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**INEQUALITY AND THE EVOLUTION OF INSTITUTIONS OF TAXATION:
EVIDENCE FROM THE AMERICAS**

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I. INTRODUCTION

Institutions matter. In recent years, scholars and policymakers have come to recognize how important institutions are in the processes of economic growth and development.¹ Despite the emerging consensus about their significance, our knowledge of where institutions come from, and of how institutions which do not work well persist over time, remains very limited. Our understanding of just how institutions matter depends, in part, on whether they are exogenous or endogenous and on the factors and processes that shape or determine them. Unfortunately, the study of how institutions evolve is not straightforward. Not only does institutional change take place gradually over long periods of time, but the likelihood of different causal mechanisms being involved further complicates analysis. Nevertheless, scholars have in recent years made progress in the study of how the provision of property rights, freedom of the press, the extent of democracy, the structure of schooling institutions, and public health programs both reflect and contribute to the extent of inequality in a society.²

Tax systems are among the oldest and most fundamental of institutions. They provide a wonderful window on how a society is organized. Taxes are necessary to raise revenue for governments to fund investments in public goods and infrastructure, as well as to provide other sorts of public services conducive to general welfare and economic growth. How governments raise revenue can also have profound effects on society. First, the technical efficiency of the tax system is important. Taxes alter the decisions of private agents, as taxpayers strive to reduce their tax liabilities. Such adjustments can often lead economies

¹See, e.g., Douglass C. North, Institutions, Economic Growth and Freedom: An Historical Introduction, in FREEDOM, DEMOCRACY, AND ECONOMIC WELFARE (Michael Walker ed., Fraser Institute 1988); DAVID DE FERRANTI, ET AL., WORLD BANK, INEQUALITY IN LATIN AMERICA AND THE CARIBBEAN: BREAKING WITH HISTORY? (Advance Conference ed. 2003).

² See, e.g., Stanley L. Engerman & Kenneth L. Sokoloff, Factor Endowments, Inequality, and Paths of Development Among New World Economies, 3 ECONOMIA 41-102 (2002)[hereinafter Engerman & Sokoloff 2002]. Also see Daron Acemoglu, Simon Johnson, and James A. Robinson, The Colonial Origins of Comparative Development: An Empirical Investigation. 91 AMERICAN ECONOMIC REVIEW 1369-1401 (2001); and Reversal of Fortune: Geography and Institutions in the Making of the Modern World Income Distribution, 117 QUARTERLY JOURNAL OF ECONOMICS 1231-1294 (2002).

to operate below their productive capacity, as taxpayers allocate their resources to those activities that yield the highest returns net of taxes, as opposed to those that would make the most productive use of resources. Taxes also impose enforcement costs on governments and compliance costs on taxpayers. The structure of taxes, as well as of other forms of government regulation, may also influence the organization of economic activities, such as whether firms operate in the formal or informal sector or whether firms enter into formal employment arrangements with workers.

Second, the tax system helps determine how much of the costs of publicly provided goods and services are borne by different segments of the population. The incidence of taxes affects both the distribution of disposable income across the population as well as the constellation of political support for various public projects. Individuals will be more willing to support government programs if they expect that the benefits they, or their peer groups, would realize from the higher level of expenditures will roughly match or exceed the corresponding increase in their tax liabilities.

Third, although the lines of causation are not always clear, how societies choose to raise tax revenue is related to the relative degrees of authority of local, state, and national governments. Control over public expenditures generally follows the power to tax. As the political and administrative feasibility of levying certain taxes may be sensitive to economy-specific circumstances, those circumstances may also influence the structure of government, as well as the extent and direction of government activities. For example, it is often suggested that because developing countries lack the administrative capacity to effectively or comprehensively implement taxes on property or income, they generally have relatively low levels of taxation (and thus relatively small government sectors) overall and rely more on more easily enforced revenue enhancements (at least by a national government) such as taxes on foreign trade or commodities. To the extent that local governments are more dependent on taxes on income or property, such societies might also be expected to have small local governments and low levels of public investments and expenditure programs (i.e. schools or local roads) whose benefits accrue primarily to local residents.

This paper examines the relationship between inequality and taxes. We are concerned with how and why institutions of taxation differ across countries, and how they evolved

over time across the societies of the Americas. Striking contrasts exist today between the tax systems of developed and developing countries.³ Tax systems in developed countries derive most of their revenue from income taxes and broad-based consumption taxes. Such tax systems are commonly regarded as more progressive in incidence than those of developing countries – whose tax revenues come largely from taxes on consumption, in the form of value-added or turnover taxes, excise taxes, and taxes on foreign trade. As a percentage of gross domestic product, aggregate tax revenues in developing countries are only about half the tax revenues of developed countries. Developing countries are also more likely to impose and collect taxes at the national level rather than extend substantial taxing authority to state and local governments.

Why tax systems vary is the more difficult question. Scholars have noted that both the level of taxation and the relative use of different tax instruments tend to be systematically related across economies to factors such as per capita income, the share of wages as a percentage of national income, the share of national income generated by large establishments, the share of agriculture in total production, and the level of imports and exports.⁴ Many observers have suggested that these patterns arise primarily from technical or resource issues in the design of tax structures. Proponents of this view highlight how, for example, it is less feasible to administer an individual income tax in countries where most workers are self-employed, or have only short attachments to any single employer, than it would be in countries where most individuals have stable full-time employment relationships with large firms.⁵ They contend that the major reason for the striking differences between the tax systems of the developed and less-developed nations is that rich countries have more choices in deciding the level of taxation and the tax mix (the relative use of

³ Vito Tanzi, *Quantitative Characteristics of the Tax Systems in Developing Countries*, in THE THEORY OF TAXATION FOR DEVELOPING COUNTRIES (David Newbery & Nicholas Stern eds., Oxford University Press 1987)[hereinafter Tanzi 1987]; Robin Burgess & Nicholas Stern, *Taxation and Development*, 31 J. ECON. LITERATURE 762 (1993).

⁴ See, e.g., Alan A. Tait, Wilfrid L. M. Gratz, and Barry J. Eichengreen, *International Comparisons of Taxation for Selected Developing Countries, 1972-1976*, 26 STAFF PAPERS—INTERNATIONAL MONETARY FUND 123 (Mar. 1979).

⁵RICHARD GOODE, GOVERNMENT FINANCE IN DEVELOPING COUNTRIES (Brookings Institution 1984); RICHARD A. MUSGRAVE & PEGGY B. MUSGRAVE, PUBLIC FINANCE IN THEORY AND PRACTICE, pp. 790-96 (4th ed. McGraw-Hill 1984).

different tax instruments).⁶ Although not inconsistent with this common wisdom, other scholars have emphasized how political factors can influence the design and administration of tax systems.⁷ From this perspective, groups with great influence are not infrequently able to tilt or shape the structures of taxation, if not of public finance more generally, in their favor. This mechanism may, it is argued, be quite relevant to explaining why less-developed countries with extreme economic and political inequality tend to have relatively regressive tax systems.

In this article, we turn to history to gain a better perspective on how and why tax systems vary. Our focus is on the societies of the Americas over the 19th and 20th centuries. Our interest in the experiences in North and Latin America has two principal sources. First, despite the region having the most extreme inequality in the world, the tax structures of Latin America are generally recognized as among the most regressive, even by developing country standards.⁸ Moreover, Latin American countries typically (though there are exceptions) have low levels of taxation and collect relatively modest tax revenues at the provincial or local level. Improving our knowledge of when and how these rather distinctive patterns in taxation and public finance emerged may help us to better understand both the long-term development of the region as well as the processes of institutional formation and change more generally.

Second, as has come to be appreciated by social scientists, the colonization and development of the Americas constitute a natural experiment of sorts that students of economic and social development can exploit. Beginning more than 500 years ago, a small number

⁶VITO TANZI & HOWELL ZEE, *TAX POLICY FOR EMERGING MARKETS: DEVELOPING COUNTRIES* (International Monetary Fund, Working Paper No. 35, 2000).

⁷See, generally, THOMAS J. REESE, *THE POLITICS OF TAXATION* (Westport, Ct. Greenwood Press 1980). For a discussion of political influence in the design of tax systems in Central America see Michael H. Best, *Political Power and Tax Revenues in Central America*, 3 *J. DEV. ECON.* 49-82 (1976).

⁸ For estimates of income inequality in Latin America see Klaus Deininger & Lyn Squire, *A New Data Set Measuring Income Inequality*, 10 *WORLD BANK ECON. REV.* 565 (1996). For a discussion of the regressivity of tax systems in Latin America see Richard M. Bird, *Taxation in Latin America: Reflections on Sustainability and the Balance between Equity and Efficiency* (June 2003) (background paper prepared for World Bank Study on Inequality and the State in Latin America and the Caribbean)(on file with co-authors)[hereinafter Bird 2003] and Ke-young Chu, Hamid Davoodi, & SANJEEV GUPTA, *INCOME DISTRIBUTION AND TAX AND GOVERNMENT SOCIAL SPENDING PROGRAMS IN DEVELOPING COUNTRIES* (International Monetary Fund, Working Paper No. 62, 2000).

of European countries established colonies in diverse environments across the hemisphere. The different circumstances meant that largely exogenous differences existed across these societies, not only in national heritage, but also in the extent of inequality. Relatively high per capita incomes (by the standards of the time) prevailed throughout the Americas, at least through the late 18th century, and many of these colonies had gained their independence from their European overlords by the early 19th century. The record of what sorts of institutions these new and nominally democratic nations established, and how they evolved over time, provides scholars with a useful laboratory to study the sources of systematic patterns in the evolution of tax systems.

When tax scholars explore the relationship between inequality and taxation, they tend to focus on two key issues.⁹ First, they examine how tax systems may alter the after-tax distribution of income or wealth. Second, they examine how tax systems may influence the decisions of individuals (or households) about labor supply, investments, or consumption, and how the induced behavior impacts on the pre-tax distribution of income or wealth.

We take a different approach. Our principal concern is with how the extent of inequality may influence the design and implementation of tax systems. We contend that an important reason why tax structures in Latin America look so different from the tax structures in the north is not that one area is rich and the other poor. Even when the relative income or wealth across the societies of the Americas was relatively equal, the tax structures looked very different. Moreover, we raise the question of whether these differences in taxes and spending patterns might have played a role in accounting for quite divergent paths of long-run development. Our thesis that inequality plays an important independent role in influencing the structure of taxation is supported by comparisons between Latin America and the United States and Canada, as well as by comparisons within the respective regions and countries.

Previous studies have shown how initial and rather extreme differences in the extent of inequality seem to have contributed to systematic differences in the ways that strategic economic institutions evolved across the Americas. The earlier work explored how a

⁹ See, e.g., Joel Slemrod & Jon M. Bakija, *Growing Inequality and Decreased Tax Progressivity*, in *INEQUALITY AND TAX POLICY* 192-226 (Kevin A. Hassett & R. Glenn Hubbard eds., AEI Press 2001)[hereinafter Slemrod & Bakija 2001]

number of mediating mechanisms (“paths of institutional development”) through which high initial inequality may have led to poor economic outcomes through its impact on the evolution of fundamental policies influencing access to suffrage, schooling, and land, but did not look at tax policy (or at the level and type of government expenditures). The purpose of this paper is to examine whether the extreme differences in inequality that were present across the economics of the Americas soon after colonization also affected the ways tax institutions evolved. We argue that it did. Societies with extreme inequality, such as most of those in Latin America, developed in such a way that there were few public resources for development, especially at the local level. The US and Canada, in contrast, had in relative and absolute terms a very high level of public resources available for spending on development, particularly at the local level--resources that likely contributed to both economic growth and reducing inequality.

We proceed as follows. Part II sets forth a brief history of the emergence of extreme differences in inequality across the Americas not long after the Europeans began to colonize the hemisphere. Part III then examines the tax systems in Latin America and North America in the 19th century. Part IV examines current tax structures in Latin America. Part V sets forth some tentative conclusions of high inequality on tax design and expenditure policy.

Several salient patterns emerge. The US and Canada (like Britain, France, Germany and even Spain) were much more inclined to tax wealth and income during their early stages of growth, and into the 20th century, than were their neighbors to the South (or developing countries today). Although the US and Canadian federal governments were similar to those of their counterparts in Latin America in relying primarily on the taxation of foreign trade (overwhelmingly tariffs) and excise taxes, the greater success or inclination of state (provincial) and local governments in North America to tax wealth (primarily in the form of property or estate taxes) and income (primarily in the form of business taxes), as well as the much larger relative sizes of these sub-national governments in North America, accounted for a radical divergence in the overall structure of taxation. Tapping these progressive (at least as conventionally understood) sources of government revenue, state and local governments in the US and Canada, even before independence, began directing substantial resources toward public schools, improvements in infrastructure involving transportation and health, and other social programs. In contrast, the societies of Latin America, which had come to be characterized soon after initial settlement by rather

extreme inequality in wealth, human capital, and political influence, tended to adopt tax structures that would be expected to be significantly less progressive in incidence and manifested greater reluctance or inability to impose local taxes to fund local public investments and services. These patterns persisted, moreover, well into the 20th century – indeed up to the present day (though somewhat moderated). Thus, the initial distribution of wealth, human capital and political influence seems to have had a profound impact on how tax and other government institutions and programs evolved. High inequality in Latin America encouraged less than progressive tax and expenditure policies, and in so doing likely contributed to the persistence of high levels of inequality. It may be the gift that keeps on giving.

What accounts for this empirical regularity pattern in the way institutions of public finance evolved? At a purely political level, extreme inequality can result in elites minimizing their relative tax burdens by either controlling the legislative process in the design of tax structures and the design of specific tax instruments, or by controlling the administrative process to allow tax evasion to continue unabated. But even politics aside, inequality limits options in designing tax systems. It is more difficult to design progressive tax structures in societies with great inequality. It is difficult politically and administratively to tax the income of the poor, especially in countries with a significant portion of the workforce subject to informal work arrangements and a large part of economic activity conducted in the informal economy. The lack of a substantial middle class limits the revenue potential of individual income taxes. The relatively recent dramatic increase in the mobility of capital and high-value labor likely limits the degree of progressivity in rate structures under individual income tax systems; similar mechanisms may have made it more difficult for local governments of 19th century Latin America nations to levy property taxes to raise revenue than it was for their counterparts in North America.

Although economic factors clearly influence the structure of a society's tax system, the historical evidence highlights how tax institutions also appear to be systematically affected by the political environment. In Latin America, and perhaps in other places where extreme inequality prevails, elites may have been able to disproportionately influence the way in which tax and expenditure systems evolved. Countries in Latin America did, and do, have choices in determining how to raise revenue – and they have chosen to devote less attention to effective taxation of income or wealth.

II. DIFFERENCES IN INEQUALITY ACROSS THE AMERICAS

Our study builds on recent scholarship that has highlighted how radical differences in the extent of inequality across New World societies were present early on in the histories of the colonies established by the Europeans.¹⁰ These differences, it is argued, were due primarily to the respective factor endowments (or initial conditions more generally). The "discovery" and exploration of the Americas by the Europeans had been part of a grand, long-term effort to exploit the economic opportunities in under-populated or under-defended territories around the world. European nations competed for claims, and set about extracting material and other advantages through the pursuit of transitory enterprises like expeditions as well as by the establishment of more permanent settlements. At both the levels of national governments and private agents, adaptation or innovation of institutional forms was stimulated by formidable problems of organization raised by the radically novel and diverse environments, as well as by the difficulties of effecting massive and historically unprecedented intercontinental flows of labor and capital. Common to nearly all of the colonies was a high marginal product of labor, as evidenced by the historically unprecedented numbers of migrants who traversed the Atlantic from Europe and Africa despite high costs of transportation, as well as by the roughly similar levels of per capita income that prevailed until well into the 18th century (or more than two centuries after the colonies began to be established).

Scholars seem to increasingly accept the idea that whereas the great majority of colonies in the Americas came to be characterized early on by substantial inequality, the circumstances in the colonies that came to make up the United States and Canada were quite unusual in that their factor endowments predisposed them toward paths of development with relative equality and population homogeneity. In explaining the logic and empirical basis for this theory, it is convenient to distinguish between three types of New World colonies. A first category encompasses those colonies with climates and soils that were well suited for the production of sugar and other highly valued crops characterized by extensive scale economies associated with the use of slaves. Most of these sugar colonies, including Barbados, Cuba, and Saint Domingue (known now as Haiti), were in the West Indies, but some (mainly Brazil) were located in South America. They soon specialized in the production of such crops, and through the persistent working of technological advan-

¹⁰ Engerman & Sokoloff 2002, *supra* note ____.

tage, their economies came to be dominated by large slave plantations and their populations by slaves of African descent. The overwhelming fraction of the populations that came to be black and slave in such colonies, as well as the greater efficiency of the very large plantations, made their distributions of wealth and human capital extremely unequal. Even among the free population, such economies exhibited greater inequality than those on the North American mainland.¹¹

The second category of New World colonies comprises the Spanish colonies, such as Mexico and Peru, that were characterized both by a substantial native population surviving contact with the European colonizers and by the distribution among a privileged few of claims to often enormous blocs of land, mineral resources, and native labor. The resulting large-scale estates and mines, established early in the histories of these colonies, were to some degree based on pre-conquest social organizations in which Indian elites extracted tribute from the general population, and the arrangements endured even when the principal production activities were lacking in economies of scale. Although small-scale production was typical of grain agriculture during this era, the essentially non-tradable property rights to tribute (in the form of labor and other resources) from rather sedentary groups of natives gave large landholders the means and the motive to operate at a large scale. For different reasons, therefore, this category of colonies was rather like the first in generating very unequal distributions of wealth. The elites relied on the labor of Native Americans instead of slaves, but like the slave owners, they were racially distinct from the bulk of the population, and they enjoyed higher levels of human capital and legal standing.¹²

¹¹ On the early Caribbean sugar plantations, see RICHARD S. DUNN, *SUGAR AND SLAVES: THE RISE OF THE PLANTER CLASS IN THE ENGLISH WEST INDIES, 1624–1713* (1972); RICHARD SHERIDAN, *SUGAR AND SLAVERY: AN ECONOMIC HISTORY OF THE WEST INDIES, 1623–1775* (Caribbean Universities Press 1974); MANUEL MORENO FRAGINALS, *THE SUGARMILL: THE SOCIOECONOMIC COMPLEX OF SUGAR IN CUBA* (Monthly Review Press 1976). For a detailed examination of the distribution of wealth among free household heads on a sugar island, see the analysis of the 1680 census for Barbados in DUNN, *supra*, at ____.

¹² The existence of scale economies, such as in slavery, did not support the competitive success or persistence of the largest units of production in this second class of colonial economies. Rather, large-scale enterprises were sustained by the natives' inability or disinclination to evade their obligations to the estate-owning families. A variety of obstacles made it difficult for them to participate fully in the commercial economy as independent entrepreneurs. Lockhart and Schwartz provide an excellent and comprehensive overview of the *encomienda* and the evolution of large-scale estates, with their relation to pre-conquest forms of social organization in different parts of

To almost the same degree as in the colonial sugar economies, the economic structures that evolved in this second group of colonies were greatly influenced by the factor endowments, viewed in broad terms. The fabulously valuable mineral resources and the abundance of low-human-capital labor certainly contributed to the extremely unequal distributions of wealth and income that generally came to prevail in these economies. Moreover, without the abundant supply of native labor, the generous awards of property and tribute to the earliest settlers would either not have been worth so much or have been possible, and it is highly unlikely that Spain would have introduced the tight restrictions on European migration to its colonies that it did. The early settlers in Spanish America had endorsed, and won, formidable requirements for obtaining permission to go to the New World—a policy that surely helped to preserve the political and economic advantages they enjoyed and kept the share of the population that was of European descent low.¹³

The final category of New World colonies is best typified by the colonies on the North American mainland, chiefly those that became the northern United States, but also Canada.

Spanish America. JAMES LOCKHART & STUART B. SCHWARTZ, *EARLY LATIN AMERICA: A HISTORY OF COLONIAL SPANISH AMERICA AND BRAZIL* (Cambridge University Press 1983). The paths of institutional development varied somewhat across Spanish colonies, reflecting significant differences between Indian populations in social capabilities and other attributes. For example, the pre-conquest forms of social organization for Indians in highland areas were quite different from those of populations on the plains or in the jungle. For a fascinating discussion of the workings of the early *encomienda* system in Peru, see JAMES LOCKHART, *SPANISH PERU: 1532–1560. A SOCIAL HISTORY* (2d ed. University of Wisconsin Press 1994).

¹³ The path of development observed in Mexico is representative of virtually all of the Spanish colonies that retained substantial native populations. In the initial phase of conquest and settlement, the Spanish authorities allocated *encomiendas*, or claims on labor and tribute from natives, and land grants to a relatively small number of individuals. The value of these grants were somewhat eroded over time by reassignment or expiration, new awards, and the precipitous decline of the native population over the sixteenth century that necessarily decreased the amount of tribute to be extracted. These *encomiendas* had powerful lingering effects, however, and ultimately gave way to large-scale *estancias* or *haciendas*, which obtained their labor services partially through obligations from natives and, increasingly, through local labor markets. Although the processes of transition from *encomienda* to *hacienda* are not well understood, it is evident that large-scale agriculture remained dominant, especially in districts with linkages to extensive markets. It is also clear that the distribution of wealth remained highly unequal, because elite families were able to maintain their status over generations. These same families generally acted as *corregidores* and other local representatives of the Spanish government in the countryside, wielding considerable local political authority. Striking similarities are found even in colonies that did not retain substantial native populations. In formulating policies, the Spanish authorities seem to have focused on circumstances in major colonies like Mexico and Peru, and then applied them system-wide. Hence, policies like restrictions on migration from Europe and grants of large blocs of land, mineral resources, and native labor to the early settlers were generally in effect throughout Spanish America. See LOCKHART & SCHWARTZ, *supra* note __; LOCKHART, *supra* note __.

These economies were not endowed either with substantial native populations able to provide labor or with a climate and soils that gave them a comparative advantage in the production of crops characterized by major economies of scale in using slave labor. Their growth and development, especially north of the Chesapeake, were therefore based on laborers of European descent who had similar, relatively high levels of human capital. Owing to the abundant land and low capital requirements, the great majority of adult men were able to operate as independent proprietors. Efforts to implant a European-style organization of agriculture based on concentrated ownership of land combined with labor provided by tenant farmers or indentured servants invariably failed in such environments. Conditions were somewhat different in the southern colonies, where crops such as tobacco and rice exhibited limited scale economies. Even so, the size of the slave plantations, the share of the population composed of slaves, and the degree of inequality in these colonies were quite modest by the standards of Brazil or the sugar islands.¹⁴

There seems to be strong evidence that various features of the factor endowments of the three categories of New World economies, including soils, climates, and the size or density of the native population, predisposed them toward paths of development associated with different degrees of inequality in wealth, human capital, and political power. Although these conditions might reasonably be treated as exogenous at the beginning of European colonization, it is clear that such an assumption becomes increasingly tenuous as one moves later in time after settlement. Particularly given that both Latin America and many of the economies of the first category, such as Haiti and Jamaica, are known today as generally the most unequal in the world,¹⁵ however, we suggest that the initial conditions had long lingering effects, not only because certain fundamental characteristics of New World economies were difficult to change, but also because government policies and other institutions tended generally to reproduce them.

