0
Peru	30	30	n/a	4.1

Source: compiled by the author on the basis of data from Cetrángolo and Gómez Sabaini (2009), Jorratt (2009), Roca (2009), Cabrera and Guzmán (2009), Cabrera (2009), Álvarez Estrada (2009), Arias Minaya (2009) and ECLAC.

Certain general conclusions can be reached regarding the levels and structures of the rates applied.

The corporate income tax rate in five of the seven countries studied ranges between a minimum of 25% (Ecuador and El Salvador) and a maximum of 35% (Argentina). Two countries are special cases. One is Chile, where corporations (first-category income) are subject to a 17% tax rate. The other is Guatemala, where corporations pay either 5% of their gross income or, optionally, 31% of their net income. Secondly, differences between tax rates seem to have declined in the region; and there have been fewer fluctuations within each over the last five years.

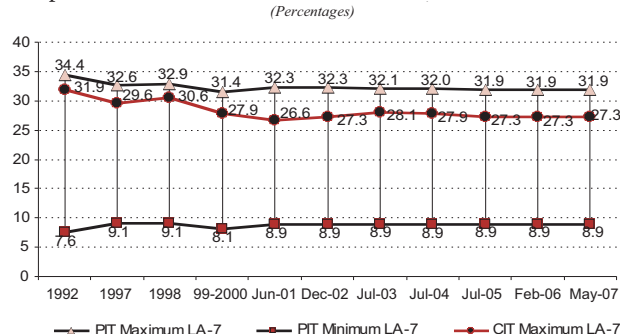
Figure 18 charts the evolution of average income tax rates for individuals and corporations in the countries studied²⁸. As shown below, average maximum rates declined between 1992 and 2007, converging at around 30 percent. While average minimum rates for individuals rose during the 1990s, they have remained relatively stable over the last few years, hovering at approximately 9 percent. As mentioned above, the figure below illustrates the shrinking gap between (average) maximum and minimum tax rates for individuals. Thirdly, countries have modified their approach to corporate “dividends” over the last few years, as a direct result of the reduction of the maximum marginal rates applied to individual income.

Figure 19 compares the legal income tax rates of the countries studied for the 1992-2007 period, on the basis of which the following conclusions may be drawn:

- With the exception of Argentina, where the maximum corporate income tax rate in 1992 was far below average for the Latin American countries studied, this rate declined significantly between 1992 and 2007.

²⁸ Maximum and minimum rates for individuals; maximum legal rate for corporations.

Figure 18
Evolution of income tax legal rates for individuals and corporations, 1992-2007
(Percentages)



Source: compiled by the author based on data from Cetrángolo and Gómez Sabaini (2009), Jorratt (2009), Roca (2009), Cabrera and Guzmán (2009), Cabrera (2009), Álvarez Estrada (2009), Arias Minaya (2009) and ECLAC.

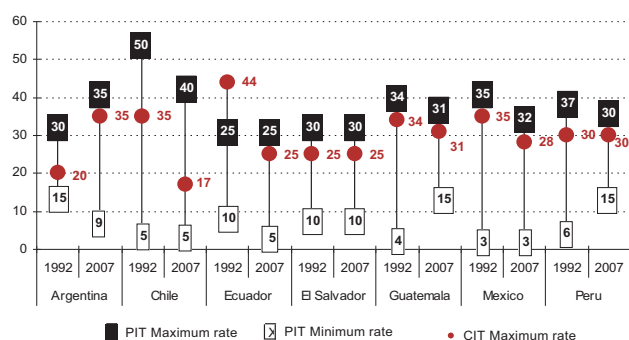
Note: PIT= Personal Income Tax; CIT= Corporate Income Tax; LA-7= countries included in the study. Data refers to the average of the seven countries analyzed.

- A comparison of the maximum and minimum income tax rates for individuals in each country between 1992 and 2007 shows that, in most cases, the gap between rates has been reduced (or at least remained steady). The exception is Argentina. This is attributable to the specific characteristics of the country’s tax system since 1992, when the gap between the maximum and minimum rates was narrow compared to the rest of the countries studied. Although its evolution has differed from that of the other countries studied, its tax rates have been moving toward convergence with other Latin American countries.
- The maximum personal income tax rates in the countries studied are virtually identical to the rates applied to corporations – between 25% and 35% – with the exception of Chile, which applies a maximum rate of 40%.

As a result of the convergence between corporate and personal income tax rates, share dividends have been excluded or exempted from personal income tax in six of the seven cases studied, since they are considered to have already been subject to taxation through the corporation which generated them.

There are some observations to be made in this regard. Firstly, the procedures described above constitute a disaggregated, proportional approach to income derived from stock share dividends that is, a departure from the concept of aggregate income. Secondly, they represent a complete acceptance of the notion that corporate income tax is non-transferable. This is a questionable idea, both in theory and practice even in developed countries, and more so in imperfect markets.

Figure 19
Comparison of income tax legal rates, 1992 vs. 2007
(Percentages)



Source: compiled by the author on the basis of data from Cetrángolo and Gómez Sabaini (2009), Jorratt (2009), Roca (2009), Cabrera and Guzmán (2009), Cabrera (2009), Álvarez Estrada (2009), Arias Minaya (2009) and ECLAC.

Moreover, the exclusion of dividends concentrates savings – Chile is one example – in the hands of corporations, which can avoid taxation by establishing other intermediate corporations, thereby escaping the progressivity of their tax obligations. This has an unquestionable impact on distributive equity, as well as on personal income tax revenue.

Fourthly, it is logical to expect that stock share income should receive the same treatment as income from other financial investments, in order to avoid arbitrage between the various instruments employed to invest savings. Partly on the basis of this argument, and partly due to the difficulty of determining income in the presence of inflation, most of the countries studied have excluded or exempted income from financial investments. Consequently, personal income tax has been limited almost exclusively to earnings derived from labor.

Most countries accord capital gains the same treatment given to ordinary income, in order to ensure parity between the two types of income. El Salvador and Guatemala are exceptions. In El Salvador, the tax rate varies according to the time elapsed between purchase and sale; in Guatemala, the tax rate for capital gains is 10% – a rate which differs from that offered under either of the country's corporate income tax regimes.

F.3 Level and composition of property taxes

A quick glance at table 6 shows that, in the seven cases studied, if taxes on financial transactions are excluded from property taxes, the latter barely exceed 0.4% of GDP. There are significant variations between countries, however. El Salvador, Guatemala and Peru are at one end of the spectrum, with a property tax burden lower than

Table 6. Property tax revenue, 2007
(Percentages)

Country	% of GDP	Structure (%)
Argentina ^a	1.01	100.0
Immovable property	0.41	40.2
Personal goods	0.31	30.2
Vehicles and others	0.30	29.5
Chile	0.60	100.0
Immovable property	0.56	93.4
Inheritance	0.04	6.6
El Salvador	0.10	100.0
Transfer of property	0.10	100.0
Guatemala	0.15	100.0
Immovable property	0.14	96.5
Inheritance	0.01	3.5
Ecuador	0.45	100.0
Immovable property	0.14	31.1
Vehicles	0.18	40.0
Total assets	0.08	18.4
Transfer of property	0.05	10.4
México	0.48	100.0
Immovable property	0.17	36.1
Vehicles	0.19	38.4
Others	0.12	25.5
Peru ^b	0.20	100.0
Immovable property	0.16	78.7
Vehicles	0.02	8.6
Transfer of property	0.03	12.7
Average (7 countries)	0.43	
Average Latin America (17 countries) ^c	0.57	

Source: Cetrángolo and Gómez Sabaini (2009), Jorratt (2009), Roca (2009), Cabrera and Guzmán (2009), Cabrera (2009), Álvarez Estrada (2009), Arias Minaya (2009) and ECLAC. Note: the scope of the data is for the general government for Argentina, Chile, Guatemala, Ecuador, Mexico and Peru. For El Salvador is for the central government.

^a Taxes on financial transactions (national and provincial), which represent a total of 2.2% of GDP, were not considered.

