INEQUALITY AND THE EVOLUTION OF INSTITUTIONS OF TAXATION: EVIDENCE FROM THE ECONOMIC HISTORY OF THE AMERICAS

Kenneth L. Sokoloff

University of California, Los Angeles and NBER

and

Eric M. Zolt

University of California, Los Angeles

NBER Political Economy Working Group (November 19, 2005)

Please Do Not Quote Without Permission of the Authors.

I. INTRODUCTION

The importance of institutions in the processes of economic growth and development is now well recognized.[1] Despite the consensus about their significance, our understanding of where institutions come from and how institutions which do not work well persist over time remains limited. 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. Despite these formidable challenges, in recent years researchers have made significant contributions to our knowledge of how institutions as fundamental as universal adult suffrage, property rights in intellectual capital, and public schools evolved over time and place.[2]

Tax systems are among the oldest and most fundamental of institutions. Taxes are necessary to raise revenue for governments to fund their operations and finance investments in public goods and other sorts of public services conducive to general welfare and economic growth. How governments raise revenue can 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.[3] 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

---

[1] For a classic statement of this view, see Douglass C. North, Structure and Change in Economic History (New York: Norton, 1981).

[2] See, e.g., Stanley L. Engerman & Kenneth L. Sokoloff, "Factor Endowments, Inequality, and Paths of Development Among New World Economies," Economia 3 (Fall 2002): 41-102. [herinafter Engerman and Sokoloff 2002]. Also see Daron Acemoglu and James A. Robinson, "Why Did Western Europe Extend the Franchise? Quarterly Journal of Economics 115 (Nov. 2000): 1167-1199; B. Zorina Khan and Kenneth L. Sokoloff, "Intellectual Property Institutions in the United States: Early Development," Journal of Economic Perspectives 15 (Summer 2001): 233-246; and Stanley L. Engerman and Kenneth L. Sokoloff, "The Evolution of Suffrage Institutions in the Americas," Journal of Economic History, 65 (September 2005): forthcoming.

[3] Such adjustments can often lead economies 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.

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 are 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.[4]

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, to the extent that local governments are more dependent on taxes on property or income than other levels of government, societies that lack the public authority or administrative capacity to effectively implement such taxes might be expected to have relatively 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.

Striking contrasts exist today between the tax systems of developed and developing countries.[5] Tax systems in developed countries derive most of their revenue from

---

[4] Recent studies of quite distinct settings have yielded remarkably consistent findings of less government provision of public services in ethnically or otherwise heterogeneous polities. The mechanisms that account for this pattern remain unclear, but may have to do with more diverse populations being hampered by higher costs of reaching a consensus (resolving the collective action problem) or with there being greater economic and political inequality across social groups in such contexts. For examples of this literature, see Alberto Alesina, Reza Baqir & William Easterly, Public Goods and Ethnic Divisions, Quarterly Journal of Economics 114 (Nov. 1999): 1243-1284; and Latika Chaudhary, "Social Divisions and Public Goods Provision: Evidence from Colonial India," unpublished UCLA working paper, 2005. For discussion of the mechanisms by which the option of the rich to substitute private goods for public goods can inhibit reform or provision of government services, see Albert O. Hirschman, Exit, Voice, and Loyalty (Cambridge, Mass.: Harvard University Press, 1970).

[5] Vito Tanzi, "Quantitative Characteristics of the Tax Systems in Developing Countries," in The Theory of Taxation for Developing Countries, David Newbery and Nicholas Stern, eds. (New York: Oxford University Press, 1987); Robin Burgess & Nicholas Stern, "Taxation and Development," Journal of Economic Literature 31 (June 1993): 762-830. [hereinafter Burgess and Stern 1993].

individual income taxes, corporate 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 a 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.[6] 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 with a large informal sector than it would be in countries where most individuals have stable full-time employment relationships with large firms.[7] 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 different tax instruments).[8] Although not inconsistent with this common wisdom, other scholars have emphasized how political factors can influence the design and administration of tax systems.[9] Groups with great influence are not

---

[6] See, e.g., Alan A. Tait, Wilfrid L. M. Gratz, and Barry J. Eichengreen, "International Comparisons of Taxation for Selected Developing Countries, 1972-1976," Staff-Papers International Monetary Fund 26 (March 1979): 123 .

[7] Richard Goode, Government Finance in Developing Countries (Washington, D.C: Brookings Institution, 1984); and Richard A. Musgrave and Peggy B. Musgrave, Public Finance in Theory and Practice (New York: McGraw-Hill; 4th edition, 1984): 790-796.

[8] Vito Tanzi and Howell Zee, "Tax Policy for Emerging Markets: Developing Countries," International Monetary Fund Working Paper No. 00-35. [hereinafter Tanzi and Zee 2000].

[9] For a pioneering discussion of the influence of politics on the design of tax systems in Central America, see Michael H. Best, "Political Power and Tax Revenues in Central America," Journal of Development Economics 3 (1976): 49-82. [hereinafter Best 1976]. More generally, see Thomas J. Reese, The Politics of Taxation (Westport, Ct. : Greenwood Press, 1980).

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.

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.[10] 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 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, prosperous, 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.

---

[10] For estimates of income inequality in Latin America and extensive treatment of these issues, see David De Ferranti, et. Al., Inequality in Latin America and the Caribbean: Breaking With History (New York: World Bank and Oxford University Press, 2004). Also see the discussion of the regressivity of tax systems in Latin America, Richard M. Bird, “Taxation in Latin America: Reflections on Sustainability and the Balance between Equity and Efficiency,” unpublished working paper, 2003. [hereinafter Bird 2003].

When tax scholars explore the relationship between inequality and taxation, they tend to focus on how tax systems may alter the after-tax distribution of income or wealth, either directly through government takings or transfers, or indirectly through their influence on the decisions of individuals (or households) about labor supply, savings, or investments.[11] We take a different approach. We examine how 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 income levels across the societies of the Americas were relatively similar, the tax structures looked very different. Moreover, we raise the question of whether these differences in taxes, and in related 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 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, and 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 discusses how these tax structures evolved over the 20th century. In Part V we offer some

---

[11] For example, see Joel Slemrod & Jon M. Bakija, "Growing Inequality and Decreased Tax Progressivity," in Inequality and Tax Policy, Kevin A. Hassett and R. Glenn Hubbard, eds. (Washington, D.C.: American Enterprise Institute Press, 2001). [hereinafter Slemrod & Bakija 2001].

tentative conclusions about what the legacy of extreme inequality in Latin America meant for the long-run pattern of on tax design and expenditure policy in that region.

Several salient patterns emerge. The U.S. 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).[12] Although the U.S. 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 U.S. 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 were 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. 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.

---

[12] For example, land and other assessed taxes generally accounted for between 15 and 40 of revenue to the British government over the period from 1690 to 1790. See John Brewer, The Sinews of Power: War, Money, and the English State, 1688-1783 (Cambridge, Mass.: Harvard University Press, 1990): 98.

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.[13] These differences, it is argued, were due primarily to factor endowments (or initial conditions more generally). The "discovery" and exploration of the Americas by the Europeans was part of a grand, long-term effort to exploit the economic opportunities in 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. 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 increasingly to accept 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 advantage, their economies came to be dominated by large slave plantations and their populations by slaves of African descent. The overwhelming fraction of the

[13] Engerman and Sokoloff 2002.

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.[14]

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.[15]

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.

---

[14] For a discussion of the rise of the Caribbean sugar plantations, including a detailed examination of the distribution of wealth among free household heads on a sugar island, see Richard S. Dunn, Sugar and Slaves: The Rise of the Planter Class in the English West Indies, 1624-1713 (New York: Norton, 1972).

[15] It is not clear whether the existence of scale economies, such as in slavery, supported the competitive success or persistence of the largest units of production in this second class of colonial economies. Rather, large-scale enterprises may have been sustained by the natives' inability or disinclination to evade their obligations to the estate-owning families. For an excellent and comprehensive overview of the *encomienda* and the evolution of large-scale estates, see James Lockhart and Stuart B. Schwartz, Early Latin America: A History of Colonial Spanish America and Brazil (New York: Cambridge University Press 1983).

Moreover, without the abundant supply of native labor, the generous awards of property and tribute to the earliest settlers would not have been worth so much (if even 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.

The final category of New World colonies is typified by those on the northern part of the North American mainland, chiefly those that became the northern United States, but also Canada. 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 and the share of the population composed of slaves were both quite modest by the standards of Brazil or the sugar islands.[16]

Overall, 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

---

[16] David W. Galenson, "The Settlement and Growth of the Colonies: Population, Labor, and Economic Development," in The Cambridge Economic History of the United States. vol. I, The Colonial Period, Stanley L. Engerman and Robert E. Gallman, eds. (New York: Cambridge University Press, 1995); Also see Jack P. Greene, Pursuits of Happiness (Chapel Hill: University of North Carolina Press, 1988).