Specifically, in those societies that began with extreme inequality, elites were likely better able to establish a basic legal framework that insured them disproportionate shares

¹⁴ David W. Galenson, *The Settlement and Growth of the Colonies: Population, Labor, and Economic Development*, in 1 *THE CAMBRIDGE ECONOMIC HISTORY OF THE UNITED STATES: THE COLONIAL PERIOD* (Stanley L. Engerman & Robert E. Gallman eds., Cambridge University Press 1995); JACK P. GREENE, *PURSUIITS OF HAPPINESS* (University of North Carolina Press 1988).

¹⁵ Deininger & Squire, *supra* note ____.

of political power, and to use that greater influence to establish rules, laws, and other government policies that advantaged members of the elite relative to non-members--contributing to persistence over time of the high degree of inequality. In societies that began with greater equality or homogeneity among the population, however, efforts by elites to institutionalize an unequal distribution of political power were relatively unsuccessful, and the rules, laws, and other government policies that came to be adopted, therefore, tended to provide more equal treatment and opportunities to members of the population.

The history of the evolution of suffrage institutions provides a powerful demonstration of how there were indeed systematic patterns across societies in the degree to which elites established a legal framework that ensured them a disproportionate share of political power. Moreover, since most of the countries in the Americas were nominally democracies by the mid-nineteenth century, the variation in the rules specifying who could vote had a direct bearing on, although likely understates, the extent to which elites based largely on wealth, human capital, race, and gender were able to wield disproportionate influence in the formulation and implementation of government policies.

Summary information about differences in how the right to vote was restricted across New World societies in the late 19th and early 20th centuries is reported in Table 1. The estimates reveal that while it was common in all countries to reserve the right to vote to adult males until the 20th century, the United States and Canada were the clear leaders in doing away with restrictions based on wealth and literacy, and much higher fractions of the populations voted in these countries than anywhere else in the Americas. Although there was important variation within Latin America, it is clear that there was much greater political equality in the US and Canada during the 19th century than there was elsewhere in the hemisphere. Not only did the United States and Canada attain the secret ballot and extend the franchise to even the poor and illiterate much earlier (restrictions that were reintroduced in the United States at the expense of blacks in the 1890s), but the evolution of the proportion of the population that voted was at least a half-century ahead of even the most progressive countries of South America (namely, Uruguay, Argentina, and Costa Rica, which have generally been regarded as among the most egalitarian of Latin American societies and whose initial factor endowments most closely resembled those of the United States and Canada).

Table 1. Laws Governing the Franchise and the Extent of Voting in Selected American Countries, 1840–1940

<i>Period and country</i>	<i>Year</i>	<i>Lack of secrecy in balloting</i>	<i>Wealth requirement</i>	<i>Literacy requirement</i>	<i>Percent of the population voting</i>
1840–80					—
Chile	1869	No	Yes	Yes	1.6
	1878	No	No	No ^a	—
Costa Rica	1890	Yes	Yes	Yes	—
Ecuador	1848	Yes	Yes	Yes	0.0
	1856	Yes	Yes	Yes	0.1
Mexico	1840	Yes	Yes	Yes	—
Peru	1875	Yes	Yes	Yes	—
Uruguay	1840	Yes	Yes	Yes	—
	1880	Yes	Yes	Yes	—
Venezuela	1840	Yes	Yes	Yes	—
	1880	Yes	Yes	Yes	—
Canada	1867	Yes	Yes	No	7.7
	1878	No	Yes	No	12.9
United States	1850	No	No	No	12.9
	1880	No	No	No ^d	18.3
1881–1920					
Argentina	1896	Yes	Yes	Yes	1.8 ^b
	1916	No	No	No	9.0
Brazil	1894	Yes	Yes	Yes	2.2
	1914	Yes	Yes	Yes	2.4
Chile	1881	No	No	No	3.1
	1920	No	No	Yes	4.4
Colombia	1918 ^c	No	No	No	6.9
Costa Rica	1912	Yes	Yes	Yes	—
	1919	Yes	No	No	10.6
Ecuador	1888	No	Yes	Yes	2.8
	1894	No	No	Yes	3.3
Mexico	1920	No	No	No	8.6
Peru	1920	Yes	Yes	Yes	—
Uruguay	1900	Yes	Yes	Yes	—
	1920	No	No	No	13.8
Venezuela	1920	Yes	Yes	Yes	—
Canada	1911	No	No	No	18.1
	1917	No	No	No	20.5
United States	1900	No	No	Yes ^d	18.4
	1920	No	No	Yes ^d	25.1

Period and country	Year	Lack of secrecy in balloting	Wealth requirement	Literacy requirement	Percent of the population voting
1921–40					
Argentina	1928	No	No	No	12.8
	1937	No	No	No	15.0
Bolivia	1951	-	Yes	Yes	4.1
Brazil	1930	Yes	Yes	Yes	5.7
Colombia	1930	No	No	No	11.1
	1936	No	No	No	5.9
Chile	1920	No	No	Yes	4.4
	1931	No	No	Yes	6.5
	1938	No	No	Yes	9.4
Costa Rica	1940	No	No	No	17.6
Ecuador	1940	No	No	Yes	3.3
Mexico	1940	No	No	No	11.8
Peru	1940	No	No	Yes	—
Uruguay	1940	No	No	No	19.7
Venezuela	1940	No	Yes	Yes	—
Canada	1940	No	No	No	41.1
United States	1940	No	No	Yes	37.8

Source: Stanley L. Engerman & Kenneth L. Sokoloff, *Factor Endowments, Inequality, and Paths of Development Among New World Economies*, 3 *ECONOMIA* 41-102 (2002).

- a. After having eliminated wealth and education requirements in 1878, Chile instituted a literacy requirement in 1885, which seems to have been responsible for a sharp decline in the proportion of the population that was registered to vote.
- b. This figure is for the city of Buenos Aires, and it likely overstates the proportion who voted at the national level.
- c. The information on restrictions refers to national laws. The 1863 Constitution empowered provincial state governments to regulate electoral affairs. Afterward, elections became restricted (in terms of the franchise for adult males) and indirect in some states. It was not until 1948 that a national law established universal adult male suffrage throughout the country. This pattern was followed in other Latin American countries, as it was in the United States and Canada to a lesser extent.
- d. Two states, Connecticut and Massachusetts, introduced literacy requirements during the 1850s. Sixteen states—seven southern and nine northern -- introduced literacy requirements between 1889 and 1926.

It is remarkable that as late as 1900, none of the countries in Latin America had the secret ballot or more than a miniscule fraction of the population casting votes.¹⁶ The great majority of European nations, as well as the United States and Canada, achieved secrecy in

¹⁶ There is some controversy about whether Argentina had wealth and literacy requirements for suffrage. Whatever the case, the proportions of the population voting were very low in that country (1.8 percent in 1896) until the electoral reform law of 1912. Those who point to the absence of such electoral restrictions at the level of the national government suggest that the low voter participation was due to a failure of immigrants to change their citizenship and vote, as well as to the lack of a secret ballot. Others believe that restrictions on the franchise were in place, and enforced, in some provinces until 1912.

balloting and universal adult male suffrage long before other countries in the western hemisphere, and the proportions of the populations voting in the former were always higher, often four to five times higher, than those in the latter. Although many factors may have contributed to the low levels of participation in South America and the Caribbean, wealth and literacy requirements were serious binding constraints. Some societies, such as Barbados, maintained wealth-based suffrage restrictions until the mid-twentieth century, but most joined the United States and Canada in moving away from economic requirements in the nineteenth century. However, whereas the states in the United States frequently adopted explicit racial limitations (until the constitutional amendments following the Civil War ended this practice), Latin American countries typically chose to screen by literacy.

The contrast between the United States and Canada, on the one hand, and the Latin American countries, on the other, was not so evident at the outset. Despite the sentiments popularly attributed to the Founding Fathers, voting in the United States was largely a privilege reserved for white men with significant amounts of property until early in the nineteenth century. By 1815, only four states had adopted universal white male suffrage, but as the movement to do away with political inequality gained strength, the rest of the country followed suit: virtually all new entrants to the Union extended voting rights to all white men (with explicit racial restrictions generally introduced in the same state constitutions that did away with economic requirements), and older states revised their laws in the wake of protracted political debates. The key states of New York and Massachusetts made the break with wealth restrictions in the 1820s, and the shift to full white adult male suffrage was largely complete by the late 1850s (with Rhode Island, Virginia, and North Carolina being the laggards). The relatively more egalitarian populations of the western states were the clear leaders in the movement. The rapid extension of access to the franchise in these areas not coincidentally paralleled liberal policies toward public schools, taxes, and access to land, as well as other policies that were expected to be attractive to potential migrants.¹⁷ Labor scarcity had been a crucial element in determining the initial level of inequality across New World colonies, and it continued to exert an important effect

¹⁷ Stanley L. Engerman & Kenneth L. Sokoloff, *The Evolution of Suffrage Institutions in the New World* (2004)(Working paper, University of California, Los Angeles)[hereinafter Engerman & Sokoloff 2004].

on the level of political inequality – even within the United States. It is striking that pioneers in extending suffrage, such as new states to the United States, Argentina, and Uruguay, did so during periods in which they were striving to attract migrants; the right to suffrage was often one of a set of policies adopted that were thought to be attractive to those contemplating relocation. When elites—such as land or other asset holders—desire common men to locate in the polity, they thus may choose to extend access to privileges and opportunities without threat of civil disorder; indeed, a polity (or one set of elites) may find itself competing with another to attract the labor or whatever else is desired. Alternative explanations, such as the importance of national heritage, are not very useful in identifying why Argentina, Uruguay, and Costa Rica pulled so far ahead of their Latin American neighbors, or why other British colonies in the New World lagged behind Canada, in the pace at which access to suffrage was extended.

Differences in the distribution of political power fed back on the distribution of access to economic opportunities and in investment in public goods in ways that had implications for the persistence of inequality and long-run paths of institutional and economic development more generally. Schooling institutions are an excellent example. Although most New World societies were so prosperous by the early nineteenth century that they clearly had the material resources to support the establishment of a widespread network of primary schools, only a few made such investments on a scale sufficient to serve the general population before the twentieth century. The exceptional societies, in terms of leadership in investing in institutions of primary education, were the United States and Canada. Virtually from the time of settlement, these North Americans seem generally to have been convinced of the value of providing their children with a basic education, including the ability to read and write. It was common for schools to be organized and funded at the village or town level, especially in New England. The United States probably had the most literate population in the world by the beginning of the nineteenth century, but the common school movement, which got under way in the 1820s (following closely after the movement to extend the franchise), put the country on an accelerated path of investment in educational institutions that served a broad range of the population. Between 1825 and 1850, nearly every northern state that had not already done so enacted a law strongly encouraging or requiring localities to establish free schools open to all

children and supported by general taxes.¹⁸ Although the movement made slower progress in the South, schooling had spread sufficiently by the mid-nineteenth century that over 40 percent of the school-age population was enrolled, and nearly 90 percent of white adults were literate (see Table 2). Schools were also widespread in early nineteenth century Canada. This northernmost English colony lagged behind the United States by several decades in establishing tax-supported schools with universal access, but its literacy rates were nearly as high.¹⁹

Table 2. Literacy Rates in the Americas, 1850–1950

Country	Year	Age	Rate (percent)
Argentina	1869	6 and above	23.8
	1895	6 and above	45.6
	1900	10 and above	52.0
	1925	10 and above	73.0
Barbados	1946	10 and above	92.7
Bolivia	1900	10 and above	17.0
Brazil	1872	7 and above	15.8
	1890	7 and above	14.8
	1900	7 and above	25.6
	1920	10 and above	30.0
	1939	10 and above	57.0
British Honduras (Belize)	1911	10 and above	59.6
	1931	10 and above	71.8
Chile	1865	7 and above	18.0
	1875	7 and above	25.7
	1885	7 and above	30.3
	1900	10 and above	43.0
	1925	10 and above	66.0
	1945	10 and above	76.0
Colombia	1918	15 and above	32.0
	1938	15 and above	56.0
	1951	15 and above	62.0

¹⁸ ELWOOD P. CUBBERLEY, *THE HISTORY OF EDUCATION* (Houghton Mifflin 1920).

¹⁹ See, e.g., CHARLES E. PHILLIPS, *THE DEVELOPMENT OF EDUCATION IN CANADA* (W. J. Gage 1957); J. DONALD WILSON, ROBERT M. STAMP & LOUIS-PHILIPPE AUDET, *CANADIAN EDUCATION: A HISTORY* (Prentice-Hall 1970).

Costa Rica	1892	7 and above	23.6
	1900	10 and above	33.0
	1925	10 and above	64.0
Cuba	1861	7 and above	23.8 (38.5, 5.3)
	1899	10 and above	40.5
	1925	10 and above	67.0
	1946	10 and above	77.9
Guatemala	1893	7 and above	11.3
	1925	10 and above	15.0
	1945	10 and above	20.0
Honduras	1887	7 and above	15.2
	1925	10 and above	29.0
Jamaica	1871	5 and above	16.3
	1891	5 and above	32.0
	1911	5 and above	47.2
	1943	5 and above	67.9
	1943	10 and above	76.1
Mexico	1900	10 and above	22.2
	1925	10 and above	36.0
	1946	10 and above	48.4
Paraguay	1886	7 and above	19.3
	1900	10 and above	30.0
Peru	1925	10 and above	38.0
Puerto Rico	1860	7 and above	11.8 (19.8, 3.1)
Uruguay	1900	10 and above	54.0
	1925	10 and above	70.0
Venezuela	1925	10 and above	34.0
Canada	1861	All	82.5
English-majority counties	1861	All	93.0
French-majority counties	1861	All	81.2
United States			
North Whites	1860	10 and above	96.9
South Whites	1860	10 and above	91.5
Total population	1870	10 and above	80.0 (88.5, 21.1)
	1890	10 and above	86.7 (92.3, 43.2)
	1910	10 and above	92.3 (95.0, 69.5)

Source: Stanley L. Engerman & Kenneth L. Sokoloff, *Factor Endowments, Inequality, and Paths of Development Among New World Economies*, 3 *Economia* 41-102 (2002).

a. In some cases, the figures for whites and nonwhites, respectively, are reported within parentheses.

The rest of the hemisphere trailed far behind the United States and Canada in primary schooling and the attainment of literacy. Despite enormous wealth, the British colonies elsewhere in the hemisphere were very slow to organize schooling institutions that would serve broad segments of the population.²⁰ Indeed, significant steps were not taken in this direction until the British Colonial Office began promoting schooling in the 1870s.²¹ Similarly, even the most progressive Latin American countries, such as Argentina and Uruguay, were more than seventy-five years behind the United States and Canada. These societies began to boost their investments in public schooling at roughly the same time that they intensified their efforts to attract migrants from Europe, well before they implemented a general liberalization of the franchise. While this association might be interpreted as providing for the socialization of foreign immigrants, it also suggests that the elites may have been inclined to extend access to opportunities as part of an effort to attract the scarce labor for which they were directly or indirectly competing. The latter perspective is supported by the observation that major investments in primary schooling did not generally occur in any Latin American country until the national governments provided the funds; in contrast to the pattern in North America, local and state governments in Latin America were not willing or able to take on this responsibility on their own. Most of these societies did not achieve high levels of literacy until well into the twentieth century. Fairly generous support was made available, however, for universities and other institutions of higher learning that were more geared toward children of the elite.

Two mechanisms may help explain why extreme levels of inequality seem to have depressed investments in schooling. First, in settings where private schooling predominated or where parents paid user fees for their children, greater wealth or income inequality would generally reduce the fraction of the school-age population enrolled, holding per capita income constant. Second, greater inequality likely exacerbated the collective-action problems associated with the establishment and funding of universal public schools, either because the distribution of benefits across the population was quite different from the

²⁰ Among the many British colonies around the Caribbean basin are Jamaica, Guyana, British Honduras, and Trinidad.

²¹ The increased concern for promoting education in the colonies may have been related to developments in Great Britain itself. Several important expansions of the public provision of elementary education occurred during the 1870s, including the 1870 Education Act and the 1876 passage of a law calling for compulsory schooling through the age of ten.

incidence of taxes and other costs or simply because population heterogeneity made it more difficult for communities to reach consensus on public projects. Where the wealthy enjoyed disproportionate political power, they were able to procure schooling services for their own children and to resist being taxed to underwrite or subsidize services to others. Although the children of the elite may have been well schooled in such polities, few other children were so fortunate. No society realized high levels of literacy without public schools.

Land policy is another prime example of how institutions may have contributed to the persistence of inequality over time. Virtually all the economies in the Americas had ample supplies of public lands well into the nineteenth century and beyond. Since the respective governments of each colony, province, or nation were regarded as the owners of this resource, they were able to influence the distribution of wealth, as well as the pace of settlement for effective production, by implementing policies to control the availability of land, set prices, establish minimum or maximum acreages, provide credit for such purposes, and design tax systems. Because agriculture was the dominant sector throughout the Americas, questions of how best to employ this public resource for the national interest, and how to make the land available for private use, were widely recognized as highly important and often became the subject of protracted political debates and struggles. Land policy was also used as a policy instrument to increase the size of the labor force, either by encouraging immigration through making land readily available or by influencing the regional distribution of labor (or supply of wage labor) through measures affecting access and raising land prices.

There were never major obstacles to acquiring land in the United States, and the terms of land acquisition became easier over the course of the nineteenth century.²² The Homestead Act of 1862, which essentially made land free in plots suitable for family farms to all those who settled and worked the land for a specified period, was perhaps the

²² For a comprehensive overview of US land policy, see PAUL W. GATES, *HISTORY OF PUBLIC LAND LAW DEVELOPMENT* (US Government Printing Office 1968). Discussions of Canadian land policy include CARL E. SOLBERG, *THE PRAIRIES AND THE PAMPAS: AGRARIAN POLICY IN CANADA AND ARGENTINA, 1880–1913* (Stanford University Press 1987); RICHARD POMFRET, *THE ECONOMIC DEVELOPMENT OF CANADA* 111-19 (Methuen 1981); JEREMY ADELMAN, *FRONTIER DEVELOPMENT: LAND, LABOR, AND CAPITAL ON WHEATLANDS OF ARGENTINA AND CANADA, 1890–1914* ch. 2 (Oxford University Press 1994).

culmination of this policy of promoting broad access to land. Canada pursued similar policies: the Dominion Lands Act of 1872 closely resembled the Homestead Act in both spirit and substance. Argentina and Brazil instituted similar changes in the second half of the nineteenth century as a means to encourage immigration, but these efforts were much less directed and thus less successful at getting land to smallholders than the programs in the United States and Canada.²³

Argentina, Canada, and the United States all had an extraordinary abundance of virtually uninhabited public lands to transfer to private hands in the interest of bringing this public resource into production and serving other general interests. In societies such as Mexico, however, the issues at stake in land policy were very different. Good land was relatively scarce, and labor was relatively abundant. Here the lands in question had long

²³ See Warren Dean, *Latifundia and Land Policy in Nineteenth Century Brazil*, 51 *HISPANIC AMERICAN HISTORICAL REVIEW* 602–25 (1971); EMILIA VIOTTI DA COSTA, *THE BRAZILIAN EMPIRE: MYTHS AND HISTORIES* ch 4. (University of Chicago Press 1985); SOLBERG, *supra* note 14; Solberg's essay in *ARGENTINA, AUSTRALIA, AND CANADA: STUDIES IN COMPARATIVE DEVELOPMENT, 1870–1965* (D. C. M. Platt, & Guido di Tella eds., Macmillan 1985); and the excellent discussions in ADELMAN, *supra* note 14. In Argentina, for example, a number of factors explain the contrast in outcomes. First, the elites of Buenos Aires, whose interests favored keeping scarce labor in the province if not the capital city, were much more effective at weakening or blocking programs than were their urban counterparts in North America. Second, even those policies nominally intended to broaden access tended to involve large grants to land developers (with the logic that allocative efficiency could best be achieved through exchanges between private agents) or transfers to occupants who were already using the land (including those who were grazing livestock). They thus generally conveyed public lands to private owners in much larger and concentrated holdings than did the policies in the United States and Canada. Third, the processes by which large landholdings might have broken up in the absence of scale economies may have operated very slowly in Argentina: once the land was in private hands, the potential value of land in grazing may have set too high a floor on land prices for immigrants and other ordinary would-be farmers to manage, especially given the underdevelopment of mortgage and financial institutions more generally. Because the major crops produced in the expansion of the United States and Canada were grains, the land could be profitably worked on relatively small farms, given the technology of the times. This may help explain why such a policy of smallholding was implemented and effective. See JEREMY ATACK & FRED BATEMAN, *TO THEIR OWN SOIL: AGRICULTURE IN THE ANTEBELLUM NORTH*, (Iowa State University Press 1987); CLARENCE H. DANHOF, *CHANGE IN AGRICULTURE: THE NORTHERN UNITED STATES, 1820–1870* (Harvard University Press 1969). In Argentina, however, small-scale wheat production coincided with ownership of land in large units, thereby maintaining a greater degree of overall inequality in wealth and political power. See SOLBERG, *supra* note 14; ADELMAN, *supra* note 14. In addition to grains, livestock production on large landholdings also increased dramatically in the late nineteenth century, and scale economies in the raising of livestock may have helped maintain the large estates. For an example of a Spanish American country that came to be characterized by small-scale agriculture and followed a path of institutional development more like that in the United States, see the discussion of Costa Rica in RALPH LEE WOODWARD, *CENTRAL AMERICA: A NATION DIVIDED* (Oxford University Press 1976); HECTOR PEREZ-BRIGNOLI, *A BRIEF HISTORY OF CENTRAL AMERICA* (University of California Press 1989).

been controlled by Native Americans, but without individual private property rights. Mexico was not unique in pursuing policies, especially in the final decades of the nineteenth and the first decade of the twentieth century, that had the effect of conferring ownership of much of this land in large tracts on non-Native American landholders.²⁴ The 1856 Ley Lerdo and the 1857 Constitution had set down methods of privatizing these public lands in a manner that could originally have been intended to help Native American farmers enter a national land market and commercial economy. Under the regime of Porfirio Díaz, however, these laws became the basis for a series of new statutes and policies that effected a massive transfer of such lands (over 10.7 percent of the national territory) between 1878 and 1908 to large holders such as survey and land development companies, either in the form of outright grants for services rendered by the companies or for prices set by decree.

In Table 3, we present estimates for these four countries of the fractions of household heads, or a near equivalent, that owned land in agricultural areas in the late nineteenth and early twentieth centuries. The figures indicate enormous differences across the countries in the prevalence of land ownership among the adult male population in rural areas. On the eve of the Mexican Revolution, the figures from the 1910 census suggest that only 2.4 percent of household heads in rural Mexico owned land. The number is astoundingly low. The dramatic land policy measures in Mexico at the end of the nineteenth century may have succeeded in privatizing most of the public lands, but they left the vast majority of the rural population without any land ownership at all. The evidence obviously conforms well with the idea that in societies that began with extreme inequality, such as Mexico, institutions evolved so as to greatly advantage the elite in access to economic opportunities, and they thus contributed to the persistence of that extreme inequality.