^b Taxes on financial transactions, which represent a total of 0.31% of GDP, were not considered.

^c The average for Latin America does not include taxes on financial transactions.

0.2 points of GDP; Argentina and Chile are at the other end, with 1% and 0.6%, respectively.

If property taxes serve as an adequate supplement to income tax in creating a direct taxation system which includes both income flows and stocks of goods, then in view of the statistics examined, this principle has clearly gone unfulfilled in Latin America.

With the exception of Argentina, which taxes net wealth through a tax on the assets of individuals, property taxes in the region consist of taxes on immovable goods and

vehicles. Ecuador and Peru also tax real property transactions (alcabala). Chile taxes inheritances, a measure which “generates little revenue, and accounts for no more than 0.2% of overall revenue”²⁹, as does Guatemala, with similar results. In the case of El Salvador, the only property tax currently in force is a real estate transaction tax; the country’s immovable property tax was abolished in 1994.

The cause of these low revenue levels is the same in each case: recurring record-keeping problems and – especially – the undervaluation of property, as well as a long list of exemptions and administrative issues. The case studies cited suggest that improved collection of real estate taxes on the part of local governments could strengthen their effectiveness.

F.4 Some considerations regarding taxes that replace or supplement direct taxation in countries

Given the legal and administrative difficulties involved in increasing corporate income tax revenue, several countries in the region have implemented assessment methods which either supplement or replace direct taxation, in order to improve the results obtained.

These methods employ taxes which serve as a minimum tax floor, regardless of the results obtained from taxation of net corporate income. Some countries have employed an assumed assessment base predicated upon the value of assets. More recently, gross sales or gross income have been used as an assessment criterion.

Taxes established using these methods are sometimes viewed as a minimum contribution. When the tax payable is determined on the basis of net income, taxpayers who find themselves above this minimum contribution are required to pay the difference; otherwise, taxes on assets or gross sales continue to serve as the minimum tax.

In other cases – particularly in recent years – these alternate methods have been used to offer taxpayers a choice of assessment criteria. The approval of the tax authorities is usually, though not always, required before such optional mechanisms can be employed.

In countries where such practices have been adopted, the concept of tax subject is being redefined. It has now expanded beyond corporations to include any party not in an employment relationship; taxation of individuals is limited almost exclusively to income derived from wages and salaries.

Most countries employ a rate of approximately 1% of gross assets (see table 7). Recently, however, there has been an increase in the use of gross sales or gross income as a

substitutive base. This has caused even more discrimination than the tax itself.

These reforms clearly reflect the limitations countries face, both legally and administratively, in the application of a tax structure whose nominal or legal rates coincide with the resulting effective rates. In practice, such systems lead to the abolition of corporate tax, replacing it with a “pseudo tax cascade” which aggravates problems surrounding the distribution of income and compromises market efficiency. If income taxes are to be strengthened, their assessment base must be broadened – eliminating exemptions, discriminatory privileges that favor certain subjects and/or sectors – and voluntary compliance must be increased. Above all, the managerial and enforcement capability of the tax authorities must be improved.

With the exception of Chile and El Salvador, all countries have established some type of minimum or substitutive tax, as explained in each case.

Two issues must be noted with regard to Argentina. Firstly, the country applies an asset tax which serves as a minimum tax. It can be used as a basis for determining the amount payable on earnings during the tax year. Thus, it serves as a minimum tax. It is applied to the assets of corporations or unipersonal businesses domiciled in the country, as well as permanent establishments or undivided estates domiciled abroad whose overall value exceeds 200,000 pesos. The rate applied in this case is 1% of the taxable base.

Secondly, since 2001 the country has levied taxes (duties or withholding taxes) on the export of commodities. Their effect has been substantially similar to that of income tax. The significance of these taxes should be noted, as they were a consistent source of high revenue between 2001 and 2007, both in absolute terms (10% of overall national revenue) and as a percentage of GDP (between 2.0% and 2.5% during the period in question)³⁰.

One example of interest is Guatemala, a country which possesses two different tax regimes for corporations and individuals engaged in corporate activity: the general regime and the optional regime. Under the first regime, corporations and individuals pay a 5% tax on their gross income; the second regime allows them to pay 31% on their net income. Two additional requirements must be met in order to participate in this optional regime: the maximum allowable deduction for costs and expenses is 97%, and a minimum tax on assets and gross income must be paid, as will be explained below.

A progressive scale has been established for wage earners, with marginal rates of up to a maximum of 31%. It includes a single deduction of Q 36,000 (approx. USD 4,700), as

²⁹ Jorratt (2009).

³⁰ This is a progressive tax in terms of income distribution. It is paid primarily by higher-income deciles, and it prevents increases in the price of the mass consumption basket.

well as other deductions for medical expenses, social security contributions, dues paid to professional associations, donations or contributions to cultural or religious institutions and non-term insurance premiums. Wage earners are also entitled to deduct the value-added tax (VAT) paid on purchases. These workers pay their annual income tax through monthly withholdings. In the case of Mexico, in late 2007 the country's national legislature approved a new tax to replace the asset tax, in an attempt to improve revenue. The new tax is applicable both to individuals and corporations domiciled in the country. Known as the Single-Rate Corporate Tax (Impuesto Empresarial a Tasa Única, or IETU), it was designed to supplement the country's income tax³¹. Taxpayers are required to pay the difference between the IETU and the income tax. IETU was designed as a consumption tax³² on cash flows. It is set at a rate of 16.5 %, at an assessment base equivalent to the value obtained after subtracting the acquisition of fixed goods, as well as costs and expenses, including

donations and losses from uncollectable loans, from cash income. Given its nature – it is a consumption tax applied to corporations – it grants no fiscal effect to expenses involving factors of production, such as wages, salaries and interest. From its inception, IETU was designed as a broad-based, general tax. It provides no exceptions or preferential treatment. In terms of revenue, it has the potential to offset the structural limitations of the country's VAT and income tax, creating an adequate income base for the state and serving as an alternative to oil as a source of revenue. In Ecuador, recent tax reforms have modified the income tax advances required from corporations (as well as individuals and undivided estates required to file tax returns), transforming them into a minimum payment. Before this reform, the advances in question for the year *t* were set at 50% of taxes accrued during the tax year (*t*-1) minus the withholdings effected during *t*-1. Under the new procedure, income tax advances are the maximum between (i) the advance as computed above, or

Table 7. Asset, capital or gross income tax rates

	2000	2001	2004	2008
Argentina	1% over assets	1% over assets	1% over assets	1% over assets above 200.000 pesos ^a
Ecuador	0.15% over net wealth ^b			0.15% over net wealth ^b
El Salvador	-	n/a	n/a	n/a
Guatemala	1.5% over assets	0.2%-0.9% over immovable property ^c and 3.5% over assets ^d	1% over assets	1% over assets
Mexico	1.8% over assetse	1.8% over assets ^c	1.8% over assets ^c	Abolished since 2008
Peru	-	-	-	0.5% over the value of assets above one million soles ^f
Chile	Not applicable	Not applicable	Not applicable	Not applicable

Source: compiled by the author on the basis of data from Tanzi (2000) for 1986 to 2000 and Gómez Sabaini (2005).

Notes:

^a The income tax can be computed as a payment against the wealth tax.

^b 1% of assets as advance payment of the income tax.

^c Although the tax base is on the value of real property, the tax is not conceived as a property tax, but as an additional tax on company income.

^d There is no tax on net wealth in Guatemala, however, the wealth tax (IEMA) levies a rate of 3.5% on assets or 2.25% on gross income declared in the income tax return of the previous year.

^e Minimum income tax for corporations; creditable against the income tax. The income tax is creditable against the gross wealth tax, in order to avoid the problem of foreign investors crediting against tax liabilities in their own country.

^f It is discounted from income tax.

³¹ With the entry into force of the IETU, the asset tax (Impuesto al Activo, or IMPAC) was abolished.

³² Conceptually, the base of IETU is similar to an origin-based VAT (it includes exports while excluding imports). In macroeconomic terms, its base is equivalent to GDP minus investment in physical capital (I) plus depreciation of fixed assets (d).