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, Brazil, and Jamaica, are among the most unequal in the world, however, the initial conditions seem to have had long lingering effects. Not only were certain fundamental characteristics of New World economies difficult to change, but government policies and other institutions tended generally to reproduce them. Specifically, in those societies that began with extreme inequality, the elites were more able to shape the evolution of rules, laws, and other institutions to advantage themselves -- contributing to persistence over time in the extent of inequality.

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.[17] 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 in these requirements within Latin America, it is clear that there was much greater political equality in the U.S. and Canada during the 19th century than there was elsewhere in the hemisphere. Indeed, as there were other channels through which elites could influence political outcomes, the rules specifying who could vote likely understates the extent to which elites were able to wield disproportionate power in the formulation and implementation of government policies. 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, whose initial

[17] The great majority of countries in the Americas were nominal democracies by the middle of the 19th century.

factor endowments and extent of inequality were most like those of the United States and Canada). 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.[18] The great majority of European nations, as well as the United States and Canada, achieved secrecy in 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.

[18] This discussion draws from Engerman and Sokoloff 2005.

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

Period and Country	Year	Lack of Secrecy in Balloting	Wealth Requirement	Literacy Requirement	Percent of the Population Voting
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
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: Engerman and Sokoloff 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. Afterwardi, 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.

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 and access to land, as well as other policies that were expected to be attractive to potential migrants.[19] Labor scarcity was a crucial element in determining the initial level of inequality across New World colonies, and it continued to

[19] Engerman and Sokoloff 2005.

exert an important effect 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 of the pattern of the evolution of suffrage institutions in the Americas, 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 and the U.S.

Differences in the distribution of political power seem to have 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 19th 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 20th 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.[20] 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 soon followed the United States in establishing tax-supported schools with universal access, and its literacy rates were nearly as high by the second half of the 19th century.[21]

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.[22] 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

---

[20] Ellwood P. Cubberley, The History of Education (Boston: Houghton Mifflin, 1920).

[21] Charles E. Phillips, The Development of Education in Canada (Toronto: W. J. Gage, 1957).

[22] Indeed, significant steps were not taken in this direction until the British Colonial Office began promoting schooling in the 1870s. 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. Among the many British colonies around the Caribbean basin are Jamaica, Guyana, British Honduras, and Trinidad.

made available, however, for universities and other institutions of higher learning that were more geared toward children of the elite.

Table 2. Literacy Rates in the Americas, 1850–1940

Country	Year	Age	Rate (percent)
Argentina	1869	6 and above	23.8
	1895	6 and above	45.6
	1900	10 and above	52
	1925	10 and above	73
Bolivia	1900	10 and above	17
Brazil	1872	7 and above	15.8
	1890	7 and above	14.8
	1900	7 and above	25.6
	1920	10 and above	30
	1939	10 and above	57
British Honduras	1911	10 and above	59.6
(Belize)	1931	10 and above	71.8
Chile	1865	7 and above	18
	1875	7 and above	25.7
	1885	7 and above	30.3
	1900	10 and above	43
	1925	10 and above	66
Colombia	1918	15 and above	32
	1938	15 and above	56
Costa Rica	1892	7 and above	23.6
	1900	10 and above	33
	1925	10 and above	64
Cuba	1861	7 and above	23.8
			(38.5, 5.3)
	1899	10 and above	40.5
	1925	10 and above	67
Guatemala	1893	7 and above	11.3
	1925	10 and above	15
Honduras	1887	7 and above	15.2
	1925	10 and above	29
Jamaica	1871	5 and above	16.3
	1891	5 and above	32
	1911	5 and above	47.2
Mexico	1900	10 and above	22.2
	1925	10 and above	36
Paraguay	1886	7 and above	19.3
	1900	10 and above	30
Peru	1925	10 and above	38
Puerto Rico	1860	7 and above	11.8
			(19.8, 3.1)
Uruguay	1900	10 and above	54
	1925	10 and above	70
Venezuela	1925	10 and above	34
Canada	1861	All	82.5
English-majority Counties	1861	All	93
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
			(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 and Note: Engerman and Sokoloff 2002. In some cases, the figures for whites and nonwhites, respectively, are reported within parentheses.

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 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 yet another important example of how differences in the extent of political and economic inequality across societies may have influenced the evolution of strategic institutions, that in turn contributed to persistence in relative 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 could directly affect 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.

As we would expect of a country with relative equality, and labor scarcity, there were never major obstacles to acquiring land in the U.S., and the terms of land acquisition became easier over the course of the nineteenth century.[23] 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 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.[24]

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

---

[23] For a comprehensive overview of US land policy, see Paul W. Gates, History of Public Land Law Development (Washington, D.C.: Government Printing Office, 1968). For discussions of Canadian land policy, see Carl E. Solberg, The Prairies and the Pampas: Agrarian Policy in Canada and Argentina, 1880-1913 (Stanford: Stanford University Press, 1987); and Jeremy Adelman, Frontier Development: Land, Labor, and Capital on Wheatlands of Argentina and Canada, 1890–1914 (New York: Oxford University Press, 1994).

[24] For discussions of these other cases, and of why rather small farms endured in the U.S., see Warren Dean, "Latifundia and Land Policy in Nineteenth Century Brazil," Hispanic American Historical Review 51 (1971):602-625; Emilia Viotti da Costa, The Brazilian Empire: Myths and Histories (Chicago: University of Chicago Press 1985), chpt. 4; Solberg 1987; and the excellent discussion in Adelman 1994. The latter makes a number of interesting arguments for why the outcome in Argentina was rather different from that of Canada (as well as in the U.S.). 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. 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. Second, 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. Moreover, livestock production on increased dramatically during the late 19th century, and scale economies in the raising of livestock may have helped maintain the large estates. In the U.S. and Canada, where the principal agricultural products in the North were grains, the land could be profitably worked on relatively small farms, given the technology of the times. This helps to explain why the policy of smallholding, reflected in the liberal land policies was implemented and effective. See Jeremy Atack and Fred Bateman, To Their Own Soil: Agriculture in the Antebellum North (Ames: Iowa State University Press, 1987).

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 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.[25] 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.

---

[25] For further discussion of Mexico, see George McCutchen McBride, The Land Systems of Mexico (New York: American Geographical Society, 1923); Frank Tannenbaum, The Mexican Agrarian Revolution (Macmillan 1929); and Robert Holden, Mexico and the Survey of Public Lands: The Management of Modernization (Dekalb: Northern Illinois University Press 1994).

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. 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.[26]

---

[26] 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.

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
Missiones	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: Engerman and Sokoloff 2002.

a. Landownership is defined as follows: in Mexico, household heads who own land; in the U.S., 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.

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.[27]

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.[28]

In Brazil, the sugar industry was the primary source of revenue to Portugal during the colony's early history, but direct taxes on sugar production hampered the competitiveness of Brazilian producers as sugar cultivation spread across the West Indies.[29] By the end of the 16th century Portugal introduced new taxes on imports into

---

[27] See Brewer 1990.

[28] 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 Barbara Tenenbaum, The Politics of Penury: Debt and Taxes in Mexico, 1821-1856 (Albuquerque: University of New Mexico Press 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 and Lyman L. Johnson, Colonial Latin America (New York: Oxford University Press 1998).

[29] Even municipal or local governments at times assessed taxes on sugar production.

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 burden on the sugar industry. Taxation of trade, or of production of commodities intended for export, was to remain 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 seem to have raised more revenues from their populations (at least those segments that were not Native Americans) than did 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. The New England colonies developed property or faculty (based on estimated 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 quasi-public or public goods and services 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' 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 (typically well above 80 percent) of national government revenue up through the Civil War. These revenues amounted to roughly 1 to 2 percent of GNP (except for spurts during wartime), and were almost exclusively consumed in covering the costs of defense, paying off the debt, and of general government expenses. 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. As was recognized, and has often been noted, the U.S. government was extremely conscientious about maintaining its reputation in financial markets, and was loath to finance much of its expenditures through borrowing or issuance of paper money. In Canada, tariffs were the major source of revenue for the national government after the confederation in 1867, generally accounting for between 60 and 70 percent of dominion revenue (and over 80 percent of dominion tax revenue) into the 20th century.[30]

The overall patterns of national government taxation, if not of the extent of reliance on debt, in Latin America were remarkably similar to that in the U.S. and Canada over the 19th century. Although wars and other shocks occasionally generated transitory impositions of, or increases in, *direct contributions* (direct levies, applied to land or a proxy for income), customs duties and excise taxes (on commodities such as liquors) normally accounted for the bulk of revenues. Indeed, there were, perhaps, only two notable differences in how Latin American central governments financed themselves. First, unlike in the U.S. and Canada, state monopolies (a holdover from the colonial period) and levies on the production of certain staples and minerals intended for export (such as coffee, sugar, guano, gold, silver, nitrates, and copper) were at times significant generators of revenue.[31] The other salient divergence was in the greater inclination of Latin American countries to incur debt or issue paper money to finance operating deficits.[32] Notwithstanding these differences, what stands out is that the Latin American central

---

[30] Together with excise taxes (levied primarily on liquors and tobacco), the revenue from tariffs generally accounted for between 75 and 85 percent of dominion revenue. In 1870, the tariffs on sugar and molasses, spirits and wine, tea, cottons, and woolens were the largest contributors, jointly accounting for 65.8 percent of all tariff revenue. See Perry (1955): Table III. Customs revenue had been the major source of provincial revenue before the Confederation, but the terms of the unification agreement stripped the provinces of the right to levy such taxes.