²⁴ For further discussion of Mexico, see GEORGE MCCUTCHEN MCBRIDE, *THE LAND SYSTEMS OF MEXICO* (American Geographical Society 1923); FRANK TANNEBAUM, *THE MEXICAN AGRARIAN REVOLUTION* (Macmillan 1929); ROBERT HOLDEN, *MEXICO AND THE SURVEY OF PUBLIC LANDS: THE MANAGEMENT OF MODERNIZATION* (Northern Illinois University Press 1994).

Table 3. Landholding in Rural Regions of Mexico, the United States, Canada, and Argentina in the Early 1900s, in percent

Country, year, and region	Proportion of household heads who own land^a
Mexico, 1910	
North Pacific	5.6
North	3.4
Central	2.0
Gulf	2.1
South Pacific	1.5
Total rural Mexico	2.4
United States, 1900	
North Atlantic	79.2
South Atlantic	55.8
North Central	72.1
South Central	51.4
Western	83.4
Alaska/Hawaii	42.1
Total United States	74.5
Canada, 1901	
British Columbia	87.1
Alberta	95.8
Saskatchewan	96.2
Manitoba	88.9
Ontario	80.2
Quebec	90.1
Maritime ^b	95.0
Total Canada	87.1
Argentina, 1895	
Chaco	27.8
Formosa	18.5
Misiones	26.7
La Pampa	9.7
Neuquén	12.3
Río Negro	15.4
Chubut	35.2
Santa Cruz	20.2
Tierra del Fuego	6.6

Source: Stanley L. Engerman & Kenneth L. Sokoloff, *Factor Endowments, Inequality, and Paths of Development Among New World Economies*, 3 *ECONOMIA* 41-102 (2002).

- a. Landownership is defined as follows: in Mexico, household heads who own land; in the US, farms that are owner operated; in Canada, total occupiers of farm lands who are owners; and in Argentina, the ratio of landowners to the number of males between the ages of 18 and 50.
- b. The Maritime region includes Nova Scotia, New Brunswick, and Prince Edward Island.

In contrast, the proportion of adult males that owned land in rural areas was quite high in the United States, at just below 75 percent in 1900. Although the prevalence of land ownership was markedly lower in the South, where blacks were disproportionately

concentrated, the overall picture is one of land policies such as the Homestead Act providing broad access to this fundamental type of economic opportunity. Canada had an even better record, with nearly 90 percent of household heads owning the agricultural lands they occupied in 1901. The estimates of landholding in these two countries support the notion that land policies made a difference, especially when compared to Argentina.

The rural regions of Argentina constitute a set of frontier provinces, where one would expect higher rates of ownership than in Buenos Aires. The numbers, however, suggest a much lower prevalence of land ownership than in the two North American economies. Nevertheless, all of these countries were far more effective than Mexico in making land ownership available to the general population.

The contrast between the United States and Canada, with their practices of offering easy access to small units of land, and the rest of the Americas (as well as the contrast between Argentina and Mexico) is consistent with our notion that the initial extent of inequality influenced the way in which institutions evolved and in so doing helped foster persistence in the degree of inequality over time.

III. TAX SYSTEMS IN LATIN AMERICA AND NORTH AMERICA IN THE 19TH CENTURY

The colonial tax structures established by the Europeans in the Americas were generally alike in obtaining much of their revenue from trade or closely related activities. Great Britain levied relatively light tax burdens on the residents of its colonies. Revenues came from regulation of trade and from the taxes it imposed on the importation into Britain of New World-produced commodities such as sugar and tobacco. Given that the demand for these goods was likely highly inelastic, British consumers likely bore most of the burden of these duties. When Britain attempted to increase tax revenues to offset more of the costs of defending its colonies on the North American mainland through excise taxes, import duties, and higher fees, the change in policy was fiercely and famously resisted.

Spain and Portugal, in contrast, were much more intent on, and effective at, raising revenue directly from the colonies. This was at least partly attributable to the enormous wealth their colonies possessed. The Spanish Crown levied a vast range of taxes, with revenue derived from impositions on a variety of activities, commodities, commercial and administrative transactions, and from tribute exacted from Native Americans varying

across colonies and districts with the composition of the economy and of the population. In general, however, most of the revenues seem to have come from taxes on the sales of various commodities (the *alcabala*), custom duties, mining (especially silver and gold production), and from various state monopolies in tobacco, salt, and other commodities.²⁵

In Brazil, the sugar industry was the primary source of revenue to Portugal during the colony's early history.²⁶ Direct taxes on sugar production came to reduce the competitiveness of Brazilian producers as sugar production spread across the West Indies. By the end of the 16th century Portugal introduced new taxes on imports into Brazil, as well as sales taxes on goods exported by Brazil to Portugal. The diversification of taxes, and the eventual boom in gold production (another activity ripe for taxation), contributed to a relative, if gradual, decline in the tax burden on the sugar industry. Taxation of trade, or of production of commodities intended for export, remained a central feature of the tax system however.

Although the various taxes levied by the British Crown on the residents of their colonies were relatively light, the local and provincial governments set up by the colonists themselves were much more likely, or able, to raise revenues from their populations (at least those segments that were not Native Americans) than were their counterparts in Latin America. This pattern both reflected and contributed to a more decentralized structure of British America. These taxes allowed local or colonial governments greater autonomy in how they operated and how they funded their operations. The New England colonies developed property or faculty (based on presumed earnings or earnings potential) taxes at both the colonial and local government levels rather early in their histories. They used the revenues to support investments in public or quasi-public goods such as public schools and roads. In contrast, the southern colonies, perhaps influenced by the interests of large landowners (as well as the inelastic demand for some of their prominent exports such as tobacco), tended to rely more on taxing imports and exports. The Middle Atlantic colonies'

²⁵ For example, in Mexico during the late 1780s, about a quarter of the colonial government's revenue came from the *alcabala*, nearly 45 percent from state monopolies, and roughly 20 percent from taxes on gold, silver, and other mining activities. See Tenenbaum (1986). The relative importance of taxes on mining seems to have declined, and the relative importance of the tobacco and other monopolies increased, over time. See MARK A. BURKHOLDER & LYMAN L. JOHNSON, *COLONIAL LATIN AMERICA* (Oxford University Press 1998).

²⁶ Even municipal or local governments at times assessed taxes on sugar production.

tax institutions fell somewhere in between, but already by the time of the revolution both the Middle Atlantic colonies and the New England colonies made extensive use of property taxes.

The reliance on trade taxes as the principal source of tax revenue continued (at least at the national government level) throughout the hemisphere after the wave of independence movements of the late-18th and early 19th centuries. In the United States, a 1789 law establishing the tariff was one of the first laws enacted by the federal government. Although the federal government had other sources of revenues, such as excise taxes, proceeds from sales of public lands, a duty on receipts for legacies, and even taxes (generally of brief duration and during wartime) on dwelling houses, land, and slaves, customs duties provided by far the dominant share of national government revenue up through the Civil War. In rough terms, these revenues amounted to 1 to 2 percent of GNP (except for spurts during wartime), and were primarily (over 80 percent) directed to defense, interest on debt, general government expenses, and other miscellaneous expenditures. Only a small fraction, about 5 percent of federal government expenditures, went to support capital investments such as public buildings, roads and canals, and improvements to rivers and harbors.

Similar patterns of national government taxation, if not expenditure, recur throughout Latin America over the 19th century. Although wars and other shocks sometimes generated transitory impositions of *direct contributions* (direct levies, applied to land or a proxy for income), customs duties normally accounted for major shares of revenue. Unlike the US and Canada, the newly independent Latin American nations received revenue generated by state monopolies (a holdover from the colonial period) and levies on the production of certain staples intended for export (such as coffee, sugar, or guano). In Mexico, for example, port taxes, income from the tobacco monopoly, and excise taxes yielded 75 to 85 percent of national government revenue over the latter half of the 19th century. Taxes on property and on businesses existed, but these typically accounted for less than 10 percent of revenue. In Brazil, between 1823 and 1888, more than 50 percent of total national revenue consistently came from tariffs on imports, with excise taxes and assessments on exports contributing roughly 14 and 25 percent of total revenue, respectively. In Chile, taxes assessed at ports and revenue raised by state monopolies consistently accounted for just under 80 percent of national government revenue throughout the second half of the 19th century and well into the 20th century. Colombia provides yet another example.

Already by the 1830s, soon after independence, customs duties and income from state monopolies on commodities such as tobacco and salt brought in 60 percent of national revenues. By the 1840s, their cumulative share rose to nearly 80 percent.

Although wars and other threats to the social order (such as the War of 1812, the US Civil War, the war between Mexico and the US, and various internal uprisings) sometimes stimulated the imposition of direct taxes that extended the reach of national governments in progressive directions (the income tax in the US during the Civil War, and the property tax in Mexico that was introduced because of the war between that country and the US), the general pattern throughout the hemisphere well into the 20th century was reliance by national governments on tax structures that targeted commodities or trade rather than income or wealth. As is evident in Table 4, it was only in the 20th century that the US and Canadian national governments introduced permanent peacetime taxes on income and wealth (estates). These new assessments, together with payroll taxes, came to be the dominant source of central government revenue during the 1930s and 1940s, and coincided with a sharp increase in the absolute and relative size of the federal government. Latin American countries also began to introduce significant income and wealth taxes during the first half of the 20th century, but the amounts raised – especially from levies on individuals – were quite modest in relative terms compared to their neighbors in North America. Notwithstanding the notable divergence in the 20th century, the national government tax structures in North America and Latin America for the 19th century are quite similar.

Table 4. Customs and Income and Wealth Taxes as a Share of National Government Revenue

	Customs	Income and Wealth Taxes
	(%)	(%)
Argentina		
1872	94.0	--
1895	71.2	3.2
1920	58.4	2.9
1940	24.7	17.9
Brazil^a		
1870	71.4	--
1888	69.1	--
1900	65.5	--
1920	56.8	--
1940	50.3	10.2
Chile		
1895	73.8	0.6
1920	70.2	6.0
1940	41.1	23.7
Colombia		
1872	69.5	--
1928	56.0	5.3
1940	36.7	30.4
Costa Rica^c		
1871	91.4	--
1885	81.3	--
1910	86.8	--
1918	64.4	18.3
1930	78.1	7.2
1948	72.4	12.0
El Salvador^a		
1897	84.0	--
1910	75.0	--
Guatemala^a		
1872	76.0	--
Mexico^b		
1870	92.3	3.6
1890	79.7	4.7
1910	86.0	11.1
1929	[29.8]	10.6
1940	[29.5]	17.0
Peru^d		
1871	95.6	--
1899	59.1	3.6
1920	51.9	6.0
1940	26.5	18.4

Uruguay		
1895	66.7	--
1910	60.0	--
1929	32.2	18.6
1940	40.0	14.0
Canada		
1870	63.2	--
1905	57.5	--
1920	37.3	10.5
1940	15.0	28.4
United States^e		
1820	83.3	--
1860	94.6	--
1870	47.5	9.3
1900	41.1	--
1927	17.0	64.8
1940	5.8	43.0

Stark contrasts exist among the societies of the Americas, however, in the size and revenue sources of state/provincial and local governments. Local governments in the United States and Canada are much more prominent than in Latin America (see Table 5). Also significant in comparing tax institutions are the radically different types of tax instruments used by lower levels of governments (see Tables 6.1, 6.2, 6.3, 6.4, and 6.5). The predisposition of the North American populations to organize and support local governments was evident as early as the 17th century, despite the absence during that era of distinctively (as compared to other societies in the Americas) high per capita incomes. Likewise was the tendency of these local governments to raise the vast majority of revenue through property taxes.

Table 5. Distribution of Tax Revenues Across Levels of Government During the 19th Century: Brazil, Chile Colombia, Mexico, Canada, and the United States

	National Government (%)	Provincial Governments (%)	Municipalities or other Local (%)
Brazil			
1826	30.8	69.2	0
1856	79.5	17.1	3.3
1860	78.2	18.2	3.5
1885/86	76.3	18.5	5.2
Chile			
1913	85.8	--	14.2
1915	82.7	--	17.3
1920	85.3	--	14.7
Colombia			
1839	88.4	2.9	8.7
1842	91.8	1.6	6.7
1850	85.4	8.7	5.8
1870	46.6	30.8	22.6
1894	60	32	8
1898	66.7	28.6	4.8
Mexico			
1882	69.1	19.5	11.5
1890	74.7	16.3	9
1900	67.3	19.8	12.9
1908	70.6	17.1	12.3
Canada			
1933	42.5	17.9	39.6
1950	68.7	18.7	12.6
1960	62.8	20.7	16.4
United States			
1855	25.5	17.4	57.1
1875	39.6	16.4	44.0
1895	36	14	50
1913	29.1	13.2	57.6
1927	35.5	18	46.5
1950	68.3	17.3	14.4

Sources and Notes:

*For Brazil, Carreira 1889. The substantial change in the distribution of tax revenues between 1826 and 1856 reflects the growth in the relative power of the national government, relative to the provinces, after independence. There were explicit divisions of authority across the levels of government as regards what could be taxed, but those divisions changed somewhat over time. In 1834, the national government was given the authority to raise revenue through collecting taxes on imports, exports, slaves, and the production of gold, sugar, cotton, and various other products, as well as through port fees, stamp requirements, and the sale of official posts and titles. The division of authority changed over time, with perhaps the principal impact being the shift of taxes on slaves to provinces, with the right to tax immobile property going to the national government. For Colombia, Felipe Perez, *Geografía General*; F.J. Vergara y Velasco, *Nueva Geografía*; *Memorias**

*de Hacienda, 1870-75; Luis Ospina Vasquez, Industria y proteccion en Colombia; and LUIS FERNANDO LÓPEZ, HISTORIA DE LA HACIENDA Y EL TESORO DE COLOMBIA, 1821-1900 (Banco de la República 1992). As seen in the table, in the 1830s and 1840s, the national government collected a major part of the fiscal revenues. The situation changed drastically after the reform of 1850, which intended to decentralize the fiscal revenues and spending. The states would be in charge of the elaboration of their own budgets. In the case of revenues, the national government would keep mainly the revenues from customs, salt monopoly, stamped paper, income from the mint, and the postal and telegraph service, while the states would collect the revenues from taxes on the gross value of the production of gold and certain agricultural commodities. These taxes were phased out during mid-century, however, and the states created new taxes then, such as a direct tax, in order to raise more revenues. Not only taxation was decentralized: spending was also reallocated. The states were put in charge of the spending on public instruction, police, prisons, justice administration, roads and public works. Between 1863 and 1886 the decentralization process became more significant. The Constitution of 1863 established the federal system in the Estados Unidos de Colombia (United States of Colombia), which was confirmed by nine sovereign states: Antioquia, Bolívar, Boyacá, Cauca, Cundinamarca, Magdalena, Panamá, Santander and Tolima. The decentralization of revenues had a significant impact: while in 1850 the revenues collected by states represented 8.7% of total revenues, in 1870 they represented 30%. In the case of the municipalities, their revenues also increased in importance from 6% to 23% between 1850 and 1870. It is important to notice that Antioquia and Cundinamarca, the two states that realized the most growth over the period in both income and state tax revenue, had been characterized by relative labor scarcity and likely had greater equality. For the United States, the figures for 1855, 1875, and 1895, were computed as a weighted average of regional estimates of per capita revenue raised for different levels of government. The federal figures include revenue raised through land sales. See Lance E. Davis & John Legler, *The Government in the American Economy, 1815-1902*, 26 *JOURNAL OF ECONOMIC HISTORY* 514-552 (1966). The estimates for 1913, 1927, and 1950, see US Bureau of the Census. 1975. *Historical Statistics of the United States: Colonial Times to 1970*. Washington, D.C.: Government Printing Office.*

It is not entirely clear how substantial local governments were at the establishment of the United States, but local governments certainly grew very rapidly during the early decades of the 19th century as the *common school movement* progressed, and as local governments were increasingly engaged in helping to organize new investments in roads and other infrastructure required as the economy was beginning to industrialize. What is apparent, is that local governments were the largest component of the overall government sector by the middle of the 19th century at the latest (their share of total government revenue was over 50 percent) with a few brief exceptions during and after major wars. Their heavy reliance on the property tax likely contributed to a rather progressive tax structure at both the local and national (all levels of government together) levels. Similarly, the aggregate pattern of expenditures was also progressive in that the main priorities of local governments were (well into the nineteenth century) schools, roads, and other infrastructure that generate broadly distributed social returns.²⁷ This pattern, character-

²⁷ We do not yet have systematic evidence on the shares of revenue to local governments coming from different taxes, but scattered information is consistent with the implication of the estimate for 1902 in Table 5a, that local governments obtained well over 90 percent of revenue from property taxes. See John Joseph Wallis, *A History of the Property Tax in America*, in *PROPERTY TAXATION AND LOCAL GOVERNMENT FINANCE: ESSAYS IN HONOR OF C. LOWELL HARRISS* (Wallace E. Oates ed., Lincoln Institute of Land Policy 2001) for further discussion of how the relative importance of the property tax as a source of state revenue varied over the nineteenth century.

ized by the predominance of property and inheritance taxes accounting for the bulk of the revenue collected by governments at all levels, endured into the early decades of the 20th century. (See Table 7.1 and Table 7.2 for evidence of a similar pattern in Canada.)

Table 6.1. Sources of Tax Revenue for the US Local Governments, 1890-1972

	1890	1902	1913	1927	1940	1950	1960	1972
Indiv/Corporate Income Taxes	--	--	--	--	0.4	0.9	1.3	4.4
Sales and Excises	--	--	0.2	0.6	2.8	5.9	7.7	8.7
Property	92.5	88.6	91.0	96.8	91.3	86.2	85.0	81.0
Payroll	--	--	0.2	0.6	1.5	2.3	2.9	3.2
Other	7.5	11.4	8.6	2.1	3.9	4.7	3.0	2.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Notes and Sources:

For the 1890 estimates, see MORRIS A. COPELAND, TRENDS IN GOVERNMENT FINANCING tbl. 13 (Princeton University Press 1961). Copeland also provides extensive discussion, as well as estimates that conform with those presented in SIDNEY RATNER, TAXATION AND DEMOCRACY IN AMERICA tbl. 1 (4th ed. 1980). We employ Ratner for the estimates after 1890, as this source covers the years up to 1972. The estimates represent the share of local government tax revenues accounted for by the respective taxes. Transfers of resources to local governments accounted for less than 10 percent of total resources available for local government expenditures through 1913 (and most of those transfers were grants for schools or roads), rose to a bit less than 15 percent by 1932, but jumped to more than 25 percent by the early 1940s. See COPELAND, supra for more discussion.

State governments in the United States also made extensive use of property taxes, but the extent to which they did so varied over the 19th century, as well as across region. The property tax was likely the largest single source of state government revenue at the beginning of the 19th century, but many states began to exploit other means of raising revenue with the onset of industrialization. Especially in the Northeast, state governments reduced or even eliminated (for a time) property taxes and raised their revenues through other sources, including fees assessed for issuing corporate charters and taxes on corporate capital (especially banks and insurance companies). This approach worked well for a time, as state governments invested in banks, transportation companies, and other institutions or infrastructure that had been justified as conducive to the development of the respective states, but also proved to generate positive private returns in an environment of accelerat-

ing economic growth.²⁸ Continued high rates of bank formation and transportation infrastructure construction, however, brought intensified competition and lower rates of return on such investments. The wave of state government bankruptcies that followed the economic contractions of the late 1830s and early 1840s led to a revival and reform of state property taxes, as it became more difficult for states to issue debt for the financing of infrastructure investment without a stable revenue source. Although states continued to raise significant revenue through fees, the property tax was by far the most important tax, and the most important revenue source for state governments into the 20th century. (See Table 6.2.)

Table 6.2. Sources of Tax Revenue for the US State Governments, 1890-1972

	1890	1902	1913	1927	1940	1950	1960	1972
Individual Income Tax	--	--	--	4.0	4.7	7.4	9.9	18.2
Corporate Income Tax	--	--	--	5.3	3.5	6.0	5.3	6.2
Sales and Excises	--*	17.9	19.9	42.8	51.0	55.6	54.0	51.0
Property	70.0	52.6	46.5	21.2	5.9	3.1	2.7	1.8
Payroll	--	--	--	7.9	24.5	18.8	19.4	16.4
Death and Gift	--	29.5	33.6	18.9	10.3	9.1	1.9	1.8
Other	30.0	--	--	--	--	--	6.9	4.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Notes and Sources:

For the 1890 estimates, see MORRIS A. COPELAND, TRENDS IN GOVERNMENT FINANCING tbl. 13 (Princeton University Press 1961).. Copeland also provides extensive discussion, as well as estimates that are consistent with those presented in SIDNEY RATNER, TAXATION AND DEMOCRACY IN AMERICA tbl. 1 (4th ed. 1980). We employ Ratner for the estimates after 1890, because his cover the years up through 1972. The estimates represent the share of state government tax revenues accounted for by the respective taxes. Non-tax revenues appear to have been substantial, however, accounting perhaps for as much as 40 of revenue in 1913.

²⁸ As is detailed in Wallis, *id.*, during the 1830s, Massachusetts raised more than half, and Rhode Island more than a third, of state government revenue from a tax on bank capital.

* The sales and gross receipts taxes for this year are included in the Other category.

Table 6.3. Sources of Tax Revenue in the US Federal Government, 1890-1972

	1890 (%)	1902 (%)	1913 (%)	1927 (%)	1940 (%)	1950 (%)	1960 (%)	1972 (%)
Individual Income	--	--	--	25.6	16.9	40.7	45.4	46.2
Corporate Income	--	--	5.3	36.6	19.8	27.1	24.0	15.7
Sales and Excises	36.6	47.6	45.6	14.6	31.6	19.2	12.8	8.1
Customs Duties	59.3	47.4	46.8	17.0	5.8	1.1	1.2	1.6
Payroll	--	--	--	2.1	14.2	9.0	14.2	25.0
Death and Gift	--	1.0	--	2.6	6.3	1.8	1.8	2.6
Other	4.1	--	--	--	--	--	2.1	2.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Notes and Sources:

For the 1890 estimates, see MORRIS A. COPELAND, *TRENDS IN GOVERNMENT FINANCING* tbl. 10 (Princeton University Press 1961). Copeland also provides extensive discussion, as well as estimates that are consistent with those in SIDNEY RATNER, *TAXATION AND DEMOCRACY IN AMERICA* tbl. 1 (4th ed. 1980). We employ Ratner for the estimates after 1890, as this source covers the years up to 1972. The estimates represent the share of federal tax revenues accounted for by the respective taxes. Non-tax revenue sources (such as postal revenues, land sales, and patent fees) are excluded from the base that the proportions are computed on. In 1890, these non-tax sources accounted for just over 15 percent of federal revenue, and their share fell over time.