(ii) the sum of 0.2% of overall property plus 0.2% of overall deductible costs and expenses, plus 0.4% of total assets, plus 0.4% of total income, minus the withholdings of the previous tax year. It is an approach which may be described as “unorthodox”, since most countries which require minimum payments of this nature base them on the value of assets or, more recently, gross sales or gross income.

In the case of Peru, a minimum income tax has been in effect since 1992. This tax has changed over time, and is based on the value of assets. Asset tax is subtracted from income tax. The current version of this tax is known as the Temporary Net Asset Tax (Impuesto Temporal a los Activos Netos, or ITAN). It is applied to values in excess of one million new soles in net assets. Though its rate was 0.5% in 2007 and 2008, in 2009 it was lowered to 0.4%. Table 7 summarizes the alternative systems employed by the countries studied.

6. Results of distributive impact studies

Studies on the impact of tax policy in the region are considerably limited, and the diversity of methodologies employed precludes a comparison between countries³³. Nevertheless, some basic areas of convergence can be identified in the results obtained. These results suggest that taxation in the region is regressive, given the predominance of indirect taxation over direct taxation. More specifically, the small role played by the most progressive of taxes – personal income tax – prevents it from offsetting the regressive nature of the system. It should also be noted that even corporate income tax is either proportional or regressive, as shown by most of the case studies – although this is more a function of transference assumptions than empirical analysis.

In Guatemala, the few studies available focus on income tax. Almost all of them conclude that corporate income tax in the country is proportional, with the exception of one recent study which describes it as regressive³⁴.

In the case of El Salvador, the results obtained suggest that both the tax system as a whole and the country’s corporate income tax are regressive, and that, with the exception of personal income tax, all of the taxes are basically concentrated in the poorest deciles. Acevedo and González Orellana (2005), have observed a decline in the Gini coefficient, from 50.19 to 50.04, when income tax is applied to individuals, as well as an increase, from 50.19 to

50.83, when it is applied to corporations.

In Peru, Houghton (2006) has shown that the combined effect of taxation and spending is progressive. He argues that a VAT increase, accompanied by increased spending, would benefit the country’s poorest households, and notes that the effective tax burden of the Personal Income Tax (PIT) is very low, even for the richest decile – despite a nominal marginal rate of 30%. This is attributable to the number of deductions allowed by the system, as well as the level of evasion.

In Ecuador, most studies focus on the impact of value-added tax³⁵. The few studies available on direct taxation suggest that the country’s PIT, while highly progressive – the richest ten percent, which accounts for more than 55% of income, pays over 90% of the tax— has had little redistributive impact³⁶. Arteta (2006) reaches similar conclusions regarding this tax, noting that the Gini index declined from 0.408 to 0.403 after its application.

Roca (2009) reaches similar conclusions after estimating the distributive impact and progressivity of the PIT on the basis of 2005 data. He notes that, despite the highly progressive nature of the tax, “the tenth decile’s share of overall income only declined from 52.08% to 51.43% after its application”. After analyzing the effects of the tax reforms of January 2008, he concludes that modifications to the PIT generated a “purely aesthetic” increase in progressivity, since “given the decline in revenue, its low redistributive impact remains unchanged”.

In Mexico, pursuant to a congressional mandate, the country’s Secretariat of Finance and Public Credit (SHCP) has carried out a number of studies on the distribution of tax payments and the impact of public spending, in order to develop an analytical understanding of the redistributive effect of tax policy³⁷. One of the most recent of these studies (2008) shows the emergence of progressive tendencies in the tax system, as the ninth and tenth deciles of the population currently account for 60% of overall revenue, whereas the first and second deciles contribute only 3%³⁸. Taxation has thus reduced the income concentration coefficient from 0.449 to 0.446.

Argentina is possibly the most studied country in the region, over the longest time period, in terms of tax

33 More details available in the full versions of the case studies (including statistical appendices), which have been published by ECLAC as part of the “Macroeconomics of Development” series, and can be consulted at www.cepal.org/publicaciones.

34 See studies by Cabrera (2009).

35 SIISE (2001), “El IVA en el Ecuador: un análisis de equidad”; Molina et al. (2000), “El IVA: regresivo para casi todos”.

36 Roca and Vallarino (2003): “Incidencia distributiva de la política fiscal en Ecuador”.

37 Studies from 2001 to 2008 are available at the SHCP web page: www.shcp.gob.mx

38 Strictly speaking, this does not mean that the tax system has had a clear progressive impact on the distribution of income. Such a conclusion would require an analysis of the impact of taxation on the income of each decile; the Lorenz Curve (which ranks deciles according to income) would have to be compared with the tax concentration curve (which tracks the amounts paid by each stratum of the population in absolute terms, regardless of income or consumption).

impact³⁹. Most studies agree on the effect of taxation on equity: direct taxes are the most progressive. Chief among these are personal income taxes and, to a lesser extent, corporate income taxes. They are followed by taxes on personal goods and net property. The most regressive taxes – in descending order – are social security contributions, taxes on cigarettes and alcoholic beverages, VAT and provincial gross income taxes. The predominance of indirect taxes over direct ones explains why the system as a whole has had a regressive impact.

In short, while the studies cited differ – largely as a result of differences in the income variables and transference criteria employed – they all suggest slightly regressive tax systems which, far from improving the distribution of income, actually encourage greater inequality. The impact of this regressivity is strongest among the two poorest deciles, which display a differential tax burden higher than that of the rest of the population – particularly compared to the two richest deciles, where the burden is lowest. Using data from 1997, Gómez Sabaini, Santiere and Rossignolo (2002) have shown that the differential tax burden⁴⁰ for the poorest decile surpasses 115%, whereas for the richest deciles it is below 100%.

Finally, in the case of Chile, it is instructive to note that two main schools of thought exist with regard to the use of tax policy as a redistributive tool. Some argue that taxes should be selected based on efficiency, and priority should be given to social spending in order to achieve greater equity. Others hold that taxation and social spending should complement one another in the quest for greater overall progressivity.

The first school includes a study by Engel et al. (1998), which analyzed the impact of the 1996 tax structure on the distribution of income and concluded that the Chilean tax structure is slightly regressive, with the Gini index rising from 0.488 to 0.496 after taxation. What is most significant about this study, however, is that it simulated a number of radical reforms, and concluded that the impact of modifications to the tax structure would be negligible compared to the redistribution indices obtained through public spending⁴¹. The study estimated that public spending would reduce the Gini index to 0.439.

The second school includes a more recent study (Cantalloppts et al.; 2007), which shows that, by overlooking

individual participation in corporate profit withholdings and taxation thereof, Engel and others (1998) underestimated the concentration of income, as well as the redistributive potential of taxation. Thus, in addition to confirming that the tax system is regressive, with the Gini coefficient rising from 0.522 to 0.530 after taxation, Cantalloppts et al. (2007) concludes that certain reforms aimed at reversing the revenue relationship between direct and indirect taxes could have a significant impact on the redistribution of income⁴². Indeed, after simulating an expansion of the taxable base of the progressive income tax and a reduction in the share of VAT, in order to keep the revenue constant, income distribution improved, with the Gini index falling from 0.530 to 0.488⁴³.

H. Estimating the income tax gap

Just as the previous sections dealt with the effects of evasion on tax systems – specifically their solvency and equity levels – this section will address three basic issues: the importance of a systematic approach to developing income tax gap estimates, the difficulties encountered in relation to current methodologies and statistics, and the results of the studies cited herein.

H.1 Importance of income tax gap estimates

As noted by Cetrángolo and Gómez Sabaini (2009) in their study of Argentina, given the fact that the failure to establish an income tax with adequate revenue-generating and redistributive capacity is largely attributable to tax administration problems, the lack of studies measuring evasion is striking. In contrast, most countries of the region have made significant efforts to estimate VAT evasion, and have given priority to improving the administration of this tax.

Given the scarcity of studies on income tax evasion, the papers cited herein are intended to encourage discussion of an estimation methodology which might be perfected and systematized in the future.