[31] Most countries did collect some government revenue from duties on exports, but their ability to rely on such taxes was constrained by international competition, and the power of exporters. It was generally only in cases where exporters had market power and could pass on some significant portion of taxes to the consumers (such as coffee in Brazil, guano in Peru, or nitrates in Chile), that duties on exports accounted for substantial shares of national government revenue.

[32] Not only were Latin American countries more willing to borrow, but they also seem to have been less committed to maintaining confidence in their service of the debt. Their poor record at debt service constrained their ability to tap external credit, and thus Latin American countries were typically quite reliant on internal sources. This may have had unfortunate effects on the development of banks and other financial institutions.

governments were like those of their neighbors to the North in raising most of their revenue from tariffs and from taxes levied on commodities generally thought to be income inelastic. 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.

Wars and other threats to the social order (such as the War of 1812, the U.S. Civil War, the war between Mexico and the U.S., and various internal uprisings) did sometimes stimulated the imposition of direct taxes that extended the reach of national governments in progressive directions (the income tax in the U.S. during the Civil War, and the property tax in Mexico during its war with the U.S.), but the general pattern throughout the hemisphere was reliance by national governments on taxes that targeted commodities or trade rather than income or wealth.[33] As is evident in Table 4, and discussed in more detail below in section IV, it was only in the 20th century that national governments in the

[33] A close examination of the variation over time in the amounts of tax revenue raised, and the manner by which national governments in Latin America financed their operations, suggests that there was often a reluctance to increase taxes during periods of war. Rather, the approach seemed to be either inflating the money supply or borrowing from foreign lenders or domestic banks. This pattern stands in stark contrast to the behavior of the U.S. government during wartime, but it is interesting to note the resemblance to how the Confederacy financed its operations during the U.S. Civil War (or War Between the States). In her intriguing article that explores the voting patterns among members of the Confederate Congress, Rosa Razaghian finds that it was those that came from the states and districts with large slave plantations (and likely the greatest inequality) that were (until the very late stages of the War) most opposed to taxing income – and thus most inclined toward financing the Confederacy through inflationary monetary policy, loans, and excise taxes. See Rosa Razaghian, "Financing the Civil War: The Confederacy's Financial Strategy," (Yale ICF Working Paper No. 04-45).

U.S., Canada, and Latin American countries introduced permanent peacetime taxes on income and wealth (including estates and gifts).[34]

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	--

[34] These new assessments, together with payroll taxes, came to be the dominant source of revenue -- especially in the U.S. and Canada -- during the 1930s and 1940s, and coincided with a sharp increase in the size of the central governments.

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 existed across the societies of the Americas, however, in the size and revenue sources of state/provincial and local governments. Local governments were far more prominent in the United States and Canada than in Latin America (see Table 5), and this feature is of fundamental importance because of the radically different tax instruments used by state and local governments (see Tables 6.1, 6.2, 6.3, 6.4, and 6.5) as compared to the national. A 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 governments to raise the vast majority of revenue through property taxes.

Local governments certainly grew very rapidly in the United States during the early decades of the 19th century as the *common school movement* progressed, and there were substantial investments in building roads and other infrastructure demanded by an early industrializing economy. Indeed, they were far and away the largest component of the overall government sector throughout the 19th century (with a share of total government revenue of 57.1 percent in 1855, for example), with a few brief exceptions during and after major wars. Their heavy reliance on the property tax suggests that a rather progressive tax structure prevailed among local governments, and given the relative prominence of this level of government, in the overall government sector as well. The local governments are also of particular importance, because their main priorities (as reflected in expenditures) well into the 20th century were the provision of public schools and investment in roads and other infrastructure that likely contributed to economic growth and generates rather broad distributions of social returns.[35] The contours of local government finance were much the same in Canada. There too local government revenue came overwhelmingly from property taxes. Our earliest estimate is that they accounted for over 82 percent of local government revenue in 1913 (see Table 6.2), but less comprehensive information suggests that the share of tax revenue accounted for by levies on property may have been even greater during the 19th century, especially in Ontario.[36]

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

---

[35] 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. (Cambridge: 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.

[36] See J. Harvey Perry, Taxes, Tariffs, & Subsidies: A History of Canadian Fiscal Development 2 vols. (Toronto: University of Toronto Press, 1955), especially chpts. 2, 5, and 12. [hereafter Perry 1995]. As related by Perry, property taxes and municipal or local governments were closely related, and property taxes had already come to be extensively relied on by the early 19th century in upper Canada. Indeed, Perry suggests that virtually wherever in Canada significant municipal government developed, the property tax was the dominant source of revenue. Direct taxation of property was less important in Quebec than Ontario, because of the customs revenue French Canada obtained and because of the tradition of statutory road levies. Property taxes were low in the Maritime Provinces, because of the limited development of local government in there – especially in Nova Scotia- and Perry and other historians of government in Canada attribute this to the heterogeneity of the population.

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 accelerating economic growth.[37] 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 revenue source for state governments into the 20th century (see Table 6.3.).

Although the provincial governments in Canada seldom levied the sorts of taxes on property that U.S. states governments did, the revenue sources they relied on were generally progressive in character. Throughout the 19th century, they depended almost exclusively (Prince Edward Island is the one exception) on royalties, taxes, and various other assessments levied on mining, cutting timber, and other exploitation of natural resources. As the scale of their programs increased, they acted to enhance their ability to finance them by introducing succession duties and taxes on corporations. These measures did not bring in major amounts, however, and during the first decade of the 20th century, generally yielded less than a quarter of provincial revenue in those provinces that had long been settled, such as Ontario, Quebec, Nova Scotia, and New Brunswick. [38]

---

[37] As is detailed in Wallis, 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.

[38] It was basically only in the sparsely populated western provinces eager to attract new investments, such as Alberta, Manitoba, and Saskatchewan, that levies on the exploitation of natural resources were minimal. During the early years of the 20th century, these provinces raised revenue primarily from the

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	0.0
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	60.0	32.0	8.0
1898	66.7	28.6	4.8
Mexico			
1882	69.1	19.5	11.5
1890	74.7	16.3	9.0
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	36.0	14.0	50.0
1913	29.1	13.2	57.6
1927	35.5	18.0	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

---

corporation tax (which seems to have fallen most heavily on the railroads) and from assessments on land (or for the titling of land). See Perry 1955 for more discussion and Appendix C for figures on the revenue sources for different provincial governments.

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, Geografia General; F.J. Vergara y Velasco, Nueva Geografia; 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 Canada, see J. Harvey Perry, Taxes, Tariffs, & Subsidies: A History of Canadian Fiscal Development 2 vols. (Toronto: University of Toronto Press, 1955): Appendix C, Table 1. 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 and John Legler, "The Government in the American Economy, 1815-1902," Journal of Economic History 26 (Sept. 1966): 514-552. The estimates for 1913, 1927, and 1950, see U.S. Bureau of the Census, Historical Statistics of the United States: Colonial Times to 1970 (Washington, D.C.: Government Printing Office 1975).

Table 6.1. Sources of Tax Revenue for the U.S. Local Governments, 1890-1950

	1890	1902	1913	1927	1940	1950
Indiv/Corporate Income Taxes	--	--	--	--	0.4	0.9
Sales and Excises	--	--	0.2	0.6	2.8	5.9
Property	92.5	88.6	91.0	96.8	91.3	86.2
Payroll	--	--	0.2	0.6	1.5	2.3
Other	7.5	11.4	8.6	2.1	3.9	4.7
TOTAL	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 (Princeton: 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 (New York: Wiley 4th edition 1980), Table 1. We employ Ratner for the estimates after 1890, as this source covers the years up to 1950. 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.

Table 6.2. Sources of Revenue to Municipal Governments, Canada, 1913-1950

	1913 (%)	1933 (%)	1950 (%)
REVENUES			
Income Taxes		1.4	--
Sales and Excises		--	4.3
Property/Wealth	82.2	78.6	69.6
Other Taxes	6.0	6.1	9.2
Non-Tax Revenues	11.8	13.9	14.3
Subsidies from Other Govts.		--	2.6
TOTAL	100.0	100.0	100.0

Table 6.3. Sources of Tax Revenue for the U.S. State Governments, 1890-1950

	1890 (%)	1902 (%)	1913 (%)	1927 (%)	1940 (%)	1950 (%)
Individual Income Tax	--	--	--	4.0	4.7	7.4
Corporate Income Tax	--	--	--	5.3	3.5	6.0
Sales and Excises	--?	17.9	19.9	42.8	51.0	55.6
Property	70.0	52.6	46.5	21.2	5.9	3.1
Payroll	--	--	--	7.9	24.5	18.8
Death and Gift	--	29.5	33.6	18.9	10.3	9.1
Other	30.0	--	--	--	--	--
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0

Notes and Sources: See the note to Table 6.1. 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.