Table 6.4. Sources of Revenue to, and Expenditures by, Municipal Governments, Canada, 1933-1960

	1933 (%)	1950 (%)	1960 (%)
Revenues			
Income Taxes	1.4	--	--
Sales and Excises	--	4.3	5.1
Property/Wealth	78.6	69.6	78.6
Other Taxes	6.1	9.2	0.4
Non-Tax Revenues	13.9	14.3	10.0
Subsidies from Other Govts.	--	2.6	5.8
Total	100.0	100.0	100.0
Expenditures			
Health and Social Welfare	18.8	16.7	5.2
Education	25.4	36.1	38.6
Transportation/Comm.	8.9	16.1	17.1
Debt Service	19.8	5.1	4.5
Protection of Persons/Property	--	--	11.0
Other	27.1	26.0	23.6
Total	100.0	100.0	100.0

Table 6.5. Sources of Revenue to, and Expenditures by, Provincial Governments, Canada, 1933-1960

	1933 (%)	1950 (%)	1960 (%)
Revenues			
Income Taxes	6.0	15.3	16.4
Sales and Excises	21.8	32.2	33.3
Property/Wealth	3.0	0.8	0.4
Other Taxes	24.1	9.3	11.8
Non-Tax Revenues	45.1	42.4	38.1
Total	100.0	100.0	100.0
Expenditures			
Health and Social Welfare	29.7	26.0	26.7
Education	12.8	19.4	24.3
Transportation/Comm.	15.5	26.6	24.9
Natural Resources	7.8	7.7	7.0
Debt Service	22.8	5.5	2.3
Protection of Persons/Property	--	5.4	4.7
Other	11.4	9.4	10.1
Total	100.0	100.0	100.0

Table 7.1. Sources of Tax Revenue in the US, for All Levels Considered Together, 1902-1972

	1902	1913	1927	1940	1950	1960	1972
Individual Income Tax	--	--	9.8	8.1	29.3	33	33.5
Corporate Income Tax	--	1.5	13.9	8.7	19.6	17.3	11.2
Sales and Excises	19.8	16.1	13.2	28.5	23.6	19.1	17.6
Customs Duties	17.7	13.6	6	2.3	0.7	0.8	1
Property	51.4	58.6	48.8	30.3	13	12.7	12.8
Payroll	--	0.1	2.4	13.3	9.7	13.4	19.7
Death and Gift	11.1	10.1	5.8	8.9	4.2	1.5	2
Other	--	--	--	--	--	2.1	2.1
Total	100	100	100	100	100	100	100

Notes and Sources: SIDNEY RATNER, TAXATION AND DEMOCRACY IN AMERICA tbl. 1 (4th ed. 1980). The estimates represent the share of total government tax revenue (national, state, and local considered together) accounted for by the respective taxes.

Table 7.2. Sources of Revenue to Consolidated Governments, Canada, 1933-1960

	1933 (%)	1950 (%)	1960 (%)
Revenues			
Income Taxes	12.4	44.5	45.1
Sales and Excises	26.2	32.0	28.7
Customs	13.5	7.9	6.0
Property/Wealth	39.2	10.8	16.2
Other Taxes	8.7	4.8	4.0
Total	100.0	100.0	100.0

The little information we have been able to gather about the revenue sources of local/municipal governments in Latin America suggests that they too (see tables 8.1 and 8.2 pertaining to Chile and Colombia) were more dependent on taxes on income, assessments on businesses and professions, as well as other revenue sources conventionally seen as more progressive than were national or state/provincial governments. However, the markedly smaller size of local governments in Latin American nations resulted in radically different, and seemingly much less progressive, aggregate tax structures than in the North American countries. Local/municipal authorities accounted for only about 10 percent of total government revenue in Brazil, Colombia, and Mexico throughout the 19th century (and in Chile, between 10 and 20 percent during the second decade of the 20th century, despite the absence of state/provincial governments). The contrast with the US and Canada is dramatic. In the US, the figure was 57.1 percent in 1855, and remained near 50 percent for the rest of the century. Even as late as the 1930s, the share of local government revenue was near 40 percent in both the US and Canada.

Table 8.1. Chile: Revenues of the Municipalities

	Total Revenues	Contributions on Income	Taxes/Fees on Professions and Industries	Taxes on Alcoholic Beverages	Taxes on Slaughtering	Taxes on Mines	Taxes on Carriages	Outside the Budget/Other
	(pesos (000))	(%)	(%)	(%)	(%)	(%)	(%)	(%)
1913	27520	39.0	7.1	6.0	4.0	2.1	3.0	38.8
1915	27858	50.0	6.7	4.1	3.3	2.5	2.5	30.9
1920	45357	38.7	15.7	2.7	2.1	2.3	2.4	36.1

Table 8.2. Sources of Revenue of Municipal Governments in Colombia, 1918: Department of Cundinamarca

Type of Tax	Total for All Municipalities in Cundinamarca	City of Bogota Alone
	(%)	(%)
Property Tax	22.5	14.2
Almotacen and plaza (tax on market)	11.7	15.0
Slaughtering House	3.5	2.7
Other Slaughtering	2.2	1.3
Bullfighting	0.5	0.1
Rental Income	1.2	0.1
Legal Games	1.2	0.9
Fines	2.7	1.6
Other Sources	54.5	64.1
Total	100.0	100.0

Source: Republica de Colombia, "Boletin de Estadistica de Cundinamarca, Bogota: Imprenta del Departamento (1919).

From what we have learned about other countries in Latin America, and what is implied by the discussion of the exceedingly limited investments in public schooling in Latin America until the 20th century (and of the greater role of the national government in funding those investments when they finally occurred), the qualitative pattern evident in the figures for Brazil, Colombia, and Mexico seems to be representative. Local/municipal governments in Latin American countries never grew very large, especially in rural areas.

The basis for our claim that the overall tax system in the 19th century United States and Canada was more progressive than that in Latin America does not rest solely on the observed differences in the relative sizes of the different levels of government. Although we have not yet obtained the evidence that would allow us to provide a satisfactorily comprehensive comparison of the structure of taxes employed by local governments in the US and Canada with that in Latin America, we have sufficient data on the revenue sources of state/provincial government to offer tentative conclusions. As seen in Table 9.1 (as well as in Table 6.2), state governments in the US obtained much of their revenue from property taxes and other taxes generally thought to be progressive in incidence, such as taxes on banks or corporations.

Table 9.1. Regional Averages of Share of State Revenue, Derived from Property and Business Taxes

	To 1825	1825-1849	1850-1874	1875-1890
Northeast				
Mean	0.41	0.25	0.33	0.35
Sd	-0.31	-0.28	-0.25	-0.25
N	149	170	161	103
Midwest				
Mean	0.90	0.41	0.5	0.58
Sd	-0.15	-0.27	-0.26	-0.18
N	14	50	113	86
South				
Mean	0.17	0.29	0.24	0.32
Sd	-0.24	-0.36	-0.28	-0.31
N	128	133	190	169
West				
Mean	--	--	0.44	0.24
Sd	-0.27	-0.31		
N	36	42		

Table 9.2. Income Shares of Local and State Taxes: US, 1860 and 1880

	% State (1860\$)	%Local	P.C. Income
1860			
Northeast	0.91%	3.65%	\$181
N. Central	1.25	6.22	89
S. Atlantic	2.21	3.07	81
E. So. Central	1.12	1.79	89
W. So. Central	0.68	2.2	184
National Avg.	1.22	2.58	128
1880			
Northeast	0.93	4.08	244
N. Central	0.84	4.4	170
S. Atlantic	2.04	3.33	84
E. So. Central	1.23	1.97	95
W. So. Central	0.97	4.31	112
National Avg.	0.9	3.97	173

Notes and Sources: Both the regional and national average shares of state and local revenues in regional were calculated from the estimates of government receipts in Lance E. Davis & John Legler, The Government in the American Economy, 1815-1902, 26 JOURNAL OF ECONOMIC HISTORY 514-552 (1966), and the per capita income estimates in ROBERT W. FOGEL, WITHOUT CONSENT OR CONTRACT (Norton 1988)., which were based on the work of Easterlin. Richard A. Easterlin, Regional Income Trends, in AMERICAN ECONOMIC HISTORY (Semour Harris ed., McGraw-Hill 1961). We do not include estimates for the national government as a share

of income, because the receipt is based on point of collection, and thus implies higher taxes in regions with ports or substantial land sales. However, our estimates of the national figures for the total tax revenue relative to income are 6.67% and 8.96% in 1860 and 1880 respectively. Some of the later-settled regions are excluded here because of incomplete information.

The reliance on these types of tax structures varied across region, with their prominence being greater in regions with less economic inequality (such as the Midwest, as compared to the South), and seems to have declined over time within region as various other forms of raising revenue, such as fees and excise taxes, increased.²⁹ It is quite interesting, moreover, that state governments tended to rely more on property taxes as a source of revenue in regions where local governments were relatively larger (as judged both by the local government share of regional income as well as relative to the income share of state income). The pattern raises the issue of whether the factors that led a population to be more oriented toward property tax are related to those factors which led that population to develop a larger local government.³⁰ In any case, over the entire US, the property tax accounted for roughly 70 percent of state government receipts in 1890, and as late as 1902 (see Table 5.2), the property tax alone accounted for over half of all revenue to state governments.

State or provincial governments in Latin America made less use of property taxes, and seem to have relied more on taxes that likely placed relatively less of the tax burden on the

²⁹ It is striking that the reliance on property and other progressive taxes, as a share of state government revenue, is closely associated with estimates of the extent of wealth inequality across the Northeast, the South, and the Midwest. The lower importance of these taxes in the West does not fit the pattern, but this appears to have been primarily attributable to the revenue that these governments obtained from public lands. Our estimates of the revenue shares of these taxes were constructed from data collected, and graciously provided by, John Legler, Richard Sylla, and John Wallis. For information on how wealth inequality varied across regions, see LEE SOLTOW, *MEN AND WEALTH IN THE UNITED STATES, 1850-1870* (1975). Remarkably, this pattern persisted into the second half of the 19th century, with the states with greater inequality relying less on the property tax for state and local government finance than others. To take 1961, for example, the shares of government tax revenue raised by state and local governments are much lower than the national average (46.3%) in states distinguished by higher inequality: Alabama (20.8%); Arkansas (28.7%); Georgia (30.4%); Hawaii (12.7%); Louisiana (23.0%); Mississippi (28.4%); New Mexico (26.4%); North Carolina (28.3%); South Carolina (23.0%); and West Virginia (29.0%). See Advisory Commission on Intergovernmental Relations, *State Constitutional and Statutory Restrictions on Local Government Debt* (1961), pp. 22-23..

³⁰ Another pattern consistent with this hypothesis is that in late-19th century Mexico, local governments were generally larger (as gauged by revenues per capita, or local government revenues relative to state government revenues) in the northern part of the country, where the fraction of the population composed of individuals of Native American descent was typically much smaller than in other regions.

extremely well to do elite. As reflected in Tables 10.1, 10.2, and 10.3, which present the distribution of revenue across various sources for state or provincial governments in Argentina, Brazil, and Colombia, they typically did have some taxes on land or property (the so-called *direct contributions*), but they accounted for markedly lower proportions of state government revenue than such taxes did in the US. In these three countries, which are certainly among the most decentralized in Latin America, taxes on forms of wealth or on business rarely accounted for more than 10 to 15 percent of state/provincial revenue during the second half of the 19th century (as compared to 70 percent in the US in 1890). Instead, state/provincial governments in Latin America collected relatively more revenue from excise taxes, transportation fees, levies on products intended largely for export, and a variety of other sources.

Table 10.1. Sources of Revenue to State/Provincial Governments

Argentina	
<i>Revenues of the Provincial Governments</i>	1872 %
Alcabala (sales tax)	0.2
Rent of land	0.2
Direct contribution	13.2
Inheritances	0.1
Tax on Fruit	0.4
Stamped paper	5.6
Patents	7.9
Road Tolls	0.4
National Subvention	2.3
From National Treasury	7.4
Constitution-Mandated Share of Tariff Revenue	15.2
Sales of land	30.5
Others/Miscellaneous	16.6
Total	100

Table 10.2. Revenues of State or Provincial Governments In Brazil: Sao Paulo and Minas Geraes

Sao Paulo	1871-72 (%)	1910(%)
Taxes on Exports	--	40.7
Transit Taxes	79.1	3.6
Tax on Inheritance/Legacies	7.9	3.1
Taxes on Transfer of Properties	--	12.8
Taxes on Property	1.2	2
Taxes on Capital of Producers	--	5.7
Indemnities and Fines	3.2	10.6
Taxes on Slaves and Slave Trade	5.8	--
Taxes on Water and Sewers	--	8.4
Judiciary and Other Fees	0.5	0.8
Lotteries	--	1.7
State Stamps	--	1.4
Sale of Public Lands	--	0.4
Miscellaneous Other	2.3	8.4

Minas Geraes	1876.0 (%)	1892 (%)	1905 (%)
Taxes on Exports	5.7	64.4	59.0
Tax on Coffee	20.3	--	--
Tax/Fees on Inheritance and Transfers of Properties	7.9	14.1	8.7
Transfer and Registration of Slaves	17.4	--	--
Taxes on Property	2.8	--	6.1
Taxes on Private Consumption	--	7.6	2.3
Taxes on Industries and Profits	--	--	8.0
Taxes on Gold, Salt, and Diamonds	2.0	0.8	1.5
Transit Fees/Taxes	16.4	0.9	1.0
Taxes on Water and Sewers	--	0.6	--
Judiciary and Other Fees	0.8	4.3	0.7
Official Posts and Titles	7.4	--	2.8
Lotteries/Gambling	3.1	--	--
State Stamps	0.2	3.9	4.2
Public Lands	--	0.1	0.7
Miscellaneous/Other	16.0	3.3	5.0

Sources and Notes: For 1876 and 1892, the sources are Torres (1961), and for 1905, the source is Barbosa (1966). The relatively high figure for the miscellaneous/other category in Minas Geraes in 1876 is due to 9.9% of the revenue coming from "direitos de 6% sobre outros generos". The high transit tax revenue in Sao Paulo in 1871 is due primarily to the Taxas das Barreiras, which was a state road tax, whereby stations on state roads collected tolls for carts, wagons, coaches, and animals on the hoof.

Table 10.3. Sources of Revenue to State Governments: Colombia, Public Revenues of All States, 1870

	Thousands of pesos	%
Tax on Slaughtered Livestock	350	18.3
Tax on Liquors	289.5	15.1
Tax on foreign merchandise	247	12.9
Direct taxes on Industry and Capital	224.1	11.7
Tax on Real Estate	135	7.1
Excise Taxes on Consumption of Cacao, Tobacco and Anis	134.6	7.0
Stamps	108.4	5.7
Miscellaneous/Other	422.4	22.1

In Brazil, for example, the legal specification of what state governments could tax and what the national government could tax was changed several times over the 19th century. Under the 1840 constitution, the main provincial taxes were taxes on sugar and coffee production, but revenues were also obtained from taxes/fees on legacies and inheritance, on transference of properties, the sale of *novhos e velhos direitos* (official posts and titles), taxes on the slave trade, and especially fees for traveling along provincial roads and rivers. There were taxes on property, but they generated only a tiny share of total revenue. Until relatively late in the 19th century, the fees charged for traveling on provincial roads (*estradas provinciais*) and internal/small rivers (*rios internos*)--fees that were called by different names such as itinerary fees, fees on departure or fees on traveling--were among the most important sources of provincial revenues. For example, in the province of Sao Paulo in the period 1871-72, the rights to departure raised 56 percent of the total revenues of the province, while the taxation on slavery trade and the tax on legacies accounted for 6 percent and 8 percent, respectively. In the province of Minas Geraes, in 1876 the main sources of provincial revenue were taxes on coffee (20 percent of the total revenues of the province), itinerary fees (16 percent), and taxes on transfer, registration and trade of slaves (15 percent).

Direct taxes did not become important until late in the 19th century, but even then the reliance in Brazil on property and other taxes progressive in character was quite modest compared to the United States. The Constitution of 1891 established a republic, and the provinces then became designated states with expanded rights to collect taxes on exports (rights previously reserved for the national government), as well as taxes on property, on transference of property, and on industries and profits. This change transformed the

tributary structure of the most prosperous states, such as Minas Geraes, whose economies were largely directed at foreign trade. In Minas Geraes, levies on exports had raised only 5 percent of the total revenues of the province in 1889, but with the expanded power to tax, this share jumped to 64 percent in 1892. Similarly, in 1910 the tax on exports raised 40 percent of the total revenues of Sao Paulo, whereas in 1871 it had yielded no revenue for the province.

The states also increased the shares of revenue they derived from taxes on property, legacies and others transferences of property, and on industrial profits. In Minas Geraes, the tax on property (*imposto predial* or territorial tax) accounted for 2.8 percent of the total revenues of the province in 1876, but its take rose to 6.1 percent in 1905. There were no taxes on industries and profits prior to the establishment of the republic, but they accounted for 8 percent of revenue in 1905. Taxes and fees on inheritance and transfers of property generated 8.7 percent of total revenues. Such taxes were of similar importance in Sao Paulo. In 1910, the state of Sao Paulo raised 2 percent of state revenue from property taxes, 5.7 percent of revenue from a tax on the capital of producers, and 15.9 percent of revenues from taxes/fees on inheritances, legacies, and transfers of property. Thus, in Minas Geraes and Sao Paulo, perhaps the two major states of Brazil, these progressive taxes accounted for 22.8 and 23.6 percent of state revenue, respectively. As is evident in Table 6b, the corresponding figure for state governments in the United States in 1902 was 82.1 percent. The contrast is dramatic and telling.

It seems clear that over the 19th century, the United States and Canada had tax structures that were markedly more progressive in orientation than the tax structures of Latin American countries. Much of this was likely due to larger local governments in North America, that were especially dependent on property taxes; however, there were also substantial differences in the tax structures employed by state governments.

Another question is whether the US and Canadian tax institutions were associated with higher levels of taxation, both in absolute terms as well as relative to income. We try to answer this question with estimates presented in Table 11 of the amount of national government taxes collected per capita in 1870 for a range of countries across the world, as well as the implied shares of these taxes to national income (using the per capita income estimates prepared by Angus Maddison for that year). Perhaps not surprisingly, given its higher per capita income, the US national government collected substantial taxes on a per

capita basis. The only country that collected more was Peru, which realized extensive revenue over a period of several decades from exports of guano – a natural resource that was all too soon depleted.³¹

Table 11. National Government Tax Revenue Per Capita, C. 1870

	Taxes per capita (1870 US\$)	Index of Tax Revenue Relative to National Income (100=US)
Americas		
Argentina	9.4	155
Bolivia	1.2	
Brazil	6.7	195
Chile	6.7	
Colombia	1.1	
Costa Rica	9	
Ecuador	1.3	
El Salvador	2.2	
Guatemala	1.7	
Honduras	0.9	
Mexico	3.1	94
Nicaragua	2.9	
Peru	14	
Venezuela	5.1	
United States	11.4	100
Europe		
Belgium	7.1	58
Denmark	9.3	104
England	13	86
France	12.3	143
Germany	5.6	63
Greece	4.8	
Holland	14	114
Portugal	4.5	
Sweden and Norway	3.7	51
Switzerland	2	20

As a share of income, however, the amount of revenue going to the national government was not especially high in the US. We only have per capita income estimates for a small number of Latin American countries, but both Argentina and Brazil easily surpass the US by this gauge (as does France, during the Franco-Prussian War), and Mexico does not lag far behind. If one considers, however, the much larger share of total government revenue that goes to local and state governments in the US than in Latin America, it is

³¹ For a brief account of the rise and fall of this industry, see W. M. Mathew, *A Primitive Export Sector: Guano Production in Mid-Nineteenth-Century Peru*, 8 JOURNAL OF LATIN AMERICAN STUDIES 35-57 (1976).

evident that the revenue going to the government sector in the aggregate is far higher as a share of national income in the US than in any other country in the hemisphere with the possible exception of Brazil, where the aggregate share in income seems to be approximately the same. Much more work needs to be done, especially on the data collection front, but the tentative implication is that the US population was supplying its government with relatively more resources on a per capita basis, and even on a share of national income basis (which we estimate to be in the 7 to 8 percent range) than its neighbors to the south. Much of this latter disparity is accounted for by the much larger role for local and state governments. This suggests that the sub-national governments in the US were making substantial investments in such projects as public schooling, roads, and other infrastructure. (For illustrative figures from the 20th century, see Table 12.) Although in principle the same sorts of investments could have been made by national or state governments in Latin America (the levels of government that collected the tax revenue), the evidence suggests that the resources flowing to such ends were modest. Not only were levels of national government revenue as a share of income insufficient to make up for the very small local governments in these countries, but the patterns of national government expenditures (and evidence on literacy attainment presented above) indicate that Latin American countries put a relatively low priority on the funding of education, health care and other public works. For example, in Chile, schools (including universities) generally received between 5 and 10 percent of the national government budget--in contrast to national defense with two to five times more--and only minimal funding from local governments. (See Table 13.) Thus, the government sectors of Latin America may have been distinguished during the 19th century not only by a distinctive set of tax instruments, with a markedly less progressive bent than those in the US, but also by a different pattern and level of expenditures.

Table 12 .State and Local Government Nonfinancial Expenditures, the US, 1915-1950

	1915 (%)	1929 (%)	1939 (%)	1950 (%)
Education	26.2	32.0	26.0	23.7
Roads	18.2	25.5	23.0	12.3
Sewer/Water	4.7	3.7	3.8	2.9
Other Construction	3.6	4.8	6.7	4.6
Fire/Police Departs	4.4	4.1	3.4	2.9
Hospitals	2.2	1.9	2.0	2.6
Public Assist/Insurance	1.5	1.6	19.7	20.4
Debt Service	8.7	8.7	5.8	2.1
Other	30.5	17.7	9.6	28.5
Total	100.0	100.0	100.0	100.0

Notes and Sources:

These distributions were computed from information on expenditures by state and local governments provided in MORRIS A. COPELAND, TRENDS IN GOVERNMENT FINANCING tbl. 14 (Princeton University Press 1961).

Table 13. Chile: Expenditures of National Government by Category

	Total Expenditures	Interior	Foreign Affairs	Justice	Public Instruction	Hacienda (finance)	National Defense	Industry and Public Works
	(in gold pesos (000))	(%)	(%)	(%)	(%)	(%)	(%)	(%)
1865	25312	11.9	3.4	3.9	5.5	47.8	27.5	0.0
1870	32249	19.1	2.6	3.5	5.8	44.5	24.5	0.0
1875	47597	27.2	3.0	3.0	5.7	42.5	18.6	0.0
1880	43950	8.6	1.1	2.5	3.5	29.1	55.1	0.0
1885	50442	13.2	2.7	4.3	6.3	50.1	23.5	0.0
1890	91049	10.1	4.3	5.3	10.7	20.0	20.3	29.3
1895	74106	9.9	3.4	4.6	7.4	18.9	39.7	16.1
1900	92374	14.0	3.5	5.3	8.0	34.8	21.2	13.1
1905	103973	15.2	5.1	4.6	11.4	26.4	21.1	16.0
1910	163247	15.5	4.9	3.4	10.8	23.6	23.3	18.5
1915	131840	15.5	2.3	3.3	11.8	34.5	24.1	7.6
1920	264171	17.4	1.8	3.0	11.5	25.2	34.0	7.2

Notes and Sources: Oficina Central de Estadística (1921), Sinopsis Estadística de la República de Chile. Santiago de Chile: Soc. Imp y. Lit. Universo.