The publication of numerous evasion estimates in Mexico should be noted. The country's legislature has instructed the Tax Administration Service (Servicio de Administración Tributaria, or SAT) to enlist the services of Mexican academic institutions in the development of such estimates. As noted by Álvarez Estrada (2009), the methodological and conceptual contributions of these

³⁹ Herschel (1963), "Política fiscal en la Argentina"; Santiere (1989), "Distribución de la carga tributaria por niveles de ingreso"; Gasparini (1998), "Incidencia distributiva del sistema tributario argentino"; Gómez Sabaini and Santiere (2000), "Los impuestos y la distribución del ingreso en la Argentina"; and Gómez Sabaini, Santiere and Rossignolo (2002), "La equidad distributiva y el sistema tributario: un análisis para el caso argentino".

⁴⁰ The differential tax burden is the quotient between the tax burden of each decile and the average tax burden. If the entire system were proportional, each quintile would display a differential tax burden of 100% in relation to the average.

⁴¹ Engel et al. (1998) "Reforma tributaria y distribución del ingreso en Chile".

⁴² Cantalloppts et al. (2007), "Equidad tributaria en Chile. Un nuevo modelo para evaluar alternativas de reforma".

⁴³ Jorratt (2009), op.cit.

studies increase the store of empirical tools available to the country's tax authorities, as well as the country's legislative and judicial branches, as they work to design better taxes and find more effective mechanisms to reduce avoidance and evasion.

This highlights the importance of developing evasion estimates which can be perfected over time. In this regard, the Mexican experience could serve as a model for the region.

H.2 Estimation difficulties

Estimating evasion poses numerous difficulties, particularly if there is no similar estimation methodology to serve as a guide. An analysis of various studies shows that the main impediment to developing accurate evasion estimates is the lack of public statistics in the region – particularly with regard to national accounts, sworn statements and household surveys.

Generally speaking, there are no major methodological differences between the income tax estimates found in the case studies. They all employ the operating surplus of national accounts as their starting point, although the adjustments made to determine the taxable base vary from country to country – mainly due to problems with the quality and availability of data.

With regard to personal income tax, the studies cited estimate the theoretical taxable base by analyzing income data from household surveys, adjusted on the basis of national accounts data. These sources have a significant limitation, however – non-response and underreporting of income by survey respondents. Individuals often refuse to answer questions regarding income, or underreport their true income. Survey information has therefore been adjusted to match national accounts data, as well as the revenue records of the tax authorities. Methodological problems may persist, however, mainly because if the income reported by household surveys (adjusted for non-response and underreporting) remains undervalued, and the richest 1% is underrepresented, potential revenue and the level of non-compliance will both be underestimated. Methodological differences appear to be more important when estimating personal income tax gap than its corporate counterpart⁴⁴.

Another methodological difficulty lies in the establishment of the taxable base, and an in the large number of tax privileges and deductions granted. Insufficient statistics, combined with complex taxable bases, constitute the main challenge facing the development of income tax gap estimates in the region.

⁴⁴ For details, see Jiménez and others, Chapter II (2010).

The characteristics of income tax in Argentina make it difficult to determine the taxable base, since it is difficult to establish a direct link between this tax and the macroeconomic aggregate data usually estimated by statistical systems. This is especially true if one considers the various privileges and deductions applied to income tax. As for statistics, most problems can be traced to the fact that available national accounts information takes 1993 as base year. Another problem is the existence of payments on account between taxes, which make it difficult to identify actual tax payments, as well as payments outside the banking system⁴⁵.

In his study of Chile, Jorratt (2009) notes that methods using the theoretical potential based on national accounts provide an adequate estimate of the evolution of tax gap, though they may not do the same for its absolute value. He notes that this is particularly relevant in the case of corporate income tax, since the basic macroeconomic variable employed – operating surplus – is a residual variable within national accounts estimates, and is therefore less precise. In the case of Ecuador, Roca (2009) notes that, while operating surplus is the national accounts aggregate variable closest to the taxable base of corporate income tax (CIT), it is biased by evasion and avoidance, since it is generated by the national accounts system on the basis of data provided by the tax authorities themselves. Moreover, in order to determine the potential taxable base of the CIT, a number of adjustments are made, in accordance with tax law. These adjustments are often based on data submitted by taxpayers – information which is itself tainted by evasion and avoidance. Consequently, actual tax gap has probably been underestimated.

In the case of Mexico, as discussed below, the task of modeling the potential of the country's income tax is even more difficult, given the number of preferential regimes established by law and the relative scarcity of usable information. Other issues include the lack of microdata with which to estimate the taxable base applicable to individuals for returns on capital, as well as the tendency of households to underreport their income⁴⁶. Arias Minaya (2009) has noted similar issues in Peru, where household surveys provide little information on capital returns⁴⁷. The case of Guatemala is particularly complex, as the methodology used to estimate corporate income tax gap had to be adjusted to allow for the country's parallel regimes – the general regime, which taxes 5% of gross

⁴⁵ Cetrángolo and Gómez Sabaini (2009), "La imposición en Argentina: un análisis de la imposición a la renta, a los patrimonios y otros tributos considerados directos".

⁴⁶ Álvarez Estrada (2009) "Tributación directa en América Latina: equidad y desafíos. Estudio del caso de México".

⁴⁷ Arias Minaya (2009) "La tributación directa en América Latina: equidad y desafíos. El caso de Perú".

income, and the optional regime, which taxes 31% of net income. This required additional assumptions regarding the fraction of income tax paid under each regime. Moreover, effective revenue had to be adjusted for comparison with potential revenue, taking into account the interlocking tax credits established between corporate income tax and the minimum tax known as the Special Temporary Peace Agreement Tax (Impuesto Extraordinario y Temporal de Apoyo a los Acuerdos de Paz, or IETAAP). Cabrera (2009) notes that, for the tax years following 2005, the methodology produces estimates for corporate income tax gap that are highly sensitive to the fraction of taxpayers participating in the 5% regime. They are also influenced, though to a lesser degree, by the minimum tax. As for income tax applied to individuals, all taxpayers were assumed to be part of the net income regime, since household surveys report earnings, not gross income.

The difficulty encountered in El Salvador was the absence of a breakdown of gross value added⁴⁸. Such a breakdown exists only for the baseline year 1990 (consequently, gross value added was broken down using baseline year participation). As with the other case studies, no data was available to adjust the non-labor income figures provided by household surveys for underreporting. Given the above, an analysis of the results obtained must bear in mind that the tax gap estimates produced are sensitive to the quality of available data and the assumptions employed in each case. Moreover, as noted by Roca (2009), though the general term “evasion” is employed, it is more accurate to speak of a “tax gap”, since the estimation methods used do not distinguish between evasion and avoidance. Potential revenue is calculated based on the letter and “spirit” of the law, regardless of the loopholes employed to (legally) reduce tax obligations (avoidance).

H.3 Results

H.3.1 Background to country studies

Argentina has a long tradition of studies on VAT evasion estimation, but little experience with income tax. Three studies on corporate income tax were carried out in the 1960s; their evasion estimates vary between 31% and 75%⁴⁹. The most recent study, carried out by Durán

(2000)⁵⁰, deals with individual income tax. This study puts evasion at 47.2%⁵¹.

In Mexico, on the other hand, more studies on tax evasion have been published in the last four years than had perhaps been published in the previous two decades. As noted previously, the abundance of such studies is a result of a congressional mandate which requires the country’s Tax Administration Service (SAT) to hire Mexican academic institutions for that purpose⁵².

In Chile, several studies are available on the subject. One of the first, published by the country’s Internal Taxation Service (SII), was carried out by Barra and Jorratt (1999), and offers estimates of evasion by tax type for the 1989-1997 period. It estimates VAT evasion for the last year of the period to be 19.7%, while corporate and personal income tax evasion rates are estimated to be 41.7% and 35.8%, respectively.