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

Table 7.1. Sources of Tax Revenue in the U.S., for All Levels Considered Together, 1902-1950

	1902 (%)	1913 (%)	1927 (%)	1940 (%)	1950 (%)
Individual Income Tax	--	--	9.8	8.1	29.3
Corporate Income Tax	--	1.5	13.9	8.7	19.6
Sales and Excises	19.8	16.1	13.2	28.5	23.6
Customs Duties	17.7	13.6	6.0	2.3	0.7
Property	51.4	58.6	48.8	30.3	13.0
Payroll	--	0.1	2.4	13.3	9.7
Death and Gift	11.1	10.1	5.8	8.9	4.2
Other	--	--	--	--	--
TOTAL	100.0	100.0	100.0	100.0	100.0

Notes and Sources: Ratner (1980), Table 1. 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, 1933-1950

	1933 (%)	1950 (%)
Revenues		
Income Taxes	12.4	44.5
Sales and Excises	26.2	32.0
Customs	13.5	7.9
Property/Wealth	39.2	10.8
Other Taxes	8.7	4.8
TOTAL	100.0	100.0

Given the very large size of the local governments in the U.S. and Canada, and their heavy reliance on property and wealth taxes into the 20th century, it should perhaps not be surprising that these same taxes loom large when one considers the total revenue collected by governments at all levels. For the U.S., in both 1902 and 1913 (see Table 7.1), property, gift, and estate taxes account for between 60 and 70 percent of the revenue to the overall government sector. Although our estimates for Canada do not extend that far back (see Table 7.2), it is clear that there too taxes on property and wealth were very important sources of revenue for the government sector overall (nearly 40 percent as late as 1933). Even if the respective levels of government in Latin America relied on the same tax instruments as did their counterparts to the north, the fact that local governments were so

much smaller implies that property and wealth holders would contribute a relatively modest proportion of government revenue overall. 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 nations in northern North America is dramatic. In the U.S., local governments generated 57.1 percent in 1855, and the figure 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 U.S. and Canada.

From exceedingly limited investments in public schooling characteristic of Latin America into the 20th century (and 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 and where Native Americans composed larger proportions of the population. The basis for our claim that during the 19th century the overall tax structures in the U.S. and Canada were much more progressive than in Latin America, however, does not rest solely on the relative sizes of the different levels of government. As already noted, the evidence we have on the structure of taxes suggests that local governments in Latin America relied much less on the property tax than did their counterparts in the U.S and Canada; early in the 20th century, local governments in Chile and Colombia raised less than half of their revenue from property and income taxes (less than 25% in Cundinamarca, Colombia), while these taxes were dominant in the accounts of Canada (78%) and the U.S. (over 90%). When one considers these local governments in Latin America relative to even U.S. state governments (which, see Table 6.2, were raising more than 80% of their revenue from property, death, and gift taxes as late as 1913) [39] the disinclination of Latin American

[39] For estimates of regional wealth inequality, see Lee Soltow, Men and Wealth in the United States, 1850-1870 (New Haven: Yale University Press, 1975). Remarkably, this pattern persisted throughout the 19th century and into the 20th, 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 property taxes 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

governments to tax property holders and the well to do stands out in especially stark terms.

Table 8.1. Chile: Revenues of the Municipalities

	Total Revenues (pesos (000))	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 (%)
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 Cundina-marca (%)	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).

The underdevelopment of local government in Latin America, where both economic and political inequality was extreme and elites might have been expected to resist the levying of property and wealth taxes to fund broad provision of public services, raises the issue of whether the two conditions are causally related to each other. A theoretical argument can certainly be made that elites might have had an interest in

(29.0%). See Advisory Commission on Intergovernmental Relations, State Constitutional and Statutory Restrictions on Local Government Debt (1961): 22-23.

resisting the growth of public services, especially those provided to segments of the population that were perceived as quite unlike their own. This notion receives some support from the observation that during the 19th century 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) in regions of the U.S. with less inequality such as the Midwest, or even the Northeast (see Table 9.1).

Table 9.1. Income Shares of Local and State Taxes: U.S., 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	2.20	184
National Avg.	1.22	2.58	128
1880			
Northeast	0.93	4.08	244
N. Central	0.84	4.40	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.	0.90	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 Davis and Legler (1966), and the per capita income estimates in Robert W. Fogel, Without Consent or Contract (New York: Norton 1988). 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.

Not only were local governments much smaller in Latin American countries generally, but the state or provincial governments in that region 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 extremely well to do elite. As reflected in Tables 10.1, 10.2, 10.3, and 10.4, which present the distribution of revenue across various sources for a sampling of state or provincial governments in Argentina, Brazil, Colombia, and Mexico during the second half of the 19th century, taxes on land or property (the so-called *direct contributions*) accounted for markedly lower proportions of state government revenue than such taxes did in the U.S.. In these four countries, the three former of which are among the most decentralized

in Latin America, taxes on forms of wealth or on business rarely accounted for more than 10 to 15 percent (and generally less) of state/provincial revenue, as compared to 70 percent in the U.S. in 1890. Instead, state/provincial governments in Latin America relied on excise taxes (such as on liquors, tobacco, flour, slaughtered livestock, and foreign merchandise), tolls on roads and other modes of transportation, fines and various fees for government services, levies on products intended largely for export (such as coffee in Brazil), especially such as , and a variety of other sources. Although patterns of incidence are not always transparent, the methods of raising revenue to fund the operations of state and provincial governments in Latin America would generally be expected to impose a proportionally rather light burden on the wealthy classes.

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).

Table 10.1. Sources of Revenue to State/Provincial Governments

ARGENTINA *Revenues of the Provincial Governments*	**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

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	2.0	
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	
Others/Miscellaneous	2.3	8.4	
MINAS GERAES	**1876**	**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
Others/Miscellaneous	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 Paolo 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	350.0	18.3
Tax on Liquors	289.5	15.1
Tax on Foreign Merchandise	247.0	12.9
Direct Taxes on Industry and Capital	224.1	11.7
Tax on Real Estate	135.0	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

Table 10.4. Sources of Revenue for the State of Yucatan: Mexico, 1870

REVENUES (source)	(revenue $)	(%)
Income From Public Lands	25,840	11.8
Income From Sea Salt Fields	34,392	15.7
Alcohol Taxes	27,092	12.4
Livestock Sales Tax	38,645	17.7
Distillation Tax	4,765	2.2
Tax on Flour	6,400	2.9
Taxes on National Imports	7,618	3.5
Other Miscellaneous Taxes	31,540	14.4
Fines	32,116	14.7
Transfer fees	9,689	4.4
Other Miscellaneous	387	0.2
TOTAL	218,484	

Sources: Levy (2005).

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 Paolo. In 1910, the state of Sao Paolo 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 Paolo, 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.

Another question is whether the U.S. 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 U.S. 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.[40]

---

[40] 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," Journal of Latin American Studies 8 (May 1976): 35-57.

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	9.0	
Ecuador	1.3	
El Salvador	2.2	
Guatemala	1.7	
Honduras	0.9	
Mexico	3.1	94
Nicaragua	2.9	
Peru	14.0	
Venezuela	5.1	
UNITED STATES	11.4	100
EUROPE		
Belgium	7.1	58
Denmark	9.3	104
England	13.0	86
France	12.3	143
Germany	5.6	63
Greece	4.8	
Holland	14.0	114
Portugal	4.5	
Sweden and Norway	3.7	51
Switzerland	2.0	20

As a share of income, however, the amount of revenue going to the national government was not especially high in the U.S.. We only have per capita income estimates for a small number of Latin American countries, but both Argentina and Brazil easily surpass the U.S. 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 U.S. than in Latin America, it is evident that the revenue going to the government sector in the aggregate is far higher as a share of national income in the U.S. 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 U.S. 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 U.S. 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 U.S., but also by a different pattern and level of expenditures.

Table 12. State and Local Government Non-Financial Expenditures, the U.S., 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 (Princeton: Princeton University Press 1961): Table 14.

Table 13.1. Chile: Expenditures of National Government by Category

	Total Expenditures (in gold pesos (000))	Interior (%)	Foreign Affairs (%)	Justice (%)	Public Instruction (%)	Hacienda (Finance) (%)	National Defense (%)	Industry and Public Works (%)
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 Estadistica (1921), Sinopsis Estadistica de la Republica de Chile. Santiago de Chile: Soc. Imp y. Lit. Universo.