Chile: Ordinary Revenue of National Government

	Ordinary Revenue (in pesos (ooo))	Customs (imports and exports)	Rail-roads	Guano (nitrates)	Direct Taxes Income and Inheritance	State Monopolies	Agriculture Tax	Other
		(%)	(%)	(%)	(%)	(%)	(%)	(%)
1850	4334.3	61.7	0.0	0.0	0.0	16.6	0.0	21.7
1860	7362.2	64.9	0.0	0.0	0.0	14.6	0.0	20.5
1870	11537.8	55.8	13.9	0.8	0.0	12.2	5.6	11.7
1880	28410.4	38.0	13.8	14.5	2.2	9.3	3.7	18.5
1890	58583.6	74.5	14.1	0.2	0.2	0.0	2.0	9.0
1897	79281.5	77.2	16.5	0.0	0.0	0.0	0.0	6.3

Notes: In some years, extraordinary revenue is quite large, but the figures presented here are confined to ordinary revenue. The revenue under the customs category includes taxes on imports and exports. A large proportion of the revenue from taxing exports appears to have been derived from exports of nitrates, and the blip in 1880 revenue from taxes on guano and nitrates appears almost entirely due to a tax on nitrates that was listed separately for several years. As that tax went to zero in 1881, the customs revenue increased sharply. For the few years in which we have a breakdown of customs revenue between imports and exports, the share of revenue rises from roughly parity in the late 1880s to revenue from exports amounting for about 60 percent in 1897. The other category includes the revenue raised from miscellaneous taxes and fees including the alcabala (sales tax), the diezmo (church tax), stamped paper, postal service.

IV. TAX SYSTEMS IN LATIN AMERICA AND NORTH AMERICA IN THE 20TH CENTURY

This section compares the current tax structure in Latin America to tax regimes in North America and other parts of the world. As discussed below, there have been important changes in the relative use of tax instruments and in the size of the government relative to the economy, but in some respects little has changed. As compared to the United States and Canada, Latin American governments remain highly centralized, and continue to rely on consumption taxes, relatively limited use of income (especially individual income) or wealth taxes. Moreover, with some exceptions, the progressivity of Latin American tax and expenditure programs seems remarkably modest given the extreme inequality prevailing in that region of the world. While generalizing across the experiences of many countries involves a great deal of abstraction, and can seem a bit reckless, we attempt below to sketch out some of the common characteristics of current tax systems in Latin America and North America. This discussion relies on several excellent cross-country

studies of tax systems in Latin America³² as well as Government Finance Statistics from the International Monetary Fund.³³

In thinking about how inequality may influence tax institutions, we focus in this section on five important characteristics of tax systems in the Americas: (i) the growth in the size of governments in the 20th century and the need for tax revenues to support government expenditures; (ii) the relative use of consumption taxes and income taxes in the tax structure; (iii) the relative use of corporate income taxes and individual income taxes; (iv) the relative use of payroll or social security taxes; and (v) the relative size of central governments as compared to state and local governments and the allocation of taxing authority to different levels of government.

Before turning to examining the tax regimes, it may be useful to discuss briefly the incidence of specific taxes and tax regimes. It is difficult to interpret how the relative use of different tax instruments affects the distribution of the tax burden. Determining the incidence of specific taxes in developed countries is difficult, and it is even more difficult in developing countries. Economists have adopted a series of shifting assumptions as to how parts of the tax system are borne by workers, consumers, and owners of capital, as well as domestic and foreign persons. Whether these assumptions make sense in a particular country or region depends on factors specific to its economy.³⁴

a. Developments in the United States and Canada

The major change in the US and Canada during the 20th century was the dramatic growth in the size of government, particularly the growth of the federal government. At the

³²See Richard M. Bird, *Tax Reform in Latin America: A Review of Some Recent Experiences*, 27 *LATIN AM. RES. REV.* 7 (1992)[hereinafter Bird 1992]; PARTHASARTHI SHOME, *TAXATION IN LATIN AMERICA: STRUCTURAL TRENDS AND IMPACT OF ADMINISTRATION* (International Monetary Fund, Working Paper No. 19, 1999); VITO TANZI, *TAXATION IN LATIN AMERICA IN THE LAST DECADE* (Center for Research on Economic Development and Policy Reform, Working Paper No. 76, 2000); JANET STOTSKY & ASEGEDECH WOLDEMARIAM, *CENTRAL AMERICAN TAX REFORM: TRENDS AND POSSIBILITIES* (International Monetary Fund, Working Paper No. 227, 2002); and Bird 2003, *supra* note ____.

³³INT'L MONETARY FUND, *GOVERNMENT FINANCE STATISTICS YEARBOOK VOL. XXV (2001)* [hereinafter "IMF 2001 YEARBOOK"] and IMF 2004 Electronic version.

³⁴Anwar Shah & John Whalley, *The Redistributive Impact of Tax Policy for Developing Countries*, in *TAX POLICY IN DEVELOPING COUNTRIES* 166-187 (Javad Khalilzadeh-Shirzai & Anwar Shah eds., World Bank 1991).

beginning of the 20th century, the US federal, state and local governments together accounted for only about 7 percent of GDP. Even by 1930, they had grown to no more than 10 percent of GDP. During the Depression and World War II, however, the size of the government sector exploded, to roughly 25 percent of GDP, with the federal government coming to assume the dominant role it plays today.³⁵ In Canada, similar developments took place.³⁶ As was the case with many European countries (but not Latin American countries), most of the major tax changes at the US and Canadian federal levels were related to the need to raise funds to support wartime activities.

In the US, the Civil War, World War I, and World War II wrought the introduction of new taxes that not only financed a substantial portion of wartime expenditures, but also contributed to the peacetime expansion of the federal government in the aftermaths of the conflicts.³⁷ Facilitated by the passage of the constitutional amendment in 1913 that cleared away legal obstacles to a federal individual income tax (which followed the passage of a corporate income tax in 1909), the relative tax and spending shares between the federal and state and local governments began to shift. The fiscal landscape changed further with the adoption of social security taxes in 1937.

During the 20th century, the individual income tax in the US replaced the property tax as the primary tax on individuals. It is interesting that when Congress required additional revenue during the War of 1812, the solution was a supplemental property tax collected through a direct assessment of the states. By the time of Civil War, funding the revenue needs for war financing through property taxation had less political appeal. Although the statutory scope of the property tax laws in many states included all types of tangible and intangible property, as a practical matter the states effectively taxed only real property under the property tax laws. At the time of the Civil War, however, the growth in financial assets, such as stocks, bonds, mortgages and cash, meant that a property tax no longer

³⁵ See C. EUGENE STEUERLE, CONTEMPORARY US TAX POLICY (2004); JOEL SLEMROD & JON BAKIJA, TAXING OURSELVES (1996). See also STEVEN R. WEISMAN, THE GREAT TAX WARS (2002).

³⁶KARIN TREFFAND DAVID B. PERRY, FINANCES OF THE NATION 2003 (2004), at https://www.ctf.ca/FN2003/finances_2003.asp.

³⁷ W. ELLIOT BROWNLEE, FEDERAL TAXATION IN AMERICA: A SHORT HISTORY (1996). The first major social spending for the federal government came after the Civil War. During the 1880s and 1890s, the relatively generous pension benefits to Civil War veterans (only from the Union army) and their dependents and survivors required significant taxes imposed at the federal level. *Id.* at 31.

taxed individuals in a roughly equal manner.³⁸ The federal government in the 1860s adopted an income tax following the British approach for raising funds to finance the Crimean War. After the Civil War, the income tax was subject to political and constitutional attacks. The Underwood-Simmons Tariff Act of 1913 reestablished the income tax in a less progressive and less ambitious form than the Civil War version or the 1894 legislation.³⁹

The scope of the individual income tax was changed greatly by the revenue demands from World War I and World War II. For example, in the United States, the number of individual income taxpayers grew from 3.9 million in 1939 to 42.6 million in 1945 and increased in tax revenues from \$2.2 billion in 1939 to \$35.1 billion in 1945.⁴⁰ This increase in federal tax revenue from the income tax changed the balance on the relative size of federal versus state and local governments. Only during World War II did federal tax revenues begin to exceed tax revenues from state and local taxes. The first federal income tax in Canada was introduced in 1917 to fund the costs of Canada's participation in World War I. Adopted a few years after the US income tax, the Canadian tax law shared much in common with the US tax legislation.⁴¹

The rise of income taxes corresponded with a decline in trade taxes. In the US and Canada, trade tax revenues as a percentage of total revenue declined steadily from the 1890s to the 1950s. In the 1890s, trade taxes were about 60 percent of total US federal tax revenues. Between 1913 and 1927, trade taxes fell from 47 percent to 17 percent of US federal tax revenues, reflecting both a change in tariff policy and the growth of other sources of tax revenue, primarily individual and corporate income taxes. A similar, though less dramatic, decline in the role of trade revenue took place in Canada.

As discussed in Part III, central governments in North America during the 1800s were relatively small compared to the size of state and local governments. The US federal government had limited responsibilities and spent funds primarily for defense, interest on debt, and general government expenditures with only a small amount going to infrastruc-

³⁸BROWNLEE, *supra* note ____.

³⁹BROWNLEE, *supra* note ____.

⁴⁰BROWNLEE, *supra* note ____.

⁴¹*Id.* at ____.

ture improvements. In contrast, state and local government had primary responsibility for providing schools, roads and other infrastructure improvements.

Part of the difference in the relative size of the federal government and state and local governments is attributable to constitutional restrictions imposed on the federal government's taxing authority. The framers severely limited the power of the federal government to impose and collect direct taxes and they required any duties, imposts or excises to be uniform through out the United States.⁴² Both measures were adopted to prevent regional interests from using the federal government to shift a disproportionate tax burden to other groups. While the constitutional limitation on direct taxes became better known as a barrier to adopting a federal income tax,⁴³ the limitation was primarily adopted by the founding fathers to prevent the federal government from imposing property taxes. Representative from slave states were concerned that a federal property tax would tax slaves as property, farm states representatives were concerned that a federal property tax would be based on the size rather than the value of landholdings, and representatives of urban commercial areas were concerned that the property tax would be based on assessed value.⁴⁴

The property tax worked well when governments were small and the bulk of one's wealth consisted of real property. Relatively low rates and visible tangible benefit provided by local governments made the property tax relatively politically palatable. In the late 1700s and early 1800s, taxing real property was also a relatively good proxy for taxing according to ability to pay. By the mid-1800s, however, there was growing dissatisfaction with the property tax. Although the states nominally increased the scope of the tax to cover

⁴² Article 1, Section 8 provided Congress with the general authority to lay and collect taxes, duties, imposts, and excises, subject to the limitation that such taxes be uniform throughout the United States. Article 1, Section 9 limited the ability of the federal government to impose direct taxes by requiring "No capitation or other direct tax shall be laid, unless in proportion to the census." See generally, BROWNLEE, *supra* note ___ at 11-20.

⁴³ In *Pollock v. Farmers' Loan & Trust Co.*, 157 US 429, *aff'd* on rehearing 158 US 601 (1895), the Supreme Court held the income tax of the Wilson-Gorman Tariff unconstitutional because it violated the prohibition on un-apportioned direct taxes in Article 1, Section 9. The Sixteenth Amendment adopted in 1913 allowed Congress the power to impose income taxes without apportionment among the States and without regard to any census or enumeration.

⁴⁴ BROWNLEE, *supra* note ___ at 14-15.

all types of property, such as cash, bonds, stocks, and mortgages, in reality the burden of the property tax fell primarily on owners of real estate.⁴⁵

Table 14 sets forth the relative tax shares for US federal, state and local governments over the last 70 years.

⁴⁵Edwin Seligman provides a scathing attack on the property tax in his classic *Essays in Taxation*. EDWIN R. A. SELIGMAN, *ESSAYS IN TAXATION* (photo. reprint 1991) (10th ed., rev. 1931). Seligman contends that the property tax is defective in five ways: (i) lack of uniformity or inequality in assessment; (ii) lack of universality in its failure to tax effectively personal property; (iii) incentives to dishonesty in reporting and classifying property; (iv) potential for regressivity; and (v) potential for double taxation. *Id.* at 19-32. Seligman reports that the assessed valuation of real estate in New York had increased from about \$476 million in 1843 to about \$9.6 billion in 1911 while the assessed valuation of personal property had only increased from about \$118 million in 1843 to \$482 million in 1911. Seligman reports that in the early 1900s the property tax in New York fell 95% on real property and only 5% on personal property despite the relative increase in the proportion of wealth held in intangible personal property.

A more sympathetic view of the property tax is provided by Edward A. Zelinsky, *The Once and Future Property Tax: A Dialogue with My Younger Self*, 23 *Cardozo L. Rev.* 2199 (2002).

Table 14. Relative Tax Shares for US Federal and State and Local Governments, 1930 through 2000

	Federal Tax Revenues (except Social Security Taxes)	State and Local Tax Revenues	Social Security Tax Revenues
1930	29.4%	70.6%	0%
1940	39.9%	55.1%	5.1%
1950	67.4%	27.6%	5.0%
1960	59.9%	30.5%	9.6%
1970	51.1%	34.5%	14.4%
1980	48.2%	32.7%	19.1%
1990	41.8%	34.7%	23.5%
2000	46%	31.7%	22.3%

Source: C. Eugene Steuerle, *Contemporary US Tax Policy* 260 (2004).

State and local taxes declined in their relative share of total taxes from the early 1900s through World War II. Following World War II, however, state and local taxes increased dramatically, from 6.1 percent of GDP to a post-war high of 9.7 percent of GDP in 1972.⁴⁶ In the late 1970s through the 1980s a series of constitutional and statutory limitations led to a decline in state and local taxes, specifically restrictions on the use of property taxes.⁴⁷ In 1978, California voters passed Proposition 13 which imposed a maximum property tax rate of 1 percent. As of 2002, 44 states had some type restrictions on the ability of local government to impose property taxes. These limitations take different forms: 33 states impose property tax rate limitations, 27 states impose limitations on property tax revenue limits, and 6 states impose limits on increases in assessed property values.⁴⁸

The composition of tax revenues for state and local governments in the US has changed over the last 70 years. Although property taxes generally continue to be a major source of tax revenues for local governments, they are no longer the dominant source of total state

⁴⁶ STEUERLE, *supra* note __, at 37.

⁴⁷ BRUNORI, *supra* note __, at 61.

⁴⁸ BRUNORI, *supra* note __, at 61-62.

and local revenue. On average, property taxes account for 28.6 percent of total state and local revenue, general sales taxes for 24.7 percent, selective sales taxes for 10.8 percent, individual income taxes for 24.3 percent, and corporate income taxes account for 4.1 percent (other taxes account for 7.6%).⁴⁹ As discussed in Part III, variation exists in the relative tax levels and use of tax instruments among the different regions. State and local governments in the Northeast and Midwest have and continue to rely more on property taxes than state and local governments in the South and West.⁵⁰

In Canada, the relative size of the federal, provincial, and local governments has varied over time. Following independence in 1867, the British North America Act provided for a centralized federal government with general taxing authority. The federal government was responsible for defense and the building of railways while the provincial governments were given limited taxing authority and were responsible for health care and education. Table 15 sets forth the relative shares of tax revenue by level of government.

Table 15. Relative Tax Shares for Canada Federal, Provincial and Local Governments, 1926 through 2000

	Federal Tax Revenues	Provincial Tax Revenues	Local Tax Revenues	Canadian and Quebec Pension Plans Revenue
1926	49.2%	14.9%	35.1%	0%
1939	47.6%	23.8%	28.6%	0%
1946	76.4%	12.9%	10.3%	0%
1950	68.7%	18.7%	12.1%	0%
1960	65.0%	18.1%	16.9%	0%
1970	49.1%	31.1%	14.0%	5.8%
1980	45.0%	36.0%	11.8%	7.3%
1990	41.0%	38.7%	10.5%	9.7%
2000	42.3%	37.5%	8.7%	11.2%

Source: KARIN TREFF AND DAVID B. PERRY, *FINANCES OF THE NATION 2003 B:9 tbl. B.4 (2004)*, at <https://www.ctf.ca/FN2003/finances2003.asp>.

In Canada, the property tax remains the primary source of revenue for local governments, with property tax receipts accounting for more than 40 percent of total revenues.

⁴⁹ US Bureau of the Census 2000 State and Local Revenue.

⁵⁰DAVID BRUNORI, *LOCAL TAX POLICY: A FEDERALIST PERSPECTIVE (2003)*.

Substantial variation exists among the provinces as to the percentage of total local government revenue from property and related taxes.⁵¹

b. Developments in Latin America

Like all tax systems, tax systems in Latin America have been shaped by countless internal and external factors.⁵² One common framework sets forth five phases of economic and political development among Latin American countries: (i) the initiation of export-import growth (1880-1900); (ii) export-import expansion (1900-1930); (iii) import-substituting industrialization (1930-1960s); (iv) stagnation in import-substituting growth (1960s to early 1980s); and (v) economic crisis, neo-liberal reform, and gradual recovery (early 1980s to present).⁵³ The economic, political, and social changes across these eras have been dramatic indeed, and thus it is remarkable, at least to us, that there has been so modest qualitative change in the level of taxation, the relative use of different tax instruments, and except until recently, the allocation of taxing rights among different levels of government.

The growth of world trade during the late 1800s resulted in large degree from the industrialization of Europe. Economic changes in Europe created demand for products from Latin America. The rise of industry and income in Europe increased its demand for crude raw materials and foodstuffs. Argentina became a major exporter of agricultural products, Chile substantially increased copper production, Brazil exported coffee, Cuba produced coffee, sugar and tobacco, Central American countries sold coffee and bananas, and Peru

⁵¹ In New Brunswick, Ontario and Saskatchewan, property tax revenues are about half of total revenues while in Newfoundland and Labrador, Prince Edward Island, and the Northwest Territories property taxes are only about 20% of total local government revenues. TREFF & PERRY, *supra* note ____.

⁵² For general histories of economic, political, and social changes in Latin America from the 1880s until the present day, see TULLIO HALPERIN DONGHI, *THE CONTEMPORARY HISTORY OF LATIN AMERICA* (John Charles Chasteen ed. and trans., Duke University Press 1993); ROSEMARY THORPE, *PROGRESS, POVERTY AND EXCLUSION—AN ECONOMIC HISTORY OF LATIN AMERICA IN THE 20TH CENTURY* (Johns Hopkins University Press 1998); THOMAS E. SKIDMORE & PETER H. SMITH, *MODERN LATIN AMERICA* (5th ed. 2001). VICTOR BULMER-THOMAS, *THE ECONOMIC HISTORY OF LATIN AMERICA SINCE INDEPENDENCE* (2nd ed. Cambridge University Press 2003); and PETER BAKEWELL, *A HISTORY OF LATIN AMERICA* (2nd ed. Blackwell 2004).

⁵³ VICTOR BULMER-THOMAS, *THE ECONOMIC HISTORY OF LATIN AMERICA SINCE INDEPENDENCE* (2nd ed. Cambridge University Press 2003); SKIDMORE & SMITH, *supra* note ____; THORPE, *supra* note ____.

produced sugar and silver.⁵⁴ As exports increased, Latin American consumers imported manufactured goods. Imports included textiles, machinery, luxury items and other finished products. The growth in trade resulted in increased revenue from tariffs and export taxes to fund government operations. The growth in trade also contributed to the expansion of centralized national governments in Latin America. Despite the major economic changes, however, political power remained highly concentrated, whether in countries such as Argentina and Chile (where landowners and other members of the economic elite joined in what has been called an “oligarchic democracy”), or in other countries, such as Mexico, Venezuela and Peru, where military officers were prominent in political affairs.⁵⁵ The resulting government policies tended to be generous in expending resources on the military and parsimonious as regards to social programs.

The second phase of economic development was an expansion of export-import growth from 1900 until around 1930. This increase in trading activity favored the landowning elite, but also supported the emergence of a new middle class of professionals, merchants, shopkeepers and small businessmen. Changes in suffrage requirements and in the conduct of elections began to broaden access to the political process.⁵⁶

The economic effects of the Great Depression in the late 1920s contributed to changes in economic policies in many Latin American countries, most notably in the spread of policies of import substitution as a means to spur industrialization; this phase of development is often dated from the 1930s to the 1960s. The government facilitated industrial growth through erecting substantial tariff barriers, creating demand through government contracts, and establishing government-run companies and investing directly in industrial firms.⁵⁷ The Great Depression also contributed to political changes in Latin America. Economic and political instability provided an opportunity for the military to gain a greater role in Latin American politics.⁵⁸ Industrialization promoted the rise of a new entrepre-

⁵⁴SKIDMORE & SMITH, *supra* note ____.

⁵⁵SKIDMORE & SMITH, *supra* note ____.

⁵⁶ See Table 1 for changes in the percentage of population voting during the period of 1840-1940.

⁵⁷ SKIDMORE & SMITH, *supra* note ____.

⁵⁸ During this period, there were successful or attempted military coups in Argentina, Brazil, Chile, Cuba, Peru, Guatemala, El Salvador, and Honduras.

neurial capitalist class as well as the formation of unions. This combination contributed to the creation of multi-class “populist alliances” in many countries.⁵⁹

There was a gradual abandonment of policies of import-substituting growth after 1960. The focus turned on the problems they had failed to resolve, and pressures from outside the region were all in the direction of greater openness. Latin American countries were still dependent on the United States, Europe and Japan for capital goods. The relative price of such goods rose as world market prices for many of the principal exports, such as coffee, wheat and copper fell. In addition, the limited demand for manufactured products within the individual Latin American countries made it difficult to realize economies of scale, and constraints on competition from abroad protected inefficient producers. Economic instability contributed to political instability. In Brazil, Argentina and Chile, military coups resulted in highly repressive regimes.⁶⁰ This gave rise to the “bureaucratic-authoritarian” states which sought to revive economic growth through major reforms.

The fifth phase is a period of crisis, debt and democracy. Latin American countries increased their external debt from \$27 billion to \$231 billion from 1970 to 1980. In the early 1980s, Latin American countries faced increasing difficulty in meeting their debt obligations. During the 1980s and 1990s, foreign governments, private bankers and the International Monetary Fund required economic reforms as a condition for partial debt relief or new financing. These reforms included liberalizing rules for foreign trade and investment, reducing the role of the government through privatization and other means, adopting measures to reduce inflation, but also often made tax reform a performance condition as part of a financing package as well.⁶¹ For example, from 1990-1995, tax reform was a part of structural reform packages in Argentina, Bolivia, Ecuador, Guatemala, Honduras, Nicaragua, Paraguay, Peru, and Venezuela.⁶²

⁵⁹ SKIDMORE & SMITH, *supra* note ____.

⁶⁰ SKIDMORE & SMITH, *supra* note ____.

⁶¹ James E. Mahon, Jr., *Causes of Tax Reform in Latin America, 1977-95*, 39 *LATIN AM. RES. REV.* 1 (2004).

⁶² THORPE, *supra* note ____, at tbl. 7.5.