Few estimates of income tax evasion are available for Peru, and there is no known study that measures both individual and corporate income tax evasion⁵³. The three existing studies of individual income tax focus on the years 1995, 2000 and 2005⁵⁴. They estimate evasion to be between 31% and 44%, although the two most recent ones suggest that it may be closer to 30%. The only study available on corporate income tax, for the year 2000, estimates evasion at 79%⁵⁵.

In Ecuador, one income tax study of the Service of Internal Revenue (SRI, 2007) offers an estimate of VAT and income tax revenue gaps by economic activity. According to this study, the overall VAT revenue gap (in 2004) was 30.6%. The biggest evaders were heavy industry (80%), medium industry (53%) and the oil extraction industry (52%). The overall income tax revenue gap was approximately 61.3%; the biggest evaders in this regard were the construction industry (96%), primary production (92%) and brokerage services (82%).

In El Salvador, the only publicly available study on evasion was published by Funde in 2008. According to this study, income tax evasion ranged from 58% to 27% between 2004 and 2007. The study notes that, according to press reports, IDB studies put VAT evasion at 37% and income tax evasion at 55%, while USAID estimates put VAT evasion at 40%, income tax evasion at 58% and

⁴⁸ Gross value added is comprised of gross operating surplus, wages and indirect taxes net of subsidy.

⁴⁹ Banco Central de la República Argentina (1962), “Boletín Estadístico”, Programa Conjunto de Tributación OEA/BID/CEPAL (1963), “Estudio sobre política fiscal en la Argentina”; Consejo Nacional de Desarrollo (1968), “Estimación de las rentas no declaradas que deberían tributar en el impuesto a los réditos”.

⁵⁰ Durán V. (2000), “La evasión en el impuesto a las ganancias de personas físicas: mitos y realidades”.

⁵¹ Cetrángolo and Gómez Sabaini (2009), *op.cit.*

⁵² Álvarez Estrada (2009), *op.cit.*

⁵³ Arias Minaya (2009), *op.cit.*

⁵⁴ SUNAT (1995), “Cálculo de evasión tributaria”; De la Roca and Hernández (2004), “Evasión tributaria e informalidad en el Perú: Una aproximación a partir del enfoque de discrepancias en el consumo”, and León (2006), “Análisis de la informalidad en el mercado laboral peruano”.

⁵⁵ SUNAT (2002), “Análisis de impuesto a la renta en el Perú”.

evasion of the alcoholic beverage tax at 67%⁵⁶. Finally, a few studies were carried out in Guatemala during the 1990s, including a report by Casanegra (1997) who estimated the rate of individual income tax evasion at approximately 66%, compared to 53% for its corporate counterpart. In 2000, Acción Ciudadana estimated income tax evasion at 48%. Finally, Solórzano (2005) put individual evasion between 3% and 20% and corporate evasion between 40% and 60% of potential revenue. As noted by Cabrera (2009), in Guatemala, as in the other countries in the region, most studies of evasion have focused on VAT.

H.3.2 Case study results

Following are the results obtained by each study, accompanied by a brief analysis. Certain clarifications should first be made, in order to facilitate a better understanding of the results and avoid erroneous interpretations of the figures they contain.

Firstly, most studies employ the tax gap methodology between effective revenue and theoretical revenue. This means that, when they discuss the evasion rate, they are referring to the gap between theoretical and effective revenue divided by theoretical revenue. The results

obtained not only include evasion, but also a significant measure of existing tax avoidance. As noted by Cabrera and Guzmán (2009), there is a certain ambiguity in the measurements obtained since they include not only evasion but also avoidance (the use of legal mechanisms to reduce tax obligations).

Secondly, it should be emphasized that the results obtained are sensitive to methodological changes, as well as the availability of statistics, as previously noted. Thirdly, while the results of the studies are presented together, and some comparisons are drawn, caution should be exercised when comparing tax gap in different countries, given the different methodologies employed and the varying availability of statistics. In any event, the results obtained should be viewed from a general, long-term perspective, in order to identify positive or negative trends which could be used to perfect or correct the methodologies and tools employed. If this approach is adopted, the data and experiences accrued over the years can serve as a valuable source of guidelines for the gradual reduction of tax evasion and avoidance.

Finally, it should be noted that the importance of this study lies in its analysis of the significance of the revenue gap. It seeks to encourage further study, in order to

Table 8. Overall income tax gap
(Percentages)

Country (year)	Tax burden	Theoretical revenue	Effective revenue ^a	Gap ^b	Tax gap rate ^c (%)	Gap / Total Tax revenue (%)
		(Percentage of GDP)				
	1	2	3	4	5	6
Argentina (2005)	27.2	11.3	5.7	5.6	49.7	20.6
Chile (2003)	18.8	8.1	4.3	3.8	47.4	20.4
El Salvador (2005) ^d	14.2	7.0	3.8	3.1	45.3	22.2
Ecuador (2005)	14.9	8.6	3.1	5.5	63.8	36.8
Guatemala (2006)	12.1	8.7	3.1	5.5	63.7	45.8
Peru (2006)	16.7	11.9	6.1	5.8	48.5	34.7
Mexico (2004)	10.3	7.0	4.1	2.9	41.6	28.5

Source: compiled by the author on the basis of data from Cetrángolo and Gómez Sabaini (2009), Jorratt (2009), Roca (2009), Cabrera and Guzmán (2009), Cabrera (2009), Álvarez Estrada (2009), Arias Minaya (2009) and ECLAC.

Note: as in the studies, the estimations of tax gap have been separated between corporations and individuals –with the exception of Argentina. To show combined tax gap, effective and theoretical revenue data were added, and based on those sums the combined gap was calculated, therefore, obtaining the combined tax gap rate.

^a Effective revenue data used to calculate tax gap may not coincide with the revenue statistics published by the tax administrations due to methodological issues specific to each country.

^b It is the theoretical revenue minus the effective revenue (both in percentages of GDP).

^c The tax gap rate is the ratio between the revenue gap (theoretical revenue minus effective revenue) and the theoretical revenue.

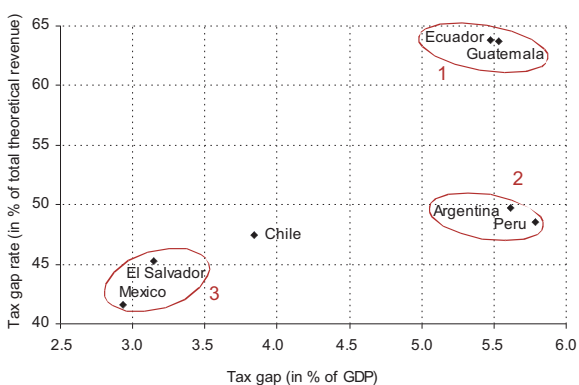
^d The study considers three scenarios in the gap of corporate income tax; an average of the results from all 3 scenarios was used in the compiling of this table.

⁵⁶ Cabrera and Guzmán (2009), op.cit.

achieve a deeper understanding of the composition of the gap – a goal which lies beyond the scope of this paper. That said, the results of the case studies are presented as follows. First, a number of indicators are grouped together and analyzed, in order to compare the results of each study. The main issues identified and conclusions reached by the authors of each study are then discussed. Table 8 shows effective income tax revenue (column 3), the revenue gap as a percentage of GDP (column 4) and as a percentage of theoretical revenue (column 5), along with the overall tax burden and theoretical income tax revenue (columns 1 and 2, respectively). From these, it can be seen that tax gap rates range between 40% and 65%, therefore it can be said about the countries studied that they have high income tax gap rates⁵⁷. These gap levels have produced an average revenue gap equivalent to 4.6 points of GDP, with a few variations between countries.

Figure 20 shows the situation of each country in greater detail. One group is comprised of Ecuador and Guatemala – two countries with a high tax gap rate (close to 65%) combined with a high revenue gap in GDP terms (approximately 5.5% of GDP). Argentina and Peru occupy the middle ground, also with a revenue gap of approximately 5.5% of GDP but with a lower tax gap rate, standing at around 50%. Mexico and El Salvador comprise a third group, with slightly lower gap rates (41%

Figure 20
Overall income tax gap
(Percentages)



Source: compiled by the author on the basis of data from Cetrángolo and Gómez Sabaini (2009), Jorratt (2009), Roca (2009), Cabrera and Guzmán (2009), Cabrera (2009), Álvarez Estrada (2009), Arias Minaya (2009).