Table 13.2. Chile: Ordinary Revenue of National Government

	Ordinary Revenue (in pesos (000))	Customs (Imports and Exports) (%)	Railroads (%)	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

Throughout the Americas, the size of the government sector grew substantially over the 20th century and the tax structures to fund increased government expenditures changed substantially. But in some respects, little has changed. As compared to the United States and Canada, Latin American governments remain relatively small and highly centralized, and continue to rely on consumption taxes, with 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.[41]

In thinking about how inequality may influence changes in tax institutions, we focus on three important characteristics of tax systems in the Americas: first, the growth in the size of governments in the 20th century and the need for tax revenues to support government expenditures; second, the change in the relative mix of different types of taxes by governments over the 20th century; and third, the change in the relative size of central governments as compared to state and local governments and the allocation of taxing authority to different levels of government. We begin by examining developments in tax systems in U.S. and Canada over the 20th century, and then turn to Latin America.

a. Developments in the United States and Canada

At the beginning of the 20th century, the U.S. 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 25-30 percent of GDP, with the federal

---

[41] This discussion relies on several excellent cross-country studies of tax systems in Latin America as well as Government Finance Statistics from the International Monetary Fund. See Richard M. Bird, "Tax Reform in Latin America: A Review of Some Recent Experiences," Latin American Research Review 27 (1992): 7. [hereinafter Bird 1992]; Parthasarthi Shome, "Taxation in Latin America: Structural Trends and Impact of Administration," (International Monetary Fund Working Paper No. 99-19). [hereinafter Shome 1999]; Vito Tanzi, "Taxation in Latin America in the Last Decade," (Center for Research on Economic Development and Policy Reform Working Paper No. 00-76); Janet Stotsky & Asegedech WoldeMariam, "Central American Tax Reform: Trends and Possibilities," (International Monetary Fund Working Paper No. 02-227). [hereinafter Stotsky and WoldeMariam 2002]; Bird 2003; and International Monetary Fund, Government Finance Statistics Yearbook Vol. XXV (Washington, D.C.: International Monetary Fund 2001) [hereinafter IMF 2001 Yearbook] and IMF 2004 Electronic version.

government coming to assume the dominant role it plays today.[42] In Canada, similar developments took place.[43] As was the case with many European countries, most of the major tax changes at the U.S. and Canadian federal levels were related to the need to raise funds to support wartime activities. Not only did the introduction of new taxes (and increase in rates of old taxes) finance a substantial portion of wartime expenditures, but they also contributed to the peacetime expansion of the federal government in the aftermaths of the conflicts.[44] 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 U.S. replaced the property tax as the primary tax on individuals.[45] The federal government first adopted an income tax during the 1860s, following the British approach for raising funds to finance the Crimean War. After the Civil War, the income tax was subject to political attacks, and was eliminated, restored, and then struck down on constitutional grounds. Following the passage of the Sixteenth Amendment in 1913, however, the Underwood-Simmons Tariff Act reestablished the income tax in a less progressive and less ambitious form than the Civil War version or the 1894 legislation.[46] The scope of the individual income tax was changed greatly by the revenue demands from World War I and World War II. For

---

[42]See C. Eugene Steuerle, Contemporary US Tax Policy (Washington, D.C.: Urban Institute Press 2004); Joel Slemrod & Jon Bakija, Taxing Ourselves (Cambridge: MIT Press 1996). See also Steven R. Weisman, The Great Tax Wars (New York: Simon & Schuster 2002).

[43]Karin Treff & David B. Perry, Finances of the Nation 2003 (Canadian Tax Foundation 2004), at http://www.ctf.ca/FN2003/finances2003.asp. [hereinafter Treff and Perry 2003].

[44] W. Elliot Brownlee, Federal Taxation in America: A Short History (Washington, D.C.: Woodrow Wilson Center Press 1996). [hereinafter Brownlee 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. Brownlee 1996: 31.

[45]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. Brownlee 1996.

[46]Brownlee 1996 and Weisman 2002.

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 tax revenues increased from $2.2 billion in 1939 to $35.1 billion in 1945.[47] This increase in federal tax revenue from the income tax changed the balance in the relative size of the federal government. Only during World War II did federal tax revenues begin to exceed tax revenues from state and local taxes.

As discussed in Part III, central governments in North America during the 1800s were relatively small compared to state and local governments. The activities of the U.S. federal government were largely confined to defense, foreign affairs and oversight of foreign trade, and general administration, with only a rather small amount going to infrastructure. In contrast, state and local government assumed nearly all of the responsibility for providing schooling and supplying roads. Much of this division of activities evolved naturally, as local governments took on the tasks that communities wanted to get done and were willing to pay for. State governments succeeded the provincial governments of colonial times, and were keen to undertake programs that would stimulate economic activity or otherwise improve welfare within their polities, whether supporting transportation projects beyond the scope of towns, such as railroads, or contributing supplemental funds to expand schooling institutions. It might well be argued that the state and local governments were dominant in the provision of these sorts of public services, because these levels of government were more responsive to micro-level concerns, or that the population was more willing to pay taxes for projects that were clearly visible and likely to benefit those bearing the cost. Part of the relatively small size of the federal government during this era, however, may have been 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 throughout the U.S.[48] Both measures were adopted to prevent regional interests from using the federal government to shift a disproportionate tax burden to other groups. While the

[47]Brownlee 1996 and Weisman 2002.

[48] 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 1996: 11-20.

constitutional limitation on direct taxes became better known as a barrier to adopting a federal income tax,[49] the limitation was primarily adopted by the founding fathers to prevent federal government property taxes.[50]

As is evident from Table 14, as the government sector has grown over time, the relative shares of tax revenue for the federal, state and local governments have changed dramatically. Even though their tax revenues increased from roughly 6.1 percent of GDP early in the twentieth century to a post-WWII high of 9.7 percent of GDP in 1972, [51] the relative size of local governments plunged over the first half of the century (from over 50 to below 15 percent), and has drifted down a bit more since (particularly as constitutional

Table 14. Relative Tax Shares for U.S. Federal and State and Local Governments, 1902 through 2000 (Percent of Total Tax Revenues)

	Federal Tax Revenues (Excludes Social Security Taxes)	State Tax Revenues	Local Tax Revenues	Social Security Tax Revenues
1902	37.4%	11.4%	51.3%	0.0%
1912	29.2%	13.3%	57.6%	0.0%
1922	45.6%	12.8%	41.5%	0.0%
1932	22.7%	23.7%	53.6%	0.0%
1940	33.9%	23.0%	31.2%	11.9%
1950	63.4%	14.3%	14.4%	7.9%
1960	60.3%	14.1%	14.1%	11.5%
1970	52.5%	17.2%	14.0%	16.3%
1980	47.9%	18.7%	11.8%	21.6%
1990	41.8%	19.8%	13.3%	25.1%
2000	45.6%	19.2%	11.9%	23.3%

Sources: U.S. Bureau of the Census, Historical Statistics of the United States: Colonial Times to 1970 (Washington, D.C.: Government Printing Office 1975); U.S. Census Bureau, Statistical Abstracts of the United States: 1983, 1992, 2003 (Washington, D.C.: U.S. Government Printing Office 1983, 1992, 2003).

[49] 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.

[50] Representatives from slave states were concerned that a federal property tax would treat slaves as property, farm states representatives were concerned that the tax might 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. Brownlee 1996: 14-15.

[51] Steuerle 2004: 37.

and statutory limitations on the use of property taxes began to bite).[52] The composition of tax revenues for state and local governments in the U.S. has changed as well. Although property taxes continue to be the major source of tax revenues for local governments, state governments rely far less on them than before. The property tax worked well when governments were small and the bulk of one's wealth consisted of real property. Relatively low rates, relative equality across households, the ability to monitor the expenditures of local governments, and the sense that public investments enhanced property values all served to make the property tax politically palatable, if not popular, at the local level. Moreover, through the middle of the 19th century, taxing real property was also a relatively good proxy for taxing according to ability to pay – a principle widely shared for most of the country's history. By the mid- to late-1800s, however, there was growing dissatisfaction with the property tax. Many observers, including economist Richard T. Ely, argued that property taxes were inequitable in distinguishing between different forms of wealth.[53] Facing mounting criticism, many state governments nominally increased the scope of the tax to cover all types of property, such as cash, bonds, stocks, and mortgages, but in reality the burden of the property tax fell primarily on owners of real estate.[54] Early in the 20th century, most states abolished general state-level property taxes and replaced personal property taxes with state-level income taxes, excise taxes (including levies on automobiles

---

[52] A series of changes in state constitutions and statutes during the late 1970s and 1980s restricted the use of property taxes. 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 of restriction 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. David Brunori, Local Tax Policy: A Federalist Perspective (Washington D.C.: Urban Institute Press 2003): 61-62. [hereinafter Brunori 2003].

[53] Richard T. Ely, Taxation of American States and Cities (New York: Thoms Y. Crowell & Co. 1888).