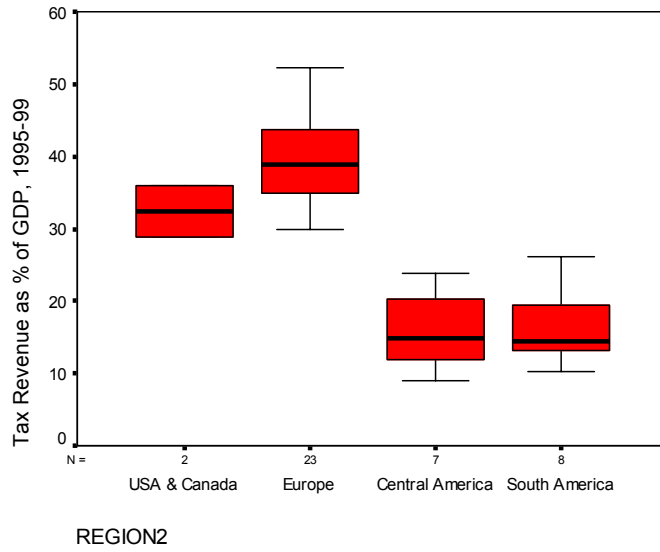
i. Level of Taxation

Currently, Latin American countries have substantially lower levels of taxation than found in the US and Canada. This is not surprising given differences in per capita income. Economic theory provides relatively little guidance as to optimal levels of taxation, but at least until some level of taxation, there does appear to be some correlation between per capita GDP and tax levels.⁶³ The relative tax burdens of Latin American countries, however, are also low as compared to tax burdens in many other developing and richer developing countries.⁶⁴ Looking at data from the mid-1990s reveals higher aggregate tax burdens in Europe and North America with lower aggregate tax burdens in Central and South America.⁶⁵

⁶³ Economic studies have shown that such factors as the share of non-tax revenues, import and export ratios, literacy rates, urbanization, debt levels, share of agriculture, and the monetization and openness of the economy are all correlated with the total shares of taxes in GDP. Burgess & Stern, *supra* note ___. For developing countries, the three major factors that explain the variation in tax levels are the share of imports and foreign debt as a percentage of GDP (positive impact) and the share of agriculture (negative impact). VITO TANZI, *PUBLIC FINANCE IN DEVELOPING COUNTRIES* (Elgar 1991).

⁶⁴ For the poorer developing countries, Burgess and Stern find a stronger correlation between increasing GDP and higher levels of taxation than in the richer developing countries or in developed countries. They note that the richer developing countries often have substantial non-tax revenue sources, either from revenue from state owned resources or from natural resources. For developed countries, the level of taxation likely reflects more political choices as to the role of government rather than the changing levels of per capita income. Burgess & Stern, *supra* note ___. For example, in Latin America, Brazil, Chile, Ecuador, Mexico, Panama, and Venezuela have substantial non-tax revenues to support government operations. INTER-AMERICAN DEVELOPMENT BANK, *LATIN AMERICA AFTER A DECADE OF REFORMS: ECONOMIC AND SOCIAL PROGRESS* tbl. C-10 (Johns Hopkins University Press 1997).

⁶⁵ For all of these charts, the shaded area represents 50% of all observations, the dark line represents the median of all observations, and the brackets represent 95% of all observations. Several problems exist in comparing data from different countries. The major difficulty is that for some countries, the reported tax data includes only central government receipts, and for other countries the tax data includes receipts from central, regional and local governments.



The table below groups Latin American countries by relative GDP and relative aggregate tax burden as a percentage of GDP.

Table 16. Grouping of Latin American Countries by GDP per Capita and Aggregate Tax/GDP Ratio

Country/Year	GDP per capita, PPP (current international \$\$)		Aggregate Tax Burden (percent GDP)
High:		High:	
Uruguay (2000)	13006	Uruguay (2000)	26.2
Argentina (2000)	12058	Nicaragua (1998)	23.9
Chile (2000)	9096	Panama (2000)	22.5
Mexico (2000)	8836	Brazil (1998)	19.8
Costa Rica (2000)	8796	Chile (2000)	19
Medium		Medium:	
Brazil (1998)	6701	Costa Rica (2000)	17.9
Panama (2000)	6204	Dominican Republic (2000)	14.9
Dominican Republic (2000)	5882	Peru (2000)	14.9
Colombia (1999)	5727	Bolivia (2000)	13.9
Venezuela (2000)	5595	Venezuela (2000)	13.7
Peru (2000)	4729		
		Low:	
Low:		Mexico (2000)	12.6
Paraguay (2001)	4643	Argentina (2000)	12.5
El Salvador (2000)	4580	El Salvador (2000)	11.1
Guatemala (2000)	3904	Colombia (1999)	10.3
Ecuador (2000)	3187	Guatemala (2000)	8.9
Honduras (2000)	2476		
Bolivia (2000)	2342	No data:	
		Ecuador (2000)	-
No data:		Honduras (2000)	-
Nicaragua (1998)	-	Paraguay (2001)	-

Sources: Janet Stotsky & Aseggedech WoldeMariam, *Central American Tax Reform: Trends and Possibilities* (International Monetary Fund, Working Paper No. 227, 2002) and David De Ferranti, et al., *World Bank, Inequality in Latin America and the Caribbean: Breaking with History?* (Advance Conference ed. 2003).

The numbers above show a positive, but not strong correlation between relative GDP and aggregate tax burden among these countries.⁶⁶ This is consistent with the view that taxes tend to rise as per capita income increases.⁶⁷ Several factors could explain this relationship. The demand for public services may rise faster than income, particularly in low-income countries. Urbanization also tends to increase with rising incomes, and the

⁶⁶ The regression analysis of GDP per capita and aggregate tax burden produced a positive but not very strong relationship between the two, with an adjusted R-square of .19.

⁶⁷Tanzi 1987, *supra* note ___.

demand for public services is generally higher in urban areas. Finally, the administrative capacity to collect taxes appears to rise as income levels increase.⁶⁸

To try and isolate how much of the difference in relative aggregate tax burdens may be due to differences in income, we compare the aggregate tax burdens for Latin American countries to those of countries in different income ranges. Using data from the 1997 IMF Government Finance Statistics, we find that low-income developing countries (GDP less than \$1,000) have a tax/GDP ratio of 12.1 percent, and that medium-income developing countries (GDP between \$1,000 and \$5,000) have a tax/GDP ratio of 17.1 percent, and that high-income developing countries (GDP greater than \$5,000 and less than \$20,000) have a tax/GDP ratio of 25.6 percent.⁶⁹ With the possible exceptions of Uruguay, Nicaragua and Panama, the aggregate tax burdens in Latin American countries are lower than would be predicted just by looking at GDP levels.

We also compare tax revenue to GDP for developing countries by region. Again using the 1997 IMF Government Finance Statistics, we find that the aggregate tax burden for Africa is 19.76 percent (with an average GDP per capita of \$2,605), the aggregate tax burden for Asia is 14.19 percent (with an average GDP per capita of \$5,768), the aggregate tax burden for developing countries in Europe is 25.3 percent (with an average GDP per capita of \$4,248), and the aggregate tax burden for the Middle East is 14.5 percent (with an average GDP per capita of \$5,775). In contrast, the aggregate tax burden for developing countries in the Western Hemisphere (Latin America and the Caribbean) is 17.4 percent (with an average per capita of \$6,446). Except for Asia and the Middle East, the aggregate tax burdens in Latin American countries are low compared to other regions, especially when one considers the relative GDP levels. While the per capita GDP in Africa is less than

⁶⁸Richard M. Bird & Eric M. Zolt, *Introduction to Tax Policy Design and Development*, in PRACTICAL ISSUES OF TAX POLICY IN DEVELOPING COUNTRIES (World Bank 2003).

⁶⁹ These statistics are roughly comparable to estimates available from other studies. For example, Tanzi & Zee estimated that the tax revenue to GDP ratio for all developing countries was 18.2% and for OECD countries the ratio was 37.9% for the period 1995-1997. TANZI & ZEE, *supra* note ___. Using a larger sample of countries, Bird, Fox & McIntyre (2003) found that low GDP countries (per capita GDP of less than \$1,000) raise about 16.6%, medium-income countries (per capita GDP of between US \$1,000-17,000) raise 20.5% and high-income countries (per capita GDP greater than US \$17,000) raise 23.2% of GDP in taxes (these estimates do not include social insurance payments).

half the per capita GDP in Latin America, the aggregate tax burden in Africa is higher by more than 2 percent of GDP.

This is not new news. Scholars have long noted that tax levels in Latin America lag behind other countries.⁷⁰ Certainly, part of the small tax burden is explained by the lack of “tax handles” and technical factors that make it administratively easier to collect taxes in many developed countries than in developing countries. But the administrative difficulty of collecting taxes in Latin America is likely less severe than in either present-day Africa or in North America 50 or 100 years ago.

So what explains the comparatively low level of taxation in Latin America--as well as the level and pattern of government expenditures and the division of taxing and spending authority among different levels of government? Certainly, many factors contribute to developing taxing and spending regimes, but political and economic inequality seems a prime suspect in accounting for the distinctive Latin American pattern.⁷¹

⁷⁰See Bird 2003, *supra* note __; SHOME, *supra* note __; and STOTSKY & WOLDEMARIAM, *supra* note __. Ricardo Carciofi and Oscar Cetrangolo used tax data from the 1980s to compare tax levels in Latin America with tax levels of other developing countries. Ricardo Carciofi & Oscar Cetrangolo, *Tax Reforms and Equity in Latin America: A Review of the 1980s and Proposals for the 1990s*, Innocenti Occasional Papers, Economic Policy Series, No. 39 (1994). They found that for the early 1980s, tax/GDP ratios were on average 1.2 percentage points lower for Latin American countries than for all developing countries, despite the fact that the regional per capita income in Latin America was 29 percent higher than the group of all developing countries. Only Chile, Brazil, and Nicaragua had above average tax ratios as compared to other developing countries within their income cluster. Carciofi and Cetrangolo also estimated tax/GDP ratio as a function of (logarithmic) values of per capita income and found that the observed tax/GDP ratio in Latin America was 3.8 percentage points lower than the estimated value.

⁷¹Best, *supra* note __. In the mid-1970s, Michael Best attempted to highlight the role play by political factors in shaping tax systems. He examined the tax regimes in Central America and compared them primarily to tax regimes in other Latin American countries. Using tax data from the 1960s, Best challenges the model that expanding tax revenues rests on the gradual growth of tax bases and the improvement of tax administration. Instead, he estimates the economic tax potential of consumption, income and property taxes under the then existing economic environment. He finds that the Central American countries could effectively expand tax revenues if the countries were so committed. To determine why countries might fail to achieve their tax capacity, Best separates the economic actors in Central America into six interest groups: landlords, industrialists, merchants, elite workers, common workers, and peasants. He then examines the relative tax preferences of the groups, assuming the groups acted in their own self-interests. Best concludes that tax levels (as well the relative use of different tax instruments, discussed below) reflect political choices made in those countries.

ii. Relative Use of Different Tax Instruments

Looking at aggregate tax burdens tells only part of the story. In order to better appreciate how tax systems differ, it is necessary to examine the relative use of different tax instruments. Summary statistics are presented below in Table 17 for the US, Canada, and fourteen Latin America countries.

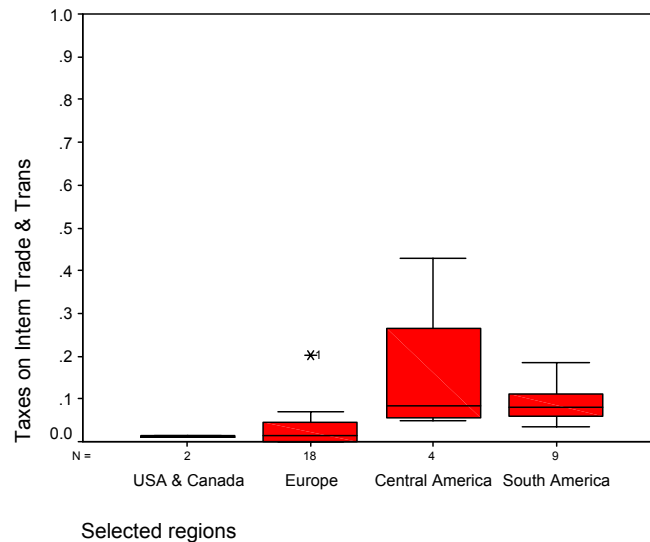
Table 17. National Tax Revenue by Type of Tax

Country	Total nat'l Tax Revenue	Individual and Corporate Tax	Corporate tax	Individual income tax	Taxes on property	Dom Tax on Goods & Services	Excises	Taxes on Intern Trade & Trans	Social Security	Other taxes
United States	100%	59%	10%	50%	1%	4%	3%	1%	35%	
Canada	100%	58%	13%	44%		18%	4%	1%	22%	
Argentina	100%	19%	13%	6%	4%	45%	15%	6%	27%	0%
Bolivia	100%	9%	9%		10%	58%	22%	7%	13%	3%
Brazil	100%	24%			0%	26%	9%	3%	41%	
Chile	100%	23%				57%	12%	8%	8%	5%
Colombia	100%	41%	39%	2%	3%	47%	4%	10%		0%
Costa Rica	100%	15%	13%	1%	0%	44%	13%	7%	34%	0%
Dominican Rep	100%	19%	7%	11%	1%	32%	27%	43%	4%	1%
Mexico	100%	40%				67%	16%	5%	12%	1%
Nicaragua	100%	14%			0%	61%	26%	10%	15%	1%
Panama	100%	28%			2%				28%	4%
Paraguay	100%	19%	19%		0%	58%	15%	18%		4%
Peru	100%	25%	14%	11%	0%	60%	14%	11%	9%	3%
Uruguay	100%	16%	9%	7%	6%	43%	12%	4%	30%	3%
Venezuela	100%	31%	30%	1%	5%	44%	8%	13%	6%	1%

Source: International Monetary Fund, Government Finance Statistics for Tax Years 1998-2002 (2004).

1. Taxes on consumption

We begin by examining the relative use of consumption taxes between North and Latin America, and add for comparison purposes data from European countries.⁷² As discussed in Part III, trade taxes and excise taxes accounted for nearly all (generally over 90%) of national tax revenue in the late 1800s for the US and Canada, as well as for most Latin American countries. North American countries and Latin American countries differ substantially, however, in the relative current use of trade taxes. Although they have substantially reduced their reliance on taxes on international trade over the last 10 years, countries in Central America and, to a lesser extent, in South America, still rely on trade taxes for a significant portion of their government revenue.



The un-weighted regional average for trade taxes for Latin American countries is roughly 11 percent of total tax revenue. Trade taxes constitute 6 percent of total tax revenue in Argentina, 3 percent in Brazil, 10 percent in Colombia, 7 percent in Costa Rica, 43 percent in the Dominican Republic, 5 percent in Mexico, 11 percent in Peru, and 13 percent

⁷² International Monetary Fund, *supra* note ____.

in Venezuela. The vast majority of the tax revenues are collected from taxes on imports.⁷³ In contrast, trade taxes in the US and Canada are less than 1 percent of total tax revenue.

Trade taxes played different economic roles during different time periods. During the periods after independence and periods of export-import growth, import tariffs were set primarily to maximize government revenue.⁷⁴ Especially, but not exclusively, during the period of import-substitution industrialization, high import tariffs were used in Latin America to protect local industry and workers at the expense of general consumers.⁷⁵ The contrast in the relative contribution to total government revenues of the two types of tariffs is striking. For example, in 1910 during the height of export-import growth, trade taxes constituted an average of 64 percent of government revenues. In contrast, in 1950, during the period of import-substitution industrialization, trade taxes were only about 20 percent of government revenue.⁷⁶ By the mid-1970s, trade taxes in Latin America averaged about 28 percent of government revenues, with import taxes about 23 percent and export taxes about 5 percent.⁷⁷ During this time period, trade taxes constituted over half of government revenues (Bolivia and Ecuador), and in other countries trade taxes were less than 10 percent of total revenues (Brazil and Venezuela).⁷⁸ The reduction in trade tax revenue over the last decade reflects the opening of economies to foreign trade and investment.

North American and Latin American countries also differ in their relative use of excise taxes. Excise taxes generally apply to tobacco, alcohol, soft drinks and petroleum and can also apply to motor vehicles and other consumer durables.⁷⁹ Some types of excise taxes,

⁷³ Only in Costa Rica do export taxes constitute a significant part of total trade taxes (1.3% of total tax revenue).

⁷⁴ BULMER-THOMAS, *supra* note 4.

⁷⁵ A similar pattern of revenue-maximizing tariffs and protectionist tariffs existed in the United States over the 19th and early 20th century. BROWNLEE, *supra* note ___; CAROLYN WEBBER & AARON B. WILDAVSKY, A HISTORY OF TAXATION AND EXPENDITURE IN THE WESTERN WORLD 389 (1986).

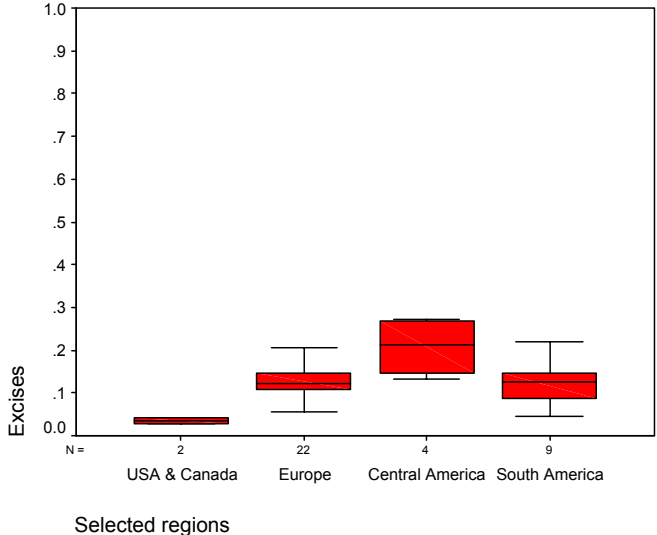
⁷⁶ THORPE, *supra* note 3, at tbl. VII.1.

⁷⁷ RICHARD ABEL MUSGRAVE, FISCAL REFORM IN BOLIVIA: FINAL REPORT OF THE BOLIVIAN MISSION ON TAX REFORM, tbl. 12-3 (1981).

⁷⁸ Difficulties exist in comparing trade tax revenues over time and across countries. It is unclear, for example, whether certain types of royalties or other types of taxes related to exports should be classified as export taxes, import taxes, or as non-tax government revenues.

⁷⁹ STOTSKY & WOLDEMARIAM, *supra* note ___, at tbl. 7.

such as taxes on inexpensive tobacco and alcohol, are likely quite regressive;⁸⁰ other types of excise taxes, such as taxes on airline tickets, premium alcohol and motor vehicles, are progressive in incidence. In almost all Latin American countries, revenues from excise taxes exceed individual income tax revenues--often by many multiples.⁸¹



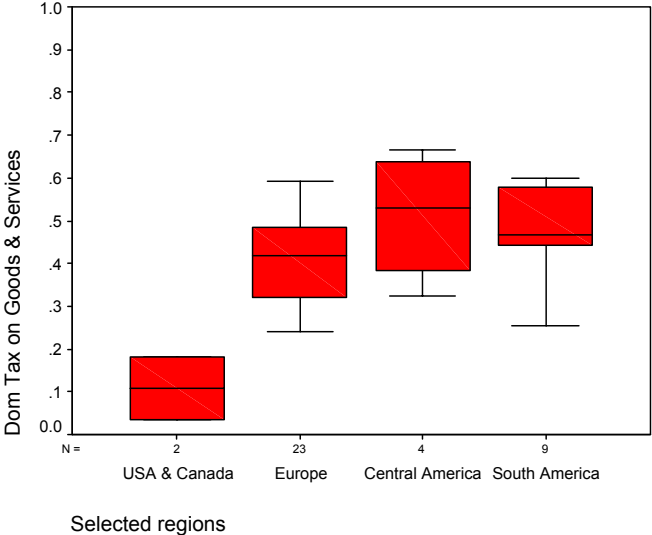
Again, substantial variation exists in the relative use of excise taxes in Latin America. Revenues from excise taxes account for about 27 percent of total tax revenues in the Dominican Republic and Nicaragua but only about 4 percent in Colombia. For most other countries in Latin America, revenues from excise taxes account for about 10-15 percent of total tax revenues. In contrast, revenues from excise taxes represent only 3-4 percent of the total tax revenues in the US and Canada.

Substantial differences also exist between North America and Latin America on the relative use of general consumption taxes, such as retail sales taxes and value-added taxes (“VATs”). The US and Canada rely on general domestic consumption taxes for about 11 percent of total tax revenues. In contrast, general domestic consumption taxes make up

⁸⁰ See NORMAN GEMMELL & OLIVER MORRISSEY, TAX STRUCTURE AND THE INCIDENCE ON THE POOR IN DEVELOPING COUNTRIES (Centre for Research in Economic Development and International Trade, University of Nottingham, Research Paper No. 03/18, Oct. 2003).

⁸¹ In the early 1980s, only in Chile, Colombia, and Mexico did individual income tax revenues exceed excise tax revenues.

about 49 percent of total tax revenues in Latin America. Substantial variations exist among countries: Argentina (45%), Bolivia (58%), Brazil (26%, note central government tax revenues), Chile (57%), Colombia (47%), Costa Rica (44%), Mexico (67%) and Peru (60%). In comparison, consumption tax revenues as a percentage of total tax revenues are about 4 percent for the US (central government tax revenues) and about 18 percent for Canada (central government tax revenues).⁸²



As many have noted, the introduction of the VAT has changed the tax landscape throughout the world (with the notable exception of the United States).⁸³ Latin American countries were among the leaders in replacing an inefficient collection of turnover taxes with VATs.⁸⁴ From a political economy perspective the relative success of the VATs came

⁸² The results set forth above are similar to the findings of STOTSKY & WOLDEMARIAM, *supra* note __. Table 4, Tax Years 1995-1999. Stotsky and WoldeMariam show that domestic tax on goods and services (general turnover or excise taxes, but not taxes on international trade) are the largest revenue source from Latin American countries. The un-weighted regional average for tax years 1995-1999 is 48.4% of total tax revenues. *Id.*

⁸³LIAM P. EBRILL ET AL., THE MODERN VAT (International Monetary Fund 2001).

⁸⁴ Brazil was the first Latin American country to adopt the VAT (1967), followed by Ecuador (1970), Uruguay (1970), Bolivia (1973), Argentina (1975), Colombia (1975), Honduras (1976), Peru (1976), Panama (1977), Guatemala (1983), Mexico (1980), and the Dominican Republic (1983). Bird 1992, *supra* note __.

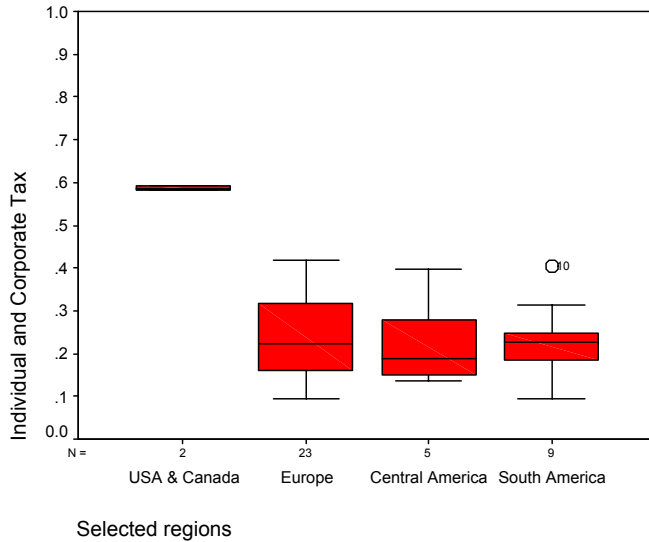
along at a very good time. It allowed many Latin American countries to increase tax revenues without substantial reliance on income taxes.⁸⁵ Over the last decade, the VAT also allowed governments to reduce reliance on trade taxes and still generate substantial revenue.⁸⁶

2. Taxes on income

The major difference in the tax systems of North and Latin America is the greater reliance by US and Canada on income taxes. As set forth below, the US and Canada raise a much higher percentage of tax revenue from income taxes than countries in Europe or Central and South America.