Notes:

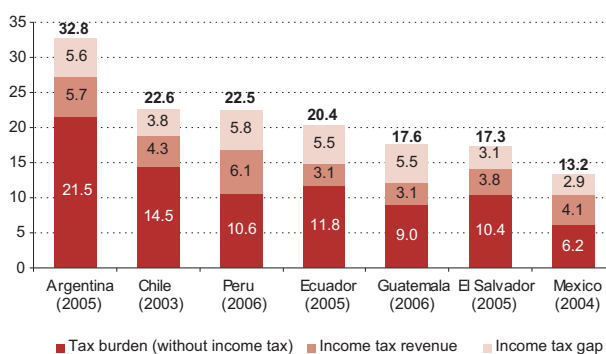
- a The tax gap rate is the ratio between the revenue gap (theoretical revenue minus effective revenue) and the theoretical revenue.
- b The revenue gap (as percentage of GDP) is the theoretical revenue minus the effective revenue

⁵⁷ The tables that follow are based on the theoretical and effective revenue data employed by each study. For studies spanning more than one year, the year for which the most statistics were available was used.

and 45%, respectively) and a substantially lower gap in GDP terms (2.9% and 3.1% of GDP, respectively). Chile is situated between groups 2 and 3.

What percentage of the overall tax burden does this loss of revenue represent? In other words, how much would the tax burden grow by if the tax gap was reduced to zero? In countries with a tax burden above the regional average, loss of revenue is significant, but considerably lower than for the rest of the region. This is the case in Argentina and Chile, where, if income tax gap was eliminated, the tax burden would grow by 20% (table 8, column 6). Ecuador, Guatemala and Peru are at the other end of the spectrum; in addition to suffering a significant loss in GDP terms, they are also below the regional average in terms of their tax burden. Consequently, their tax gap represents a high percentage of overall revenue: 35% in Peru, 37% in Ecuador and 46% in Guatemala. While the causes of these gaps tend to be specific to the tax system of each country, certain common characteristics can be found. These include administrative and legal loopholes, abuse of tax incentives and a weak tax culture. Figure 21 shows the tax burden each country would possess if tax gap was eliminated. In Argentina, the complete elimination of the revenue gap in income tax, combined with the country's considerable existing revenue, would raise the tax burden to approximately 33% of GDP. If the income tax gap was reduced to zero in Peru, Ecuador and Guatemala, the resulting increase in revenue would largely offset their low tax revenue, raising the tax burden to over 20% of GDP in the first two countries and approximately 18% in Guatemala. The case of Mexico deserves special attention: while the elimina-

Figure 21
Total tax burden, income tax revenue and income tax gap
(Percentage of GDP)



Source: compiled by the author on the basis of data from Cetrángolo and Gómez Sabaini (2009), Jorratt (2009), Roca (2009), Cabrera and Guzmán (2009), Cabrera (2009), Álvarez Estrada (2009), Arias Minaya (2009) and ECLAC.

Note: Effective income tax revenue data used to calculate the tax gap may not coincide with the revenue statistics published by the tax administrations due to methodological issues specific to each country.

Table 9. Corporate income tax gap
(Percentages)

Country (year)	Tax burden	Theoretical	Effective	Gap ^b	Tax gap rate ^c (%)	Gap / Total Tax revenue (%)
		CIT revenue	CIT ^a revenue			
(Percentage of GDP)						
	1	2	3	4	5	6
Argentina (2005) ^d	27.2	8.0	4.0	4.0	49.7	14.7
Chile (2003)	18.8	4.8	2.5	2.3	48.4	12.3
El Salvador (2005) ^e	14.2	4.3	2.1	2.2	51.0	15.3
Ecuador (2005)	14.9	6.8	2.4	4.4	65.3	29.7
Guatemala (2006)	12.1	7.6	2.8	4.8	62.8	39.3
Peru (2006)	16.7	10.2	4.9	5.2	51.3	31.2
Mexico (2004)	10.3	3.2	1.7	1.5	46.2	14.6

Source: compiled by the author on the basis of data from Cetrángolo and Gómez Sabaini (2009), Jorratt (2009), Roca (2009), Cabrera and Guzmán (2009), Cabrera (2009), Álvarez Estrada (2009), Arias Minaya (2009) and ECLAC.

^a Effective revenue data used to calculate the tax gap may not coincide with the revenue statistics published by the tax administrations due to methodological issues specific to each country. CIT: Corporate Income Tax.

^b It is the theoretical revenue minus the effective revenue (both in percentages of GDP).

^c The tax gap rate is the ratio between the revenue gap (theoretical revenue minus effective revenue) and the theoretical revenue.

^d On account of the availability of statistical data, the study of Argentina does not have a separate tax gap estimates for corporations and individuals. For this table the same gap rate was used (49.7%) and the gap in terms of GDP was divided using the proportions that each concept (CIT and PIT) represents in the total income tax.

^e The study considers three scenarios for corporate income tax gap; in compiling the table the average of the results from all 3 scenarios was used.

tion of the tax gap would represent almost 3 additional GDP points, this increase would not be enough to make its tax burden consistent with the regional average, and it would remain one of the lowest in Latin America.

Table 9, table 10 and figure 22 show the same indicators, with corporate and personal income tax divided into separate categories. It should be noted that, since corporate income tax (CIT) accounts for 73.3% of income tax revenue in Latin America (see figure 16), CIT gap should not differ significantly from the tax gap in both categories combined. In other words, since CIT accounts for the majority of both theoretical and effective revenue, combined gap levels are determined by the level of CIT gap. This can be observed in columns 4 and 5 of table 9. The data analyzed shows that the tax gap for personal income tax (PIT) is much lower than its corporate counterpart: 0.5% to 1.5% in GDP terms, and 3% to 14% of the overall tax burden.

It should also be noted that individual tax gap rates are lower than corporate ones in every country except Guatemala. This is surprising, since corporations are less complex, from a taxation standpoint, than individuals. A number of possible explanations for this phenomenon will be discussed later on.

The fact that the average tax gap rate for both corporations and individuals approaches 50% means that effective revenue is approximately 50% of potential

revenue. This is clearly shown in figure 22; effective revenue in GDP terms is very similar to the revenue gap – i.e. the shortfall between effective and potential revenue, both for CIT and PIT.

Figure 22 also highlights the greater relative importance of CIT, as well as the status of each country studied. Peru is the country with the highest CIT revenue gap (5.2% of GDP), followed by Guatemala (4.8%), Ecuador (4.4%) and Argentina (4.0%). The case of Guatemala and Ecuador should be noted; due to their high tax gap rates, effective revenue in those countries is significantly lower than the revenue gap.

With regard to personal income tax, Argentina, Chile and Mexico possess the highest gaps (1.6%, 1.5% and 1.4% of GDP, respectively). Mexico stands out among the three, as its effective revenue is 0.8 GDP points higher than the gap. The other two countries where effective revenue exceeds the gap are El Salvador and Peru. The case of Guatemala should be noted; despite a PIT gap rate of 69.9%, its loss of revenue in GDP terms is the second lowest after Peru (0.8% and 0.6% of GDP, respectively). The same is true, to a lesser degree, of Ecuador. Guatemala's low theoretical individual income tax revenue (only 1.1% of GDP) is largely attributable to the significant loss caused by the deduction of Q 36,000 (approximately USD 4,700) granted to dependent workers. This loss is equivalent to approximately 3 points of GDP.