[54]Edwin 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," Cardozo Law Review 23 (August 2002): 2199.

and gasoline to help pay for roads), and sales taxes.[55] Taxes on real property were left to local governments. Property taxes contributed over half the revenues of state governments at the beginning of the century, but by the 1940s they accounted for less than 6 percent. Today, 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%). [56]

The regional variation noted in relative tax levels and use of tax instruments noted above for the 19th century persisted through the late 20th century. Not only did the Midwest and the Northeast continue to have relatively larger local governments, and rely more on property taxes as a share of total state and local government revenue, than did the South and the West, but a marked association across states between the extent of income inequality (as gauged by the gini coefficient for income) and the importance of property taxes was evident until the very end of the century (for example, see Figure 1 below for 1980).

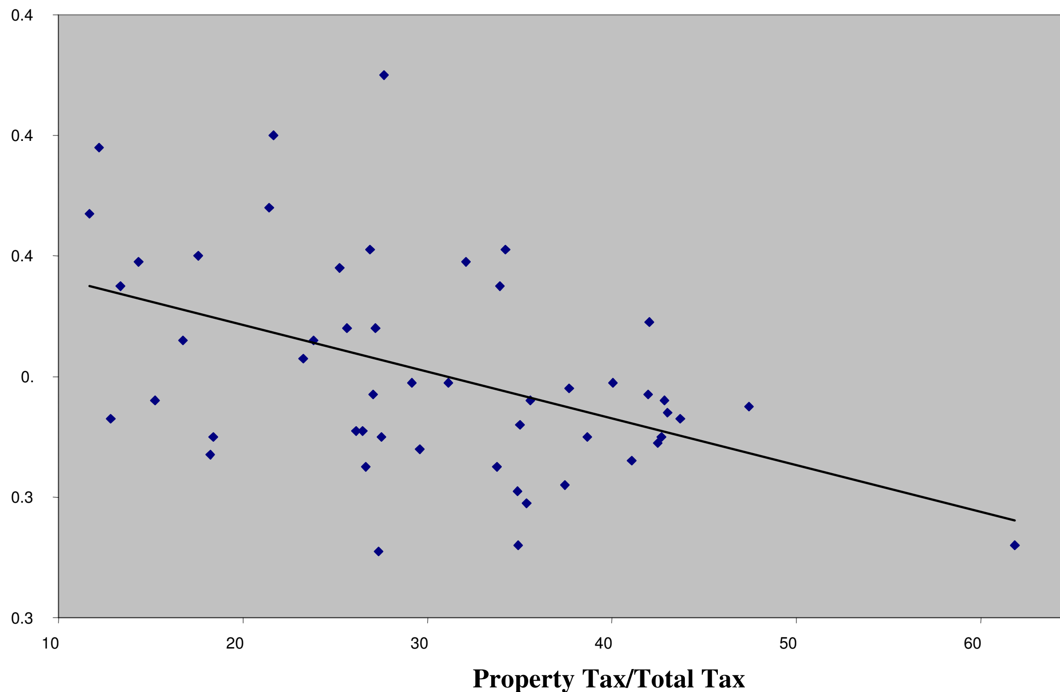
Figure 1.

Income Inequality and the Property Tax as a Share of All State and Local Tax Revenue in the United States: Plot of Gini Coefficient and Property Tax Share By State, 1980

---

[55] Robin Einhorn, American Taxation, American Slavery (unpublished manuscript). By the 1860s, more than half the states had adopted "uniformity" clauses that required all types of property to be assessed in the same way and valued at the same rate. General property taxes proved to be unsuccessful because of the administrative challenges in identifying and valuing personal property.

[56] US Bureau of the Census 2000 State and Local Revenue.



Source: The state and local government revenue information can be found in the U.S. Bureau of the Census, Statistical Abstracts 1983, No. 477 on pg. 284 (http://www2.census.gov/prod2/statcomp/documents/1982_83-03.pdf) and the income statistics can be found in No. 704 on pg. 426. (Washington, D.C.: U.S. Government Printing Office 1983).

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. 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 U.S. income tax, the Canadian tax law shared much in common with the U.S. tax legislation.[57] The Canadian record was also much like that of the U.S. in that the relative importance of the

---

[57]Brownlee 1996.

local governments declined markedly over the 20th century. In Canada, however, it was the provincial governments that expanded with the relative decline of local governments and the federal government (since the latter's peak just after World War II).

Table 15. Relative Tax Shares for Canada Federal, Provincial and Local Governments, 1926 through 2000 (Percent of Total Tax Revenues)

	Federal Tax Revenues	Provincial Tax Revenues	Local Tax Revenues	Canadian and Quebec Pension Plan Revenue
1926	49.5	15.3	35.2	0.0
1939	47.6	23.7	28.7	0.0
1946	76.6	13.0	10.4	0.0
1950	69.0	18.6	12.4	0.0
1960	64.8	18.2	17.0	0.0
1970	50.9	31.1	14.0	4.0
1980	48.3	36.0	11.8	3.9
1990	46.9	38.3	10.5	4.3
2000	47.3	37.5	8.6	6.6

Source: Karin Treff and David B. Perry, Finances of the Nation 2003 B:9 tbl. B.4 (2004), at http://www.ctf.ca/FN2003/finances2003.asp.

As in the U.S., the property tax remained the dominant source of revenue for local governments, with property tax receipts accounting for roughly 70 percent of revenue at 1950 and still today accounts for more than 40 percent.[58]

b. Developments in Latin America

Latin American countries experienced major economic and political changes over the late-19th and 20th centuries. Perhaps foremost among the changes was a sharp acceleration in economic growth that began during the 1870s and 1880s, spurred in large part from exogenous factors such as the expansion of international trade around the world and higher prices for commodities in which the region had a comparative advantage.

[58] Substantial variation exists among the provinces as to the percentage of total local government revenue from property and related taxes. 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. [hereinafter Treff and Perry 2003].

Although this boom in commodity prices was fueled by improvements in the technology and organization of international trade, as well as increases in demand for raw materials and foodstuffs from rapidly-industrializing Europe, producers of tradable goods in several Latin American countries, such as Mexico, benefited also from the relative decline of their silver-based currencies as compared to the gold standard. Where this latter development occurred, the surge in commodity output extended beyond agricultural produce (coffee, sugar, animal products, etc.) and natural resources (such as oil, copper, and other minerals) and encompassed industrial production (supported by imports of machinery from abroad) as well. Although their were interruptions in the ascent of their economies, and the records and rates of progress varied somewhat across countries, Latin America as a whole has grown at nearly the same rate as the United States since 1870, after a period of relative stagnation for roughly the previous century.[59]

With the onset of relatively sustained economic growth, Latin America imported an increasing volume of manufactured goods, including machinery as well as consumer goods ranging from textiles to luxuries (such as automobiles). The growth in trade resulted in increased revenue from tariffs (some of which had been raised to protect local industry) and from (to a lesser degree) export taxes, supporting an expansion of central governments in Latin America. In the more progressive and prosperous countries, such as Argentina, Chile, Costa Rica, and Uruguay, this was the beginning of significant national government support for public services such as schools, which local governments had conspicuously failed to do a good job at providing. In other generally less democratic (if not oligarchic) regimes such as Mexico, Venezuela and Peru, where military officers were not infrequently prominent in political affairs, the expanding central governments tended to focus more on building up the armed forces and domestic security. Such contrasts call

---

[59] For an overview of industrial development in Latin America over the late 19th and 20th centuries, see Stephen Haber, "Development Strategy or Endogenous Process: The Industrialization of Latin America," (Stanford: Stanford University working paper, 2005). For general histories of economic, political, and social changes in Latin America during the era see Tulio Halperin Donghi, The Contemporary History of Latin America, John Charles Chasteen ed. and trans. (Durham: Duke University Press 1993). [hereinafter Halperin Donghi 1993]; Rosemary Thorpe, Progress, Poverty and Exclusion—An Economic History of Latin America in the 20th Century (Baltimore: Johns Hopkins University Press 1998). [hereinafter Thorpe 1998]; Thomas E. Skidmore & Peter H. Smith, Modern Latin America (New York: Oxford University Press 2001). [hereinafter Skidmore and Smith 2001]; Victor Bulmer-Thomas, The Economic History of Latin America Since Independence (New York: Cambridge University Press 2003). [hereinafter Bulmer-Thomas 2003]; and Peter Bakewell, A History of Latin America (Malden: Blackwell 2004). [hereinafter Bakewell 2004]

attention to the slow pace of democratization in Latin America, and its implications for tax structures and government policies overall. As highlighted in Table 1 above, even the more progressive countries were not to achieve rates of participation in elections at all comparable to those in the U.S. and Canada until the second half of the 20th century. Given the persistence of extreme economic and political inequality in that region, it is perhaps not so surprising that it has been only in recent decades that substantial commitments to broad provision of quasi-public goods such as schools and other social welfare programs have materialized.[60] The same conditions may also help to understand the patterns of evolution of tax structures detailed below.

i. Changes in Size of Government Sector and Level of Taxation

The size of the government sector grew in Latin America over the 20th century, financed by a combination of increases in both tax and non-tax revenue.[61] The timing of this growth in the public sector was, however, very different from that in the U.S. or Canada. As is suggested from the figures on central government tax revenues as a percentage of GDP presented in Table 16 for a number of Latin American countries, the growth of Latin American governments was most pronounced from the 1970s through the 1990s – in contrast to their counterparts to the north that realized their advanced between the 1930s and 1950s.