⁸⁵It is interesting to think about how inequality may influence the design of value-added taxes. The conventional advice from tax policy advisors is to adopt a broad-based VAT with no special rates or exclusions. The consensus is that such a VAT would likely be regressive—but that this could be countered through more progressive taxes in other parts of the tax system and by progressive spending and support programs. Unfortunately, there is a gap between theory and practice, and developing countries have generally been unable to reduce the regressive nature of a VAT without special rates or exclusions. If the concern is poverty reduction, a strong case can be made for exempting basic food products from the VAT. Exclusions for basic food products may not substantially reduce regressivity but it would alleviate the tax burden on the poor. For example, Bird and Miller show that exempting five items from the VAT in Jamaica reduced by half the tax burden imposed on the poorest 40% of the population. Richard M. Bird & Barbara D. Miller, *The Incidence of Indirect Taxation on Low-Income Households in Jamaica*, 37 *ECON. DEV. & CULTURAL CHANGE* 393 (1989). So if the objective is to reduce the tax burden on the poor, it may make sense to adopt special exclusions even if the benefits are also available to middle and upper classes. If the concern is on increasing progressivity in the tax system, perhaps the most effective idea would be to improve the administrative coverage to include services of the types that are disproportionately consumed by wealthier individuals, or to adopt higher rates or special excise taxes for luxury items.

⁸⁶ MICHAEL KEEN & JENNY E. LIGTHART, COORDINATING TARIFF REDUCTION AND DOMESTIC TAX REFORM (International Monetary Fund, Working Paper No. 93, July 1999).



For Latin American countries, income tax revenues from individuals and firms are about 23 percent of total tax revenues. By comparison, income tax revenues are about 59 percent of total tax revenues for the US and Canada. With the exception of Colombia (41%), Mexico (40%), and Venezuela (31%), income tax revenues as a percentage of total tax revenue are relatively small: Argentina (19%), Brazil (24%), Costa Rica (15%), Peru (25%) and Uruguay (16%).

The relative portion of tax revenues (as a percentage of total tax revenue) raised from the corporate income tax does not appear to vary greatly, either between regions or among countries in the region. The relative proportions of corporate and individual income tax receipts as a total of income tax revenues, however, do vary greatly. Corporate tax revenues exceed individual tax revenues in Latin American countries by substantial amounts--the un-weighted average is 15 percent for corporate tax revenues as compared to 5 percent for individual tax revenues (as a percentage of total tax revenues).⁸⁷

⁸⁷ There is much variation among countries in the region: Argentina (corporate tax revenues 13% and individual tax revenues 6%), Colombia (corporate tax revenues 39% and individual tax revenues 2%), Costa Rica (corporate tax revenues 13% and individual income tax revenues 1%) and Peru (corporate tax revenues 14% and individual income tax revenues 11%).

While corporate tax revenues are an important part of total tax revenues in Latin America, it is difficult to determine who actually bears the tax burden of the corporate tax. In developed countries, the incidence of the corporate income tax has been subject to much academic inquiry with mixed success. Determining the incidence of the corporate tax in developing countries is more difficult. It may be useful to consider the major sources of corporate tax revenue. To the extent that

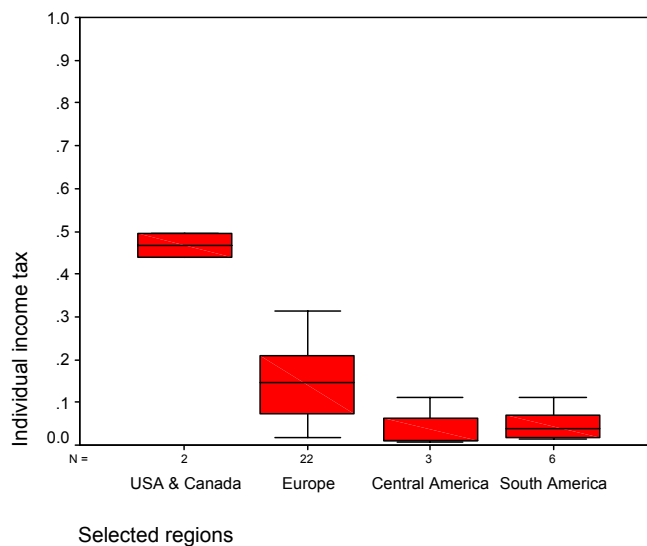
In comparison, individual income tax revenues as a percentage of total tax revenues substantially exceed corporate tax revenues in the US and Canada. (US individual tax revenues are 50% of total tax revenues and corporate tax revenues are 10%, in Canada individual income tax revenues are 44% and corporate tax revenues are 13%.)⁸⁸

tax revenue is received from state-owned enterprises, then the tax can be viewed as transfer payments within the government, with no distributional impact. Shah & Whalley, *supra* note 26. If corporate tax revenues are received from local monopolists, then the tax likely falls on the monopolists. If the revenues are received from foreign corporations, then the incidence of the tax may depend on their share of market power in the country as well as the tax system in their home country.

The conventional wisdom has been that capital-importing countries should tax foreign corporations doing business in their countries especially if the tax regime of the home country provided for a foreign tax credit for income tax paid in the source country. If the local country did not tax, then this would thus result in a revenue transfer between the treasuries of the country of investment and the country of the foreign investor. This, however, assumes that the foreign investor would, in fact, be subject to tax liability in its home country on income earned in the source country. However, multinational corporations are quite adept at structuring their operations either through low-tax or tax haven jurisdictions or through transfer-pricing arrangements such that little, if any, tax is due in the home country. Therefore, it is unlikely that the “mere transfers” between Treasuries of the respective countries is an accurate representation of the tax situation between residence and source countries.

The original Harberger approach showed that in a closed economy the incidence of the corporate tax was borne by all holders of capital. Arnold C. Harberger, *The Incidence of the Corporate Income Tax*, 76 J. POL. ECON. 215-40 (1962). However, in small, open economies, the incidence of the corporate tax is likely much different. Harberger contends that it is likely that the incidence of the tax (indeed an amount even greater than the tax collected) falls on labor rather than capital. Arnold C. Harberger, *The ABCs of Corporate Tax Incidence: Insights into the Open-Economy Case*, in TAX POLICY AND ECONOMIC GROWTH (American Council for Capital Formation Center for Policy Research 1995). The progressivity or regressivity of the corporate tax thus depends on incidence assumptions, and the applicability of such assumptions can vary between developed and developing countries and among developing countries. It is quite plausible that the corporate tax could contribute to the regressivity of a tax system, rather than, as traditionally thought, be a progressive tax on holders of capital--the large majority of which are in top 20 percent of the population. In addition, it is quite plausible that one group of beneficiaries of the corporate tax would be landowners in the developing country Arnold C. Harberger, *Reflections on Distributional Considerations and the Public Finances*, in PRACTICAL ISSUES OF TAX POLICY IN DEVELOPING COUNTRIES (World Bank 2002).

⁸⁸ In the US, before World War II, revenues from the corporate income tax generally exceeded individual income tax, often by substantial amounts. With the expansion of the individual income tax during World War II, and the reduced role of the corporate tax, especially following the Economic Recovery Tax Act of 1981, the individual income tax plays the dominant role in the US tax regime. BROWNLEE, *supra* note ____.



Several factors may explain the low yield of individual income taxes in Latin American countries. First, many tax systems have large personal exemptions that effectively reduce the proportion of individual income taxpayers in the total population, and provide a substantial “tax-free” amount to those few taxpayers left in the individual income tax system.⁸⁹ These high tax thresholds explain why the population subject to income tax is typically much greater in the US and Canada than in Latin America, and why the proportion of individual income subject to the income tax relative to GDP is over 60 percent in the US and Canada, but the figure is generally less than 10 percent across Latin America.⁹⁰

Another factor is that although the Latin American countries started reducing their top marginal rates under the individual income tax systems later than the US, Canada, and the European countries did, several Latin American countries have been more aggressive in reducing the top marginal income tax rates. The highest marginal rates in the US (35%) and Canada (29% federal and marginal provincial rates up to 18.02%) exceed the top marginal rates in Bolivia (13%), Brazil (27.5%), Nicaragua (25%) and Peru (20%). Higher top marginal rates are found in Argentina (35%), Chile (45%) and Mexico (40%). It is also

⁸⁹ For example, the un-weighted regional average exemption amount increased from .6 per capita GDP in the mid-1980s to 2.3 per capita GDP in 2001. Several countries have exemptions that are substantially above the regional average: Nicaragua (7.7), Guatemala (5.0) and Colombia (4.1). STOTSKY & WOLDEMARIAM, *supra* note __, at tbl. 11.

⁹⁰ VED P. GANDHI, SUPPLY-SIDE TAX POLICY: ITS RELEVANCE TO DEVELOPING COUNTRIES 361 tbl. A6 (1987)

likely that the Latin American tax systems provide more generous personal deductions and exemptions than the North American and European tax systems.⁹¹

Third, Latin American tax systems are not very effective at taxing income from agricultural or the informal sector. That the latter could be a major problem is evident from the Table 18 below that shows the high proportions of the labor force employed under informal arrangements. The pattern in many developing countries is for the percentage of workers in the formal economy to increase over time with economic development. In Latin America, however, over the last 20 years employment in the informal sector has grown substantially as compared to employment in the formal sector.⁹²

Table 18. Distribution of Working Population in Argentina and Brazil

Share in Working Population (percentage)	Argentina (2001)	Brazil (2001)
Capitalists	1.1	1.3
Professionals/Executives	5.8	4.5
Petty Entrepreneurs	5.4	3.7
Formal Workers	45.9	31.7
Informal Workers	41.8	58.8

Source: DAVID DE FERRANTI, ET AL., WORLD BANK, INEQUALITY IN LATIN AMERICA AND THE CARIBBEAN: BREAKING WITH HISTORY? (Advance Conference ed. 2003).

Finally, Latin American countries do not effectively tax financial income, partially through statutory design and partially through ineffective enforcement efforts. For example, Argentina, Ecuador, Nicaragua and Venezuela do not tax interest earned on savings. Interest on government bonds is exempt in Argentina and Mexico. Dividends are exempt from tax in Bolivia, Ecuador, Peru and Nicaragua. There is no tax on capital gains in Bolivia, Costa Rica, Ecuador, or Peru.

Moreover, a substantial percentage of portfolio investments from Latin American individuals and corporations are held in US and European investments, where they likely escape both source and resident based taxation.⁹³ Table 19 sets forth some aggregate

⁹¹ SHOME, *supra* note ____.

⁹² In 1980, about 40 percent of workers were employed in the informal sector and about 60% in the formal sector. In 1995, about 56 percent of workers were employed in the informal sector and about 44% in the formal sector. THORPE, *supra* note ____, at tbl. 7.3.

⁹³ In Bolivia, Costa Rica, Guatemala, and Nicaragua, individuals are not taxed on income earned outside their country. Although Argentina, Brazil, Chile, Columbia, Ecuador, Honduras, Mexico,

investment numbers for Argentina, Brazil, Chile and Mexico since 1980. The US Treasury Department compiles this data from the mandatory reports filed by banks, security dealers, investors and other entities who deal directly with foreign residents in the purchase and sale of long-term securities.

**Table 19. Foreign Purchases of Long-Term Domestic Securities by Type
(Amounts in millions of dollars)**

	Argentina	Brazil	Chile	Mexico
1980				
US Treasury Bonds & Notes	\$10	\$0	\$0	\$1
US Gov't Agency Bonds	\$0	\$0	\$0	\$0
US Corp. Bonds	\$0	\$4	\$0	\$56
US Corp. Stocks	\$33	\$9	\$9	\$203
Foreign Bonds	\$4	\$7	\$0	\$190
Foreign Stocks	\$7	\$0	\$0	\$17
1990				
US Treasury Bonds & Notes	\$121	\$1,195	\$710	\$2,558
US Gov't Agency Bonds	\$28	\$19	\$752	\$178
US Corp. Bonds	\$107	\$106	\$139	\$219
US Corp. Stocks	\$230	\$107	\$95	\$908
Foreign Bonds	\$189	\$122	\$221	\$453
Foreign Stocks	\$25	\$73	\$48	\$578
2000				
US Treasury Bonds & Notes	\$1,085	\$6,206	\$1,813	\$27,204
US Gov't Agency Bonds	\$1,396	\$1,581	\$277	\$3,437
US Corp. Bonds	\$2,071	\$638	\$746	\$2,465
US Corp. Stocks	\$5,475	\$3,331	\$3,208	\$6,999
Foreign Bonds	\$29,141	\$20,380	\$1,785	\$8,394
Foreign Stocks	\$4,749	\$17,801	\$1,321	\$12,309

Source: United States Department of Treasury Office of International Affairs

Peru, and Venezuela all tax residents on their world-wide income, it is like a substantial portion of foreign source income escapes taxation.

The US government is a co-conspirator in this arrangement. Since 1984, the US government does not generally impose US income tax on interest income from portfolio investments held by non-resident investors. I. R. C. § 871(h). See also Charles E. McLure, Jr., *US Tax Laws and Capital Flight from Latin America*, 20 INTER-AMER. L. REV. 321 (1989) and Manuel Pastor, Jr., *Capital Flight from Latin America*, 18 WORLD DEV. 1 (1990).

It is difficult from these numbers to determine how much of this portfolio investment is, or should be, subject to tax in these Latin American countries. The size of the investment flows and their increase over the last few decades relative to income in these countries, however, suggests that imposing substantial tax rates on income from domestic capital sources might have increased capital flight (without as much increase in revenue unless the taxing authorities in these Latin American countries can effectively tax income from capital invested abroad).⁹⁴

Given that the individual income tax is the primary tax instrument for redistribution purposes, it is not surprising that tax systems in Latin America have only a modest impact in reducing after-tax inequality. The combination of the high tax threshold under the individual income tax system and the difficulty of taxing workers in the informal sector or petty entrepreneurs translates into the actual group of taxpayers being quite small. Even for taxpayers subject to the individual income tax, the failure to tax capital income effectively reduces the tax to primarily a withholding tax on labor income in the formal sector. So while the individual income tax system is likely progressive, even after the reduction in top marginal rates (at least with respect to labor income), the impact as regards to redistribution is modest.⁹⁵

⁹⁴ To the extent there is taxation of capital income in Latin American countries, it is also not clear that the tax on capital would be strongly progressive. As in many developing countries, the top quintile of the population receives between 70-95% of capital income, profits, and rents. However, rich taxpayers are more successful in structuring their financial investments to reduce taxes, and it would be surprising if the wealthy in Latin America did not succeed in structuring their investments to minimize tax liability. Less wealthy taxpayers may thus invest in less tax efficient ways than their wealthier countrymen. The World Bank estimates that the top quintile receives a high percentage of the total of income from capital: about 70% in Argentina, 78% in Brazil, 75% in Colombia, 95.9% in Guatemala, 93.6% in Nicaragua, 78.5% in Peru and 68.1% in Venezuela. DAVID DE FERRANTI, ET AL., WORLD BANK, *INEQUALITY IN LATIN AMERICA AND THE CARIBBEAN: BREAKING WITH HISTORY?* (Advance Conference ed. 2003).

⁹⁵ So who bears the burden of the individual income tax? As a first approximation, as most income tax revenues is collected through pay-as-you-earn (PAYE) withholding schemes, the individual income tax appears to fall primarily on workers in the formal sector. It is difficult to determine how much tax revenue under the individual tax system is from PAYE withholding systems, but it is likely to be 85-95% of total individual income tax revenue. It is likely, however, that both the individual income tax and the social security tax operate as taxes on the formal sector, and that this will affect the relative wage costs between the agricultural sector and the formal sector as well as between the informal sector and the formal sector. Shah & Whalley, *supra* note ___. The tax affects rural-urban migration patterns as well as relative employment costs in the urban informal and formal sector. Thus, part of the burden of the individual income tax imposed on workers in the formal sector is likely shifted to workers in the agricultural and informal sector.

The capacity for redistributing income is remarkably small in Latin American compared to other regions. As a percentage of total GDP, the individual income tax revenues are between .3 and 1.7 percent of GDP (Argentina .6%, Brazil .3%, Colombia 1.7%, Costa Rica 2.4%, and Peru 1.4%). To the extent GDP estimates are low due to a large informal economy, the actual percentage of the individual income tax revenue to GDP is further reduced. In contrast, in the US and Canada, individual income tax revenues are likely between 9-12 percent of GDP.

It is difficult to compare the challenges of designing tax systems in contemporary Latin America with those that prevailed in North America in the 19th century. Many factors influence a country's ability to tax income and wealth successfully, so making comparisons between these regions and time periods is difficult. Among the factors are the technology for collecting taxes, the mobility of capital, the change in the composition of wealth assets, the size of establishments, the literacy rates, and taxpayer compliance morality.

But even if Latin American countries now face fewer administrative challenges to taxing income or wealth than the North American countries in the 19th century, the challenges of adopting progressive tax structures may be quite formidable. There are several reasons why inequality may lead to challenges for both tax design and tax evasion.

First, it is enormously difficult for countries with extreme inequality to raise adequate revenue in a relatively fair and efficient manner. Stated differently, countries with a substantial middle class have a wider array of tax policy alternatives than do countries without one. Consider first the individual income tax system. In a society with extreme inequality, even if one could successfully tax the rich, particularly the income from their capital, there simply are not enough rich to go around. And taxing the income of the poor may be difficult both administratively and politically.⁹⁶ The smaller the number of truly

⁹⁶ A paper by Engel, Galetovic and Raddatz nicely illustrates the difficulty of using the individual income tax system to raise substantial amounts of revenue from the rich in a society with substantial inequality. Eduardo M.R.A. Engel, Alexander Galetovic, & Claudio E. Raddatz, *Taxes and Income Distribution in Chile: Some Unpleasant Redistributive Arithmetic*, 59 J. DEV. STUD. 55 (1999). Engel et al. examine the pre-tax and post-tax distribution of income in Chile and find that the tax system as a whole is slightly regressive (Gini coefficient pre-tax is 0.4883 and the Gini coefficient post-tax is 0.4961). *Id.* They then attempt to determine how inequality would change if individual tax rates were increased and if tax evasion was substantially reduced. Under certain plausible assumptions they find that the reduction in the Gini coefficient would be only to 0.4837. Engel et al. conclude that the more unequal the pretax distribution, the greater the distortion costs

rich in a country, the higher the relative income tax rates for high income groups relative to low income groups to raise a given amount of revenue. The required marginal income tax rates to raise substantial revenue from this group are likely not feasible given the mobility of capital and high value labor.

There is a rich economic literature examining the consequences of high progressive individual tax rates in developed countries. Increasing progressivity in tax rates results in changes in the supply of labor by individuals and changes in the level and nature of capital investments. This optimal tax literature provides interesting insights in designing a rate structure that captures the tradeoff between increased equality from higher individual income tax rates and economic distortions on labor supply. The important determinants are the sensitivity of labor supply to the after tax wage rate and the distribution of endowments in a society. Simple application of optimal tax theory would predict that growing inequality should increase progressivity in the tax system. This results because the equity gain from redistribution relative to efficiency losses should generally be greater the greater the dispersion of income distribution.⁹⁷

Less is known about the consequences of high nominal progressive income tax rates in developing countries, but we offer the following observations. Consider the following three ways in which a progressive individual income tax system may influence behavior. First, high individual income tax rates may influence the choice between entering into formal or informal employment arrangements. Schneider and Enste estimate that the percent of informal employment as a percent of the labor force ranges from 40 percent in Chile to about 59 percent in Ecuador.⁹⁸ Taxes, both individual income taxes and social security taxes, may cause many employers and employees to negotiate informal arrangements to reduce tax liability.

Second, high individual income tax rates may influence the decision to operate in the formal and informal economy. The decision to operate in the formal or informal economy

and the less redistributive effect from a progressive individual income tax system. *Id.* This is sobering news for Chile, but it is even more problematic for other Latin American countries whose individual income tax systems are less effective than the Chilean system or those countries with a lower per capita income than Chile.

⁹⁷ Slemrod and Bakija 2001, *supra* note ____.

⁹⁸ FRIEDRICH SCHNEIDER & DOMINIK ENSTE, *THE SHADOW ECONOMY—AN INTERNATIONAL SURVEY* (Cambridge University Press 2002).

depends on several factors. For example, the greater the government and private sector benefits from operating in the formal economy, the more likely firms would choose to register and conduct operations in the formal economy. So, if access to the banking system, capital markets, government courts, or government contracts, is important, then firms will register. If not, then firm may choose to avoid registering to avoid tax obligations or other government regulations. Schneider and Enste estimate that about 40 percent of the GNP in Latin America is due to activity in the informal economy.⁹⁹

Third, high individual income tax rates may influence decisions as to the location of capital investment. Reductions in capital controls and improvements in technology have made it easier for individuals to invest funds outside of their countries. Changes in tax laws, particularly the change in the US tax law providing for no US taxation of portfolio interest, also increased the attractiveness for Latin Americans investing in US government and corporate securities. As set forth in Table 19, the estimates of investments by Latin Americans in US and other non-Latin American securities are staggering.¹⁰⁰

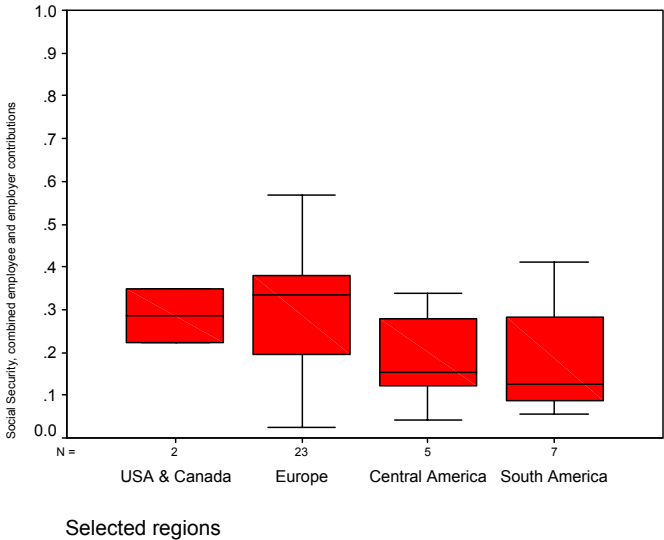
3 Social Security Taxes

The final tax instruments we examine are social security (or payroll) taxes. Social security taxes are a large and growing part of tax systems in Europe and North America. Social

⁹⁹ SCHNEIDER & ENSTE, *supra* note ____.