Table 10. Personal income tax gap
(Percentages)

Country (year)	Tax burden	Theoretical	Effective	Gap ^b	Tax gap rate ^c (%)	Gap / Total Tax revenue (%)
		PIT revenue	PIT ^a revenue			
		(Percentage of GDP)				
	1	2	3	4	5	6
Argentina (2005) ^d	27.2	3.3	1.6	1.6	49.7	6.0
Chile (2003)	18.8	3.3	1.8	1.5	46.0	8.1
El Salvador (2005)	14.2	2.7	1.7	1.0	36.3	6.9
Ecuador (2005)	14.9	1.8	0.8	1.1	58.1	7.1
Guatemala (2006)	12.1	1.1	0.3	0.8	69.9	6.5
Peru (2006)	16.7	1.8	1.2	0.6	32.6	3.5
Mexico (2004)	10.3	3.8	2.3	1.4	38.0	13.9

Source: compiled by the author on the basis of data from Cetrángolo and Gómez Sabaini (2009), Jorratt (2009), Roca (2009), Cabrera and Guzmán (2009), Cabrera (2009), Álvarez Estrada (2009), Arias Minaya (2009) and ECLAC.

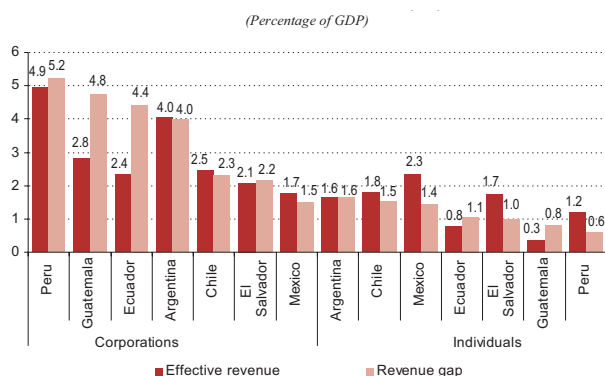
^a Effective revenue data used to calculate the tax gap may not coincide with the revenue statistics published by the tax administrations due to methodological issues specific to each country. PIT: Personal Income Tax.

^b It is the theoretical revenue minus the effective revenue (both in percentages of GDP).

^c The tax gap rate is the ratio between the revenue gap (theoretical revenue minus effective revenue) and the theoretical revenue.

^d On account of the availability of statistical data, the study of Argentina does not have a separate tax gap estimates for corporations and individuals. For this table the same gap rate was used (49.7%) and the gap in terms of GDP was divided using the proportions that each concept (CIT and PIT) represents in the total income tax.

Figure 22
Revenue and gap in corporate income tax (CIT)
and in personal income Tax (PIT)



Source: compiled by the author on the basis of data from Cetrángolo and Gómez Sabaini (2009), Jorratt (2009), Roca (2009), Cabrera and Guzmán (2009), Cabrera (2009), Álvarez Estrada (2009), Arias Minaya (2009).

Note: Effective revenue data used to calculate the tax gap may not coincide with the revenue statistics published by the tax administrations due to methodological issues specific to each country.

H.3.3 Analysis of results: trends and composition

A more detailed analysis by country, including the evasion trends observed in each study, as well as its composition, yields the following results.

In the case of Argentina, the authors argue that, given the scarcity of available information and the problems which

must be addressed, developing an estimate for the disaggregate on income taxes – corporate or individual – is virtually impossible, due to the difficulty of finding a direct link between aggregate macroeconomic data and the bases of individual and corporate taxes. This difficulty is largely attributable to monotaxation, on the one hand, and the fact that one part of value added is classified as “mixed gross income” (a category which includes remuneration from self-employed persons and employers).

Despite this severe limitation, the magnitude of the overall gap (49.7%) computed for the year 2005 highlights the need to continue working toward a better understanding of the causes of income tax evasion in the country.

In the case of Chile, the study spanned four years for corporations and one year for individuals. It observed a decline in corporate tax gap rates from 48% in 2003 to 30% in 2006. The importance of copper revenues should be noted. Evasion is not a significant issue with such revenues; and given that they represent a significant share of the increase in revenue observed during the period, this may explain the decline observed. Consequently, after estimating tax gap without including copper revenues, the author concludes that it actually “increased” during the period in question.

The individual income tax gap rate was 46% in 2003. Jorratt (2009) notes that the situation varies by type of income, as 91.7% of underreporting of individual income

takes place with regard to the corporate profits of individuals. This is attributable to “the greater opportunities for evasion which corporate profits offer, compared to labor income, which is subject to withholdings by the employer.” He also notes that “this may be indicative of tax avoidance or planning, which is indistinguishable from evasion, given the method employed.” In terms of discrimination by population decile, it should also be noted that virtually 100% of individual tax evasion takes place among the deciles with the highest income.

In Ecuador, the average estimated revenue gap for corporate income tax during the 2004-2006 period was 63.7% of potential revenue, or approximately 4% of GDP. This means that taxation generated just over a third (36.3%) of the revenue it could potentially produce, losing one dollar and seventy-five cents for every dollar collected⁵⁸.

Individual income tax gap was 58%, or 1.1% of GDP.

With regard to individuals, Roca (2009) notes the significant share of home-based businesses – a difficult sector to tax – in potential revenue (50% of the taxable base). He attributes this to the structure of the Ecuadorian economy, as well as to the fact that distributed profits and dividends are not subject to taxation, and that two thirds of wages are tax-free.

Tax gap rates in El Salvador were 51% for corporations and 36.3% for individuals, or 2.17% and 0.97% of GDP, respectively. Estimates suggest that corporate tax gap is much higher than personal tax gap; this substantial difference is attributable to an overestimation of corporate tax gap (since corporations are better able to employ legal means to report higher costs and lower profits, the measurements of the tax gap would include a substantial portion of tax avoidance), as well as to an underestimation of personal tax gap, caused by a lack of data to make adjustments for under-reporting of non-labor income in household surveys.

Results in Guatemala differ from those of the other studies because, as previously noted, it is the only country in which the individual tax gap rate is higher than the corporate rate (69.9% compared to 62.8%). As noted by Cabrera (2009), however, given the small size of the individual tax base, if one compared the revenue gap of corporations in terms of GDP to that of individuals, the corporate one would be higher. It should also be noted that the percentage of registered wage earners – 45.8% – is relatively high compared to that of the other countries studied. This may be attributable to the size of the informal labor market in Guatemala.

The corporate tax gap rate in Mexico rose from 33% to

46%⁵⁹ during the period studied (2002-2004). The author of the study concludes that this increase would explain the drop in corporate income tax revenue during that period. Nevertheless, he also points out that 2004 was an inflection point in terms of tax performance – a phenomenon which could not be reflected in the estimate, since the delayed publication by INEGI of the compendium of Accounts by Institutional Sectors limits the analysis of tax gap for the 2005-2007 period.

With regard to individuals, the first issue to be noted is that tax gap on wages and salaries has declined over the years, and the country has now reached outstanding levels of efficiency in the collection of such revenue (5.8% of tax gap in 2006). Secondly, there is a vast difference between this type of revenue and that derived from individual corporate profit, which displays a tax gap rate of 87%. The study shows that, of the 1.1% of GDP which individual income tax gap represents, 1% of GDP is comprised of “income derived from corporate and professional activities and leasing”, while only 0.1% of GDP is made up of “remuneration for wage labor”. As noted by Alvarez Estrada (2009), “while it is true that the administration of tax revenue from small and medium-sized businesses represents one of the most difficult challenges facing the tax authorities of countries similar to Mexico in size and structure, the average tax gap rate of 87 percent observed during the period studied creates an unfavorable impression of the equity of the Mexican tax system”.

Corporate income tax gap in Peru reached 51.3%, according to the study by Arias Minaya (2009). This is equivalent to 5.2% of GDP. The only other study which can be used as a reference calculated a tax gap rate of 79% in 2000, which is thought to be an overestimate⁶⁰, Arias Minaya also points out that, as with copper in Chile, corporate income tax revenue grew steadily between 2003 and 2006 as a result of higher mineral prices. This may have plausibly reduced the evasion rate.

The study estimates a tax gap rate for individuals (32.6%) similar to that of other recent studies. The author makes an important clarification, namely, that this tax gap rate refers primarily to labor income. This is because individual income tax in Peru mainly focuses on labor income. In addition, household surveys usually include little information on capital returns.