[60] See David De Ferranti, Guillermo E. Perry, Francisco G. Ferreira, Michael Walton, et al, Inequality in Latin America and the Caribbean: Breaking With History? (Washington, D.C.: The World Bank 2004), especially chapters 2, 4, 7, 9, and 10.

[61] For example, Brazil, Chile, Ecuador, Mexico, Panama, and Venezuela have generally had substantial non-tax revenues to support government operations.

Table 16. Central Government Tax Revenues (Percent of GDP)

	1900	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000
Argentina	10	7	5	7	8	10	10	8	13	10	14
Bolivia							5	10	5	14	18
Brazil	10	11	9	8	10	7	7	10	10	24	23
Chile					9	11	17	16	32	21	24
Colombia					4	7	8	10	12	13	14
Costa Rica						10	12	14	18	23	21
Mexico	5	4		6	7	9	8	9	16	16	15
Peru						11	16	16	17	13	16
Uruguay									22	24	28
Venezuela			8	9	12	18	27	19	26	24	20

Sources: Latin American Centre, University of Oxford, Oxford Latin American Economic History Database (2005), available at http://oxlad.qeh.ox.ac.uk/; Joint Tax Program (OAS, IADB, ECLA), Fiscal Policy for Economic Growth in Latin America: Papers and Proceedings of a Conference Held in Santiago, Chile, December 1962 (1965): 172, Table 6-1; Bulmer-Thomas, V., The Economic History of Latin America Since Independence (Cambridge: Cambridge University Press 2003); Brazil Ministry of Finance; Mexico Ministry of Finance and Public Credit.

Another striking feature of the record in Latin America is the generally low aggregate tax burdens through the first half of the 20th century. Even accounting for the local and state governments omitted from this table, Latin American public sectors appear to have generally been only one-quarter to one-half as large, relative to GDP, as those in the U.S. and Canada during the 1930s and 1940s. It was not until the 1950s that aggregate tax burdens began to rise across Latin America, boosted by substantial increases, at least in several countries, in income tax revenues from both individuals and corporations. In contrast, what increases in tax revenues that were realized during the 1960s, 1970s, and 1980s were generated largely by greater collections from turnover taxes and the VAT. In a few countries (most notably Venezuela), taxes on petroleum or other natural resources provided substantial revenue to support a larger public sector.[62]

It is not surprising that Latin American countries have long had substantially lower levels of taxation than the U.S. and Canada, given the widespread recognition that government sectors are generally larger relative to their home economies in countries with higher per capita income. But the relative tax burdens of Latin American countries are

---

[62]For example, in Venezuela during the late 1950s, taxes on petroleum accounted for two-thirds of total tax revenue. Raynard M. Sommerfield, Tax Reform and the Alliance for Progress (Austin & London: University of Texas Press 1966) : 57.

also small relative to those in other developing countries.[63] For example, using estimates from the 1997 IMF Government Finance Statistics, we can compare the aggregate tax burdens for Latin American countries to those of other economies with similar levels of per capita income. Low-income developing countries (GDP per capita less than $1,000) are reported as having an average tax/GDP ratio of 12.1 percent, medium-income developing countries (GDP per capita between $1,000 and $5,000) a tax/GDP ratio of 17.1 percent, and high-income developing countries (GDP per capita greater than $5,000 and less than $20,000) a tax/GDP ratio of 25.6 percent.[64] With the possible exception of Uruguay, the aggregate tax burdens in Latin American countries are lower than the average for their respective income class of developing countries. [65]

If we compute the average tax burdens by region, we find that the aggregate tax burden for Africa is 19.8 percent (with an average GDP per capita of $2,605); the aggregate tax burden for Asia is 14.2 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

---

[63]Economic theory provides relatively little guidance as to optimal levels of taxation, but at least until some level of taxation, there is a positive correlation between per capita GDP and tax levels. Burgess and Stern 1993. For the poorer developing countries, Burgess and Stern find a stronger correlation between increasing GDP and levels of taxation than in either 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 (Baltimore: Johns Hopkins University Press 1997): table C-10.

[64] 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 and Zee 2000. 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).

[65] Nicaragua and Panama, countries not included in Table 16, also have aggregate tax burdens that roughly correspond to the averages for their respective GDP levels.

other regions, especially when one considers the relative GDP levels. While the per capita GDP in Africa is less than half the per capita GDP in Latin America, the aggregate tax burden in Africa is higher by more than 2 percent of GDP. Scholars have long noted that tax levels in Latin America lag behind other countries, and suggested that the lack of "tax handles" and technical factors that make it administratively difficult to collect taxes provide at least part of the explanation.[66] But the administrative difficulty of collecting taxes would seem likely to be less severe in present-day Latin America than in Africa, or in North America 100 years ago.

ii. Changes in the Relative Use of Different Tax Instruments

Looking at aggregate tax burdens tells only part of the story. In order to better appreciate how the structure of taxes have evolved in Latin America over the 20th century and the factors that contribute to those changes, it is necessary to examine the relative use of different tax instruments. Table 17 sets forth the changing contributions of different tax instruments for six Latin American countries over the period from 1900 to 1990.

---

[66]See Bird 2003; Shome 1999; and Stotsky and WoldeMariam 2002. 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. 94-39). 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.

Table 17. Historical Central Government Tax Revenue by Type of Tax (Percent of Total Tax Revenue)

	Argentina	Brazil	Chile	Colombia	Mexico	Venezuela
International Trade						
1900	49	54	88	--	42	61
1930	48	44	54	55	41	51
1960	3	11	19	29	24	15
1970	--	--	10	27	10	5
1990	8	3	15	10	7	9
Income - Total						
1900	3	--	1	--	--	--
1930	4	3	13	4	11	0
1960	48	32	34	45	30	33
1970	--	--	26	33	36	87
1990	12	25	16	41	31	82
Income - Individual						
1960	15	13	18	25	12	1
1970	--	--	--	16	--	--
1990	4	2	5	--	14	0
Income - Corporate						
1960	31	19	17	20	18	32
1970	--	--	--	18	--	--
1990	8	7	10	--	16	82
Domestic Goods & Services						
1900	--	12	--	--	--	--
1930	--	21	--	--	--	35
1960	--	53	25	15	24	24
1970	--	--	44	16	36	3
1990	37	21	55	49	36	2

Sources: V. Bulmer-Thomas, The Economic History of Latin America Since Independence (Cambridge: Cambridge University Press 2003) Table 6.6 from Council of Foreign Bondholders (1931); League of Nations (1938); R. Burgess & N. Stern, "Taxation and Development," Journal of Economic Literature 31 (1993): 762, tbl. 2; International Monetary Fund, Government Financial Statistics (2004); Joint Tax Program (OAS, IADB, ECLA), Fiscal Policy for Economic Growth in Latin America: Papers and Proceedings of a Conference Held in Santiago, Chile, December 1962 (1965): 50, table 2-2; R. Musgrave & M. Gillis, Fiscal Reform for Colombia: Final Report and Staff Papers of the Colombian Commission on Tax Reform (1971): 271-73, Tables 3-5; Latin American Centre, University of Oxford, Oxford Latin American Economic History Database (2005); Problems of Tax Administration in Latin America: Papers and Proceedings of a Conference held in Buenos Aires, Argentina (1961): 60 Table 2-; Raynard M. Sommerfeld, Tax Reform and the Alliance for Progress (Austin: Published for the Institute of Latin American Studies by the University of Texas Press 1966): 56, table 5; Wayne Thirsk ed., Tax Reform in Developing Countries (Washington D.C.: World Bank 1997): 289, Table 7.1; Rosemary Thorp, Poverty and Exclusion (1998):346, Tables VII.1-2.

Table 17 highlights three major trends in Latin American taxation: first, the decline in reliance on trade taxes to fund government operations; second, the rise and fall of income taxes in relative to other tax instruments; and third, the increased reliance on domestic consumption taxes. During the first decades of the 20th century, Latin American

countries continued to rely heavily on customs revenue, with tariffs set both to raise central government revenue as well as to protect influential economic interests (including local industry and workers generally) from foreign competition.[67] In 1930, taxes on international trade (primarily tariffs but some taxes on exports) accounted for: 44 percent of central government revenue in Brazil; 48 percent in Argentina; 54 percent in Chile; 55 percent in Colombia; 41 percent in Mexico; and 51 percent in Venezuela. The importance of these taxes on international trade decreased dramatically over the second half of the century, and especially over the last decades with the worldwide movement to open economies to foreign trade and investment. For a short interval, during the 1950s, 1960s, and 1970s, income taxes replaced tariffs as the major source of revenue, but taxes on domestic goods and services (particularly the VAT) have assumed the dominant role in recent decades.