¹⁰⁰ Countries that have greater inequality may also have higher levels of tax evasion than those with less inequality. Generally, the least compliant taxpayers are those in the lowest and highest income tax ranges. Kim M. Bloomquist, *US Income Inequality and Tax Evasion: A Synthesis*, TAX NOTES INT'L 347 (July 28, 2003); Dennis Cox, *Raising Revenue in the Underground Economy*, 37 NAT'L TAX J. 283, 283-288 (1984). Economists and behavioral scientists offer competing explanations for this phenomena. Economists note that tax compliance levels are strongly correlated to the "opportunity to evade taxes," and taxpayers at the highest and lowest income levels have the greatest opportunity to evade taxes. JEFFREY A. ROTH, JOHN T. SCHOLZ, & ANN D. WITTE, 1 TAXPAYER COMPLIANCE: AN AGENDA FOR RESEARCH (University of Pennsylvania Press 1989). Take a simple example. As discussed above, the highest level of tax compliance results from wage and salary income in the formal sector. Most countries have effective wage withholding systems—the difference is how much of the economy is covered by such systems. Behavioral scientists offer a different explanation. They focus on what they call "taxpayer stress." The two major components of taxpayer stress are: first, financial strain; and second, taxpayer dissatisfaction. HENK ELFFERS, INCOME TAX EVASION: THEORY AND MEASUREMENT (1991). Financial strain reflects the simple inability to pay taxes due. Taxpayer dissatisfaction results from a perception of unfair treatment from the tax system, unhappiness about the complexity and burden of the tax system, and a weak connection between the amount of taxes paid and the perceived value of goods and services received.

security tax revenues are about 35 percent of total tax revenues in the US and about 22 percent of total tax revenues in Canada.



Social security taxes as a percentage of total tax revenue are substantial in many countries in the region: Argentina (27%), Brazil (41%), Costa Rica (34%), and Uruguay (30%). However, social security taxes are much less a factor in other Latin American countries: Bolivia (13%), Chile (8%), Mexico (12%), Peru (9%) and Venezuela (6%). On average, social security taxes are about 19 percent of total tax revenues.

Three important points are worth noting about social security taxes. First, pension reforms in many Latin American countries have increased the link between amounts contributed and benefits received, such that a substantial portion of taxes are placed in individual workers' accounts. Second, even before the reforms, there was a much stronger correlation between income earned before retirement and benefits paid than exists under the US and Canadian social security systems. Third, the social security tax regime covers only a portion of the workforce. As discussed above, informal work relations cover anywhere from 40-60 percent of the workforce in Latin American countries. The result is that distribution of government benefits under pension plans may go primarily to upper-income individuals. For example, in Brazil, it is estimated that 65.1 percent of pension benefits are received by the top quintile and 16.5 percent by the fourth quintile of the

population. The bottom quintile received only about 2.4 percent of pension distributions.¹⁰¹ The distribution of unemployment insurance is slightly better—with the top quintile receiving 19.5 percent, the fourth quintile receiving 36.3 percent and the bottom quintile receiving 3.0 percent.

iii. Comparisons between Latin American countries and other countries by income ranges

It is useful to compare the relative use of tax instruments by Latin American countries to other countries by income range. Table 20 presents a summary of the relative use of different tax instruments with different income levels, measured by per capita GDP. Not surprisingly, low-income countries make greater use of certain types of taxes than high-income countries.

Table 20. Relative use of different tax instruments by the national government by income level.

1990-1995 GDP estimates	Tax revenue as percent of total revenue	Tax Revenue	Individual and Corporate Tax	Corporate tax	Individual income tax	Taxes on property	Dom Tax on Goods & Services	Excises	Taxes on Intern Trade & Trans	Import duties	Social Security	Other taxes
150-500	84%	100%	19%	11%	12%	3%	43%	17%	21%	20%	11%	7%
500-5,000	87%	100%	23%	11%	10%	1%	45%	13%	10%	9%	23%	1%
5,000-20,000	87%	100%	36%	13%	22%	2%	34%	12%	9%	9%	20%	3%
>20,000	87%	100%	35%	8%	25%	3%	32%	9%	1%	1%	30%	2%
Total	87%	100%	28%	10%	16%	2%	39%	12%	9%	9%	24%	2%

Source: International Monetary Fund, *Government Finance Statistics for tax years 1998-2002 (2004)*.

¹⁰¹ DAVID DE FERRANTI, ET AL., WORLD BANK, *INEQUALITY IN LATIN AMERICA AND THE CARIBBEAN: BREAKING WITH HISTORY?* (Advance Conference ed. 2003). (Table 10.6 from Barros and Foguel 2000).

First, consider taxes on consumption. As discussed above, Latin American countries rely on general domestic taxes on goods and services for about 49 percent of their total tax revenue.¹⁰² This is quite high, especially when compared to other countries with similar per capita income. For the poorest group of developing countries (per capita GDP of between \$150-500), tax revenues from general domestic taxes on goods and services average about 43 percent of total tax revenue. For middle-income developing countries (per capita GDP of between \$500-5000), the percentage is slightly higher at about 45 percent of total revenues. For richer developing countries (per capita income of between \$5,000-20,000) and developed countries (per capita income over \$20,000), the percentage of total tax revenue from general domestic taxes on goods and services are about 34 percent and 32 percent, respectively. Most Latin American countries would be considered richer developing countries--while some (Peru, Paraguay, Guatemala, Ecuador, Bolivia) would likely be at the higher end of the middle-income developing country range.

As countries become wealthier, they tend to rely less on excise taxes and taxes on international trade. Here, Latin American countries seem more typical, given their relative per capita income. In Latin America, excise tax revenues comprise about 15 percent of total revenues, as compared to 17 percent for the poorest group of developing countries, 13 percent of middle-income developing countries, 12 percent for richer developing countries, and 9 percent for developed countries. Trade taxes comprise about 11 percent of total tax revenues for Latin American countries, as compared to 21 percent of total tax revenues for the poorest group of developing countries, 10 percent for the middle-income developing countries, 9 percent for the richer developing countries and 1 percent for the developed countries.

The major difference between Latin American countries and countries of similar income levels is in the use of income taxes, especially individual income taxes. On average, Latin American countries raise about 23 percent of total tax revenues from income taxes,

¹⁰² The statistics in Table 18 are roughly comparable to the summary findings presented by TANZI & ZEE, *supra* note _____. Tanzi & Zee confirm that most countries rely on general consumption taxes, such as the VAT, excise taxes, and trade taxes to fund a substantial portion of government operations. *Id.* In OECD countries, general consumption tax revenues for 1995-1997 account for 11.4% of GDP. By comparison, in developing countries, general consumption tax revenues for the same time period account for 10.5% of GDP.

with about 15 percent from corporate tax revenues and about 5 percent from individual income tax revenues.¹⁰³ In contrast, the poorest developing countries raise about 19 percent of total tax revenues from income taxes (11% from corporate and 12% from individual income tax revenues); the middle-income developing countries raise about 23 percent of total tax revenues from income taxes (11% from corporate and 10% from individual income tax revenues); the richer developing countries raise about 36 percent of tax revenues from income taxes (13% from corporate and 22% from individual income tax revenues); and developed countries raise about 35 percent of total tax revenue from income taxes (8% from corporate and 25% from individual income tax revenues). Again, as most of the Latin American countries are “richer developing” countries, the share of government services funded by the individual income tax is only about a quarter of what one would expect based on relative income levels.

iv. Differences between Latin American countries and other regions

As seen in Table 21, there are also important regional differences among developing countries. Perhaps the most interesting comparisons are between those in Africa and those in the western hemisphere.

¹⁰³ The difference between the total income tax revenues and the amounts raised from corporate income tax revenues and individual income tax revenues is attributable to data from Brazil and Panama that contains substantial amounts of “unallocated income tax revenues.”

Table 21. Relative Use of Different Tax Instruments by Region.

Region	Tax revenue as percent of total revenue	Individual and Corporate Tax	Corporate tax	Individual income tax	Taxes on property	Dom Tax on Goods & Services	Excises	Taxes on Intern Trade & Trans	Import duties	Social Security, combined employee and employer contributions	Other taxes
Industrial (GDP > 20,000)	87%	35%	8%	25%	3%	32%	9%	1%	1%	30%	2%
Developing Africa -	84%	27%	12%	14%	2%	32%	11%	27%	26%	10%	5%
Developing Asia -	84%	34%	12%	20%	1%	40%	13%	6%	6%	13%	4%
Developing Europe -	90%	22%	8%	12%	1%	43%	13%	4%	4%	30%	1%
Developing Western Hemisphere -	85%	23%	14%	5%	2%	50%	16%	11%	11%	19%	2%
Total	86%	27%	10%	15%	2%	40%	12%	9%	9%	24%	2%

Source: International Monetary Fund, Government Finance Statistics for tax years 1998-2002 (2004).

The principal tax revenue sources as a percentage of total tax revenues for African countries are: income taxes (28%--11% from corporate and 16% from individual income tax revenues), domestic taxes on goods and services (36%), excise taxes (11%), and taxes on international trade (23%). In contrast, the developing countries in the western hemisphere raise revenue from: income taxes (24%--14% from corporate and 5% from individual income tax revenues), domestic taxes on goods and services (50%), excise taxes (16%), and taxes on international trade (12%). Again, what is striking is the relative use of individual income taxes. Whereas African countries raise 16 percent of total tax revenues from individual income taxes, Latin American countries raise only about 5 percent.

v. Different Levels of Government

A very different government structure existed and continues to exist in Latin America than in North America. In colonial times the Spanish and Portuguese adopted highly

centralized systems of imperial administration for their Latin American colonies.¹⁰⁴ Even in pre-Columbian times, the Aztecs and the Incas ruled large portions of Latin America under centralized control.¹⁰⁵ After independence from the Spanish and the Portuguese, strong centralized governments were required to keep conflicts among local factions from fragmenting the new nations.¹⁰⁶ Just as constitutional restrictions strongly influenced the development of state and local governments in the US, the initial constitutional provisions and subsequent constitutional amendments influenced the allocation of political and fiscal authority in Latin American countries.¹⁰⁷ Thus countries with federal structures, such as Brazil and Argentina (but not Mexico and Venezuela) have larger provincial and local governments than unitary countries, such as Bolivia, Ecuador, and Chile.

Even in the federal countries with substantial provincial or state governments, local governments in Latin America are much smaller than local governments in North America. Table 22 sets forth the relative sizes of different levels of governments for five Latin American countries. These figures reflect the “first generation” of decentralization that began in the early 1980s in Latin America.¹⁰⁸

¹⁰⁴HALPERIN DONGHI, *supra* note ___, at 40. Although the Spanish and Portuguese administrative structures were quite similar, the concentration of wealth and power among landowners in Brazil resulted in greater local political autonomy.

¹⁰⁵BAKEWELL, *supra* note ___, at 25-37. The Aztecs controlled a large part of Mexico through what is not Guatemala. The Incas ruled from present northern Ecuador to central Chile.

¹⁰⁶ MORITZ KRAEMER, INTERGOVERNMENTAL TRANSFERS AND POLITICAL REPRESENTATION: EMPIRICAL EVIDENCE FROM ARGENTINA, BRAZIL AND MEXICO 2 (Inter-American Development Bank, Working Paper No. 345, 1997).

¹⁰⁷ For example, in Brazil, the 1889 constitution provided both for states to be governed by popularly elected officials and for states to have independent taxing authority. EDUARDO WIESNER, FISCAL FEDERALISM IN LATIN AMERICA: FROM ENTITLEMENTS TO MARKETS 55 (2003). The 1988 constitution provided for additional autonomy for state and municipal governments and assigned exclusive authority to impose VATs to the state governments and exclusive authority to impose taxes on urban property and taxes on personal and professional services to the municipal government. *Id.* at 55-56.

¹⁰⁸ See WIESNER, *supra* note ___, at 10, describing the first generation of decentralization as characterized by: (i) implementation of constitutional reforms that provided for automatic and largely unconditional transfers from central government to sub-national governments; (ii) introduction of targeted fiscal transfers through formulas to specific sectors and to low-income groups; (iii) an alleged process of devolving resources together with responsibilities; (iv) delegation of some limited taxing and spending authority; and (v) a general lack of any independent evaluation of results. The “second generation” of decentralization policies began in the late 1990s and provided for tighter macroeconomic budget constraints, stronger intergovernmental regulatory frameworks, and more intensive use of incentives at the sectoral level. *Id.* at 12.

Table 22. Revenue and Taxes by Level of Government in Latin America

Country	Share of Total Government Tax Revenue Collected by Level of Government (%)		Share of Total Government Expenditure by Level of Government (%)	
	Before Decentralization	With Decentralization	Before Decentralization	With Decentralization
Argentina^a				
Central	79.3	80.0	63.5	51.9
Provincial	13.7	15.4	31.0	39.5
Local	7.0	4.6	5.4	8.6
Brazil^b				
Central	59.8	47.1	50.2	36.5
State	36.9	49.4	36.2	40.7
Local	3.8	3.6	13.6	22.8
Colombia^c				
Central	82.2	81.6	72.8	67.0
Departmental	12.2	11.1	16.7	15.7
Local	5.6	7.3	10.5	17.3
Mexico^d				
Central	90.7	82.7	90.2	87.8
State	8.3	13.4	8.8	9.5
Local	1.0	3.9	1.0	2.8
Venezuela^e				
Central	95.8	96.9	76.0	77.7
State	0.1	0.1	14.9	15.7
Local	4.0	3.1	9.1	6.5

Sources: For Argentina and Colombia, RICARDO LÓPEZ MURPHY, *FISCAL DECENTRALIZATION IN LATIN AMERICA* 22, 25, 33 (Washington, D.C.: Inter-American Development Bank, 1995). For Brazil, ANWAR SHAH, *THE NEW FISCAL FEDERALISM IN BRAZIL* 15 (World Bank). For Venezuela, 1 WORLD BANK, *VENEZUELA: DECENTRALIZATION AND FISCAL ISSUES* 5 (World Bank). For Mexico, Victoria E. Rodríguez, "The Politics of Decentralization: Divergent Outcomes of Policy Implementation," Ph.D. diss., University of California, Berkeley, 1987, p. 271; and INEGI, *Finanzas públicas estatales y municipales* (Aguascalientes, Mexico: INEGI, 1994).

- a. Figures before decentralization as of 1983, under decentralization as of 1992.
- b. Figures before decentralization as of 1974, under decentralization as of 1988.
- c. Figures before decentralization as of 1980, under decentralization as of 1991.
- d. Figures before decentralization as of 1982, under decentralization as of 1992.
- e. Figures before decentralization as of 1980, under decentralization as of 1989.

Substantial variation in the size of local and regional governments exists among countries in Latin America, with Argentina, Brazil and Colombia having the largest sub-national governments, Venezuela, Mexico and Bolivia somewhere in the middle, and all other countries having relatively small local and regional governments.¹⁰⁹

¹⁰⁹ Eliza Wills, Christopher da C.B. Garman and Stephan Haggard, *The Politics of Decentralization in Latin America*, 34 *LATIN AMER. RES. REV.* 1 (1995), review decentralization in Argentina, Brazil, Colombia, Mexico, and Venezuela examining the influence that central government has over

The allocation of taxing authority to sub-national levels of government influences the division of expenditures by government units. On average, sub-national levels of governments in OECD countries are responsible for 35 percent of total government expenditures, while sub-national governments in Latin America are responsible for less than 15 percent of total expenditures.¹¹⁰

We have only limited data on property taxation in Latin America. Sub-national property tax as a percentage of GDP is relatively small: Argentina (.92%), Chile (.61%), Nicaragua (.13%), and Mexico (.31%).¹¹¹ In contrast, sub-national property taxes in Canada are 4.07% of GDP. Property taxes as a percentage of local revenue ranges vary substantially in the four countries: Argentina (35%), Chile (35.1%), Nicaragua (6.4%) and Mexico (13%).

c. Summary

Latin American countries continue to rely more on tax structures that are likely much less progressive than those of North American countries as well as other developed countries, and arguably, even less progressive than those in other developing countries. Even if we confine our attention to the tax revenue raised by national governments, current Latin American tax systems differ dramatically from those in North America. First, the level of tax burden is substantially higher in the US and Canada than in Latin America countries. Second, general consumption tax revenues as a total of tax revenue (and as a percentage of GDP) is substantially higher in Latin American countries than in the US and Canada.

Third, income tax revenue as a percentage of total tax revenue is much greater in the US and Canada than in Latin American countries, with all of the differences due to the greater tax revenue from individual income taxes. Individual income tax revenues as a

local finances. They examine the relative discretion the federal government has in determining the amount of transferred funds, the ability of central governments to impose conditions on the use of funds, and the ability of local governments to borrow funds. They find that the degree of decentralization reflects the relative political power of presidents, legislators, and sub-national governments. and that the structure of political parties in the respective countries influences the level of autonomy of lower levels of government.

¹¹⁰ INTER-AMERICAN DEVELOPMENT BANK, *supra* note ___, at fig. 3.3.

¹¹¹ Richard M. Bird and Enid Slack, *Land and Property Taxation Around the World: A Review*, tbl. 4 (2004)(unpublished manuscript, on file with co-authors). These figures are from 1995.

percentage of total tax revenue is on average about 10 times higher in the US and Canada than in Latin American countries. With some exceptions, it is also appears that the taxing authority provided state and, especially, local levels of governments is much less in Latin America than in North America.

There are also marked contrasts between the tax systems in Latin America and those in other developing countries. Most relevant to our study is that income tax revenues as a percentage of GDP in Latin America are only about half those in other developing countries, and individual income tax revenues are only about a quarter to a third.

V. CONCLUSION

Tax systems in Latin America differ from the tax regimes in the US and Canada. They also differ from tax regimes in other developing countries. In this paper, we have begun to explore why the tax systems in Latin America evolved as they have. Our study is concerned with three issues. First, has the extreme inequality that came to characterize nearly all of the Latin American countries during their colonial periods help to explain why their structures of taxation that are so different today, even relative to other developing countries with roughly similar per capita incomes? Second, why do Latin American countries rely predominantly on consumption taxes, such as value-added taxes, turnover taxes, excise taxes and trade taxes, rather than on taxes thought to be more progressive – such as individual income or property taxes? Third, why have Latin American countries relied more on centralized or national governments, and had relatively small local and regional governments?

Part of the explanation for the distinctive institutions of taxation is undoubtedly technical or resource factors. Developing countries have traditionally relied on tax instruments that present fewer administrative challenges in enforcement and collection. Given that they typically have a much more limited capacity to collect complex taxes which involve the monitoring of individuals, such as those on income, than do highly industrialized countries, and that their environments complicate the task further, it is to be expected that governments in developing countries would focus more on sources of revenue such as taxes on trade, taxes that fall on foreign corporations, and sales or excise taxes. That being said, our preliminary examination suggests that other factors, whose effects were evident in the past, may have played, and continue to play, a significant role as well.

In Part II, we showed how extreme inequality in Latin America can be traced back centuries to the initial conditions prevailing when the Europeans began to establish colonies throughout the hemisphere. Although the paucity of data do not allow for direct comparisons of income or wealth inequality across the societies of the Americas during the 19th century, the stark contrasts between North America and Latin America with regard to literacy rates, voting rights and land ownership are powerful evidence that these societies were profoundly different in the magnitude of the gulf in material circumstances between elites and the bulk of the population. Moreover, despite substantial extensions of access to schooling (leading to major increases in literacy), to suffrage and, in some cases, to land ownership during the 20th century, Latin America continues to stand out as the region of the world with the greatest degree of inequality.

In Part III, we began with a comparison of the tax systems in North and South America during the 19th century. Although there may be other explanations for some of the patterns we lay out, the evidence seems consistent with our hypothesis that differences in the extent of inequality across these societies contributed to the different political decisions they made regarding how much revenue to raise, the relative use of different tax instruments, the nature and size of state and local governments, and the types and size of government expenditure programs. In general, we found that there were no major differences in how national governments chose to raise their revenue during the 19th century. The United States, Canada, and Latin America all relied overwhelmingly on customs duties, other taxes levies on foreign trade, and excise taxes. However, during this period, many of the state and local governments in the US and Canada successfully taxed wealth, generally in the form of property taxes, and income, generally in the form of business taxes. These taxes, as a percentage of total central and local tax revenues, were quite substantial. Indeed, as late as the first part of the 20th century, property taxes were more than half of total tax revenues in the US. The revenues obtained, moreover, were primarily directed by the local and state governments toward education, transportation, water/sewer projects, and other types of investment projects that generated benefits for a broad spectrum of the population. Although it is difficult to establish a clear causal relationship, it seems likely that such investments were broadly progressive and enhanced mobility for low-income individuals.

Although similar efforts by state and local governments in Latin America did exist, these programs were nowhere near as extensive as the social programs in the US and Canada. In this way, as well as perhaps others, this pattern of stunted development of local

governments, together with the overall regressive tax institutions, likely contributed to the persistence of extreme inequality in these societies over time. It has only been in the last few decades that Latin American governments have begun to raise sufficient revenue to fund substantial government programs beyond the military or industrial-policy type programs that long dominated their budgets. Thus, the heroes in our story are the local and state (provincial) governments in the US and Canada in the early 1800s though the early 1900s that put in place rather progressive tax structures to fund expenditures on public goods and investment projects that generated returns for a broad spectrum of the population, and likely stimulated economic growth as well. Property taxes (and inheritance taxes) provided most of the revenue to these local and state governments--at a time when real property likely constituted a large portion of the wealth of individuals.

Unfortunately, there were very few local or state governments in Latin America that took such a path. Although other explanations might be offered, we are intrigued with the possibility that the extreme inequality in wealth, human capital, or political influence characteristic of nearly all of the countries in the region was responsible for the reluctance of Latin American local governments to act as their counterparts to the north did. With such a distribution of resources, elites would bear most of any tax burden, especially one levied on wealth or income, and realize a smaller than proportionate benefit, especially since they could procure for themselves and their families many of the same services privately.

In Part IV, we compared the current tax structures in North America and Latin America, as well as tax systems in other parts of the world. Latin American countries still have relatively low aggregate tax burdens and still rely on taxes on consumption, rather than taxes that are generally considered more progressive in incidence. The governments are still rather centralized as compared to the size of different levels of governments in the US and Canada and other regions of the world.

Latin American countries continue to have the highest rates of inequality in the world. From a tax design and enforcement perspective, this presents serious challenges. Many Latin American countries have adopted individual income tax regimes that exclude most of the population from taxation, and provide relatively low rates and many tax preferences for those still subject to tax. Value-added tax systems provide for substantial exemptions for basic food and other products to relieve the tax burden on the poor, but the benefits of such

provisions spill over to the middle and upper classes. With the move to more open economies, it is plausible that the corporate income tax long thought to be progressive in incidence, may actually fall more on labor than on owners of capital. Even if Latin American countries could now adopt effective property tax systems, the revenues from such taxes would be relatively small compared to current revenue requirements. These property taxes could provide resources to fund provincial and local governments, but, unlike the circumstances in the early 1800s to early 1900s, they could not be a major source of revenue to fund major social programs.

The tax choices available to governments have changed over time. This may be, as many argue, another consequence of the advances in technology that have made capital more mobile and the economy more global. On the other hand, we are deeply impressed with the historic pattern of relatively light tax burdens borne by the elites in this part of the world long marked by high levels of inequality. In our view, the evidence suggests that its long history of extreme inequality is central to understanding the distinctive set of tax institutions that have characterized Latin America.