Finally, by way of general observation, the following should be noted: contrary to what might have been expected, the results of the case studies show that, with the exception of Argentina (where a distinction between

⁵⁹ Álvarez Estrada (2009), *op.cit.* It should be noted that studies by ITAM (2006) and CIDE (2006) also suggest an increase in evasion rates between 2002 and 2004.

⁶⁰ Arias Minaya (2009), *op.cit.*

⁵⁸ Roca (2009), *op.cit.*

tax subjects was not possible) and Guatemala (where results were very similar for both subjects), corporate income tax gap was invariably higher than its individual counterpart.

These results seem striking, given the generalized view that corporations in the region are few, that they keep accounting records, that their billing practices are easier to monitor and that they are more subject to tax enforcement, which means that their tax gap rate should be lower than average. Consequently, other explanations must be sought. These include the following:

- a. First and foremost, personal income tax in Latin America is primarily a labor tax. As such, it is captured at source, and is very difficult to evade. Financial and freelance income, on the other hand, are either tax-exempt or difficult to tax, as they are concealed behind alternate regimes that replace the taxation of net income.
- b. Secondly, given the lack of data with which to adjust non-labor income reported in household surveys for underreporting, individual income tax gap may be somewhat underestimated.
- c. Thirdly, the possibility that corporate tax gap may be overestimated to a certain extent cannot be ruled out mainly because national accounts data is not entirely clear, and no precise information is available regarding the loss of revenue caused by exemptions.
- d. Finally, given the ability of corporations to use legal means to report higher costs and lower profits, a significant portion of revenue gap is actually comprised of tax avoidance.

I. Conclusions and final results

The profound inequalities which characterize the countries in the region, as well as their high poverty levels, constitute a powerful reason to analyze the relationship between tax policy and equity, in order to improve public measures to address the grave social problems afflicting our societies. Determining the meaning of equity and its relationship to other principles associated with public policy is no simple task. There are a multiplicity of similar terms in the social debate, which are often used in a confusing and inaccurate manner.

Moreover, while it is generally acknowledged that fiscal policy is one of the most important tools through which the state can influence the distribution of income, the scourge of social inequity has sharpened considerably in recent years due to the lack of significant public revenue with which to correct or counteract the situation.

The fiscal systems of the region currently share three common characteristics:

(i) a low tax burden; (ii) regressive taxation; and (iii) poorly-targeted public spending policies. From a taxation standpoint, these issues have a significant impact on equity, in terms of revenue levels, tax structure, fraud and tax avoidance. The social needs of citizens cannot be met without economic resources. Moreover, evasion poses a serious threat to equity, inasmuch as failure to comply with tax obligations forces other taxpayers to shoulder a higher burden, and may result in the loss of public goods or services.

While some progress has been made in addressing these limitations, the general situation is still characterized by tax structures which depend heavily on consumption taxes, high levels of tax evasion and avoidance, low revenue from direct taxes such as income tax – specifically personal income tax (particularly in relation to developed countries) – and scant or non-existent property tax revenue.

With regard to direct taxation, some progress has been made over the last 15 years in the countries studied. For example, maximum marginal rates have declined from extreme levels (Chile, Ecuador and Peru) to values closer to international standards. Income tax revenue displayed the highest growth between 2001 and 2007 (albeit with clear variations between countries), driven primarily by exports and rising international commodity prices. This growth has been uneven in terms of tax subjects, however; in some countries, such as Argentina, Chile and Peru, it is attributable primarily to the predominance of corporate income tax over personal income tax.

It is generally acknowledged that the historically small role (low revenue) of direct taxation in the region – notwithstanding the progress made in recent years – is attributable to two factors: narrow tax bases and high levels of non-compliance. This has resulted in effective rates too low to have a significant economic impact. Both factors are also a result of the privileged treatment and tax loopholes that characterize the region's tax systems. In such an environment, the basic prerequisites of equity – that those with the same payment capacity be taxed equally (horizontal equity) and those with greater payment capacity pay higher taxes (vertical equity) – go unfulfilled, and furthermore, economic distortions in the allocation of resources compromise the overall efficiency of the economy and damage international competitiveness, as they generate greater incentives for businesses to focus their production on the captive markets.

This leads to the first conclusion of this report: despite the relatively small share of income tax revenue in overall revenue (an issue which could be addressed through a tax reform that expands their share while also ensuring greater

progressivity), high income tax evasion would compromise any redistributive effect such taxes may have, and ultimately would end up increasing income inequality in the region, casting doubt on the very function and purpose of taxes as a tool of economic policy. Hence, a detailed study of the causes of evasion is necessary, in order to first develop an adequate methodology with which to identify and measure the scale of the problem with precision, and then, once the results have been obtained, develop policy measures to reduce its negative impact on equity.

The causes of evasion identified by the case studies involve certain characteristics of the countries in the region, such as the large underground economy, the financial limitations of taxpayers and the high concentration of income. Roca (2009) notes that the high concentration of income tax collection on a small number of taxpayers and economic activities is a double-edged sword. On the one hand, it lowers tax administration costs, making relevant sectors and businesses easy to identify. On the other hand, once these subjects have been identified, tax authorities are faced with the challenge of compelling taxpayers of considerable power to meet their obligations, even though the latter are probably far more sophisticated than the authorities in terms of tax planning. As they probably also belong to specialized sectors, they would, moreover, require specialized auditing.

Another cause of evasion is the low likelihood of being audited and punished by the tax authorities. In this regard, Arias (2009) notes that, in Peru, the National Superintendence of Tax Administration (SUNAT) does not publish systematic records of its enforcement actions or the sectors of the economy targeted for that purpose. Neither does it make known the criteria employed to select the taxpayers audited, nor the issues examined during an audit. Furthermore, its auditors do not crosscheck information against the SUNAT database, and its audits very often lead to claims and appeals in tax court.

High evasion rates are also attributable to the region's tax compliance culture. A variety of factors encourage evasion. These include, among others, the perception that the distribution of the tax burden is unfair, mistrust regarding the manner in which revenue is spent and the perception that evasion is a common social practice.

The design of the tax system itself can also encourage evasion and avoidance, by creating opportunities for arbitrage and tax planning practices that reduce tax obligations. This is largely attributable to the complexity of the region's tax systems, as well as the existence of significant tax deductions, such as the exemptions granted for certain types of income.

Using a common methodology based on the concept of the gap between effective and theoretical revenue, the seven

case studies cited arrive at a discouraging but realistic conclusion regarding the taxation of income in their respective countries: the levels of tax gaps are very high, ranging between approximately 40% and 65%. This represents an average GDP gap of 4.6%. Significant variations exist between countries, however. Countries such as Ecuador and Guatemala (with tax gaps close to 65%) are at one extreme, while others, such as Mexico and El Salvador, display much lower levels (40% to 45%).

The differences observed between corporate and personal income tax gap should also be noted. The data shows that corporate income tax accounts for 70% of effective revenue; consequently, results for both taxes combined are heavily weighted toward those obtained for corporate tax gap. As for individuals, both the level of revenue gap and the estimated tax gap rates are lower than for corporations. While this is striking, as mentioned before, it also demonstrates the usefulness of studies like those cited here in identifying problems in tax design and tax administration. Moreover, despite the existence of numerous VAT evasion estimates throughout the region (and the priority given to improving the administration of this tax), income tax evasion has not received the same level of attention. In that regard, the studies cited in this report are intended to encourage discussion of an approach for producing estimations which can be improved and systematized in the future. Using the studies cited above as a reference point, without overlooking their methodological and statistical limitations, the purpose of such an effort would be to use the estimates and conceptual contributions of future studies to expand and perfect the empirical tools needed to measure income tax gap levels more accurately in each country. In conclusion, the indicators developed over time will provide national authorities with an accurate assessment of the situation, which can be used to design more efficient and progressive taxes and curb tax evasion and avoidance.

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Dag-Hammarskjöld-Weg 1-5
65760 Eschborn
T +49 6196 79-0
F +49 6196 79-1115
E info@gtz.de
I www.gtz.de