Table 18 allows for a comparison of the current sources of tax revenue to the central governments in Latin American with those in the U.S. and Canada. Several patterns, all reflecting the much greater importance of indirect taxation in Latin America, stand out. First, countries in Central America and South America, still rely on trade taxes for a significant portion of their central government revenue. Employing an unweighted average, taxes on foreign trade account for roughly 11 percent of total tax revenue in Latin America.[68] In contrast, the figure is less than 1 percent in the U.S. and Canada. Second, North American and Latin American countries also differ in their relative use of excise taxes. Moreover, granted that excise taxes can in principle be regressive (when they apply to goods such as tobacco, alcohol, soft drinks, and petroleum) or progressive (when they apply to airline tickets or motor vehicles), and that they vary significantly in significance across countries, but it is striking that nearly everywhere in Latin America the revenues from them exceed individual income tax revenues, often by many multiples, and that the share of total revenues they account for is markedly higher than in the U.S. or Canada.[69]

---

[67] Haber 2005 and Bulmer-Thomas 2003.

[68] The vast majority of the tax revenues are collected from taxes on imports. Only in Costa Rica do export taxes constitute a significant part of total trade taxes (1.3% of total tax revenue).

[69]Stotsky and WoldeMariam 2002: table 7. Today, revenues from excise taxes account for over 20 percent of total tax revenues in Bolivia, the Dominican Republic, and Nicaragua but less than 5 percent in Colombia and Mexico. 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

Table 18. Current Central Government Tax Revenue by Type of Tax

(% of Total Tax Revenue)

	Income Tax				Domestic Tax on Goods & Services		Taxes on Int'l		
Country	Total	Corporate	Individual	Property	Total	Excises	Trade & Trans.	Social Security	Other Taxes
United States	59	10	50	1	3	3	1	35	0
Canada	58	12	43	0	18	4	1	23	0
Argentina	19	13	6	4	45	15	6	27	0
Bolivia	9	9	0	10	58	22	7	13	3
Brazil	24	--	--	0	26	9	3	41	5
Chile	23	--	--	0	57	12	7	8	5
Colombia	41	39	2	3	46	4	10		0
Costa Rica	15	13	1	1	45	11	6	33	0
Domincan Republic	21	9	12	1	35	31	38	4	1
Mexico	38	--	--	0	30	3	4	24	3
Nicaragua	14	--	--	0	59	24	9	18	0
Panama	27	--	--	2	16	8	15	35	4
Paraguay	19	19	0	0	59	16	18	0	4
Peru	23	13	10	0	56	13	10	8	4
Uruguay	16	9	7	6	42	12	4	30	3
Venezuela	30	29	2	8	44	8	12	6	1

Sources: International Monetary Fund, Government Finance Statistics (2004); Mexico Ministry of Finance and Public Credit; Colombia Ministry of Finance.

Notes: Average for tax years 1998-2002, for all available data. For Brazil, 1998 data only. For Panama, 2001 data only. For Paraguay, budgeted tax revenue only. In some cases, rounding causes the sum of component shares to appear to exceed or fall below aggregate shares.

Finally, the stark contrast in the relative use of general consumption taxes, such as those on retail sales or on value-added ("VATs") provides another powerful illustration of how Latin American countries are more inclined toward indirect taxation. The central governments in the U.S. and Canada today raise only 11 percent of their tax revenues from such taxes (3 percent in the U.S. and 18 percent in Canada), as compared to 49 percent in Latin America.[70] As is well known, the introduction and diffusion of the VAT over the

revenues in the U.S. and Canada. In the early 1980s, only in Chile, Colombia, and Mexico did individual income tax revenues exceed excise tax revenues. Also 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).

[70] The results set forth above are similar to the findings of Stotsky and WoldeMariam 2002: 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. It should be pointed out that the reliance of Latin American countries on general consumption taxes has substantially increased over the last 30 years.

second half of the 20th century changed the tax landscape throughout the world (with the notable exception of the United States).[71] Latin American countries were among the leaders in replacing an inefficient collection of turnover taxes with VATs.[72] From a political economy perspective the relative success of the VATs came along at a very good time. It allowed many Latin American countries to increase tax revenues without substantial reliance on income taxes.[73] Over the last decade, the VAT also allowed governments to reduce reliance on trade taxes without sacrificing revenue.[74]

The other side of the lower reliance of the U.S. and Canada on indirect taxes is the importance of income tax revenues, which account for about 59 percent of total tax revenues in these countries. Income taxes play only a small part in Latin American, bringing in about 23 percent of total tax revenues (down from a peak in the 1960s).[75] Revenues from income taxes in North America come primarily from individual income taxes. In contrast, corporate tax revenues contribute the vast majority of income tax revenues in Latin America. Table 19 presents an aggregate (across countries) for the two regions over the period from 1975 through 2002. Here it is evident that although corporate tax revenues have remained relatively stable (as a share of the total) over the last

---

[71]Liam P. Ebrill et al., The Modern VAT (Washington D.C.: International Monetary Fund 2001).

[72] 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.

[73]It 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. Because developing countries have had little success in using tax and spending policies to reduce regressivity, these 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," Economic Development & Cultural Change 37 (January 1989): 393. If the concern is on increasing progressivity in the tax system, countries can try 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.

[74] Michael Keen & Jenny E. Ligthart, "Coordinating Tariff Reduction and Domestic Tax Reform," (International Monetary Fund Working Paper No. 99-93).

[75] 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%).

several decades, individual income tax revenues fell off dramatically. For the period 1996 through 2002, corporate tax revenues averaged about 19 percent of total tax revenue for central governments and individual income tax revenues only about 6 percent.[76] As further evidence of the lack of convergence, individual income tax revenues were about four times corporate tax revenues in both the U.S. and Canada.[77]

---

[76] Much variation exists 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 tax revenue is received from state-owned enterprises, then the tax can be viewed as transfer payments within the government, with no distributional impact. Anwar Shah & John Whalley, "The Redistributive Impact of Tax Policy for Developing Countries," in Tax Policy in Developing Countries, Javad Khalilzadeh-Shirzai & Anwar Shah eds. (Washington D.C.: World Bank 1991): 166-87. 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 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," Journal of Political Economy 76 (June 1962): 215-40. 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 (Washington D.C.: American Council for Capital Formation Center for Policy Research 1995). 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. Arnold C. Harberger, "Reflections on Distributional Considerations and the Public Finances," in Practical Issues of Tax Policy in Developing Countries (Washington D.C.: World Bank 2002).

[77] Currently, US individual tax revenues are 50% of total tax revenues and corporate tax revenues are less than 10%. In Canada, individual income tax revenues are 43% and corporate tax revenues are 13%. 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 1996.

Table 19. Central Government Tax Structure by Region, 1975-2002 (Percent of Total Tax Revenue)

	Income Tax			Domestic Goods and Services			
	Total	Individual	Corporate	Total	General Consumption	Excises	International Trade
US and Canada							
1975-1980	78%	57%	21%	15%	8%	7%	7%
1986-1992	79%	64%	15%	17%	10%	7%	4%
1996-2002	83%	67%	16%	15%	9%	6%	2%
Latin America							
1975-1980	32%	13%	19%	42%	19%	19%	26%
1986-1992	29%	10%	19%	45%	24%	19%	26%
1996-2002	25%	6%	19%	59%	40%	17%	16%

Sources: International Monetary Fund, Government Finance Statistics (2004); Shome Parthasarathi, ed., Tax Policy Handbook (IMF 1995), tbls. 1-30; Mexico Ministry of Finance and Public Credit.

Notes: To maintain consistency of measurement and to allow cross-country comparisons between tax structures, the table reflects consolidated central government revenue for most countries. However, if these data were unavailable, national budget data, or some combination of national, state, and local revenues were used. To even out annual fluctuations, the figures are averaged over 1975-1980, 1986-1992, and 1996-2002.

It is to be expected that low-income countries employ different types of taxes than do high-income countries, but Latin American societies stand out somewhat even relative to other economies at similar levels of development. Table 20 presents a summary of the relative use of different tax instruments with different income levels, measured by per capita GDP. First, consider general taxes on domestic goods and services as well as excise taxes. As discussed above, Latin American countries rely on these taxes for about 57 percent of their total tax revenue.[78] This is generally higher than in their counterparts in the same range of per capita income. Most Latin American countries would be considered

[78] The statistics in Table 18 are roughly comparable to the summary findings presented by Tanzi and Zee 2000. 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. Tanzi and Zee 2000. 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.

richer developing countries (per capita income of between $5,000-20,000), and the average for that class is 46 percent.[79]

Table 20. Relative Use of Different Tax Instruments by Central Governments, by Income Level

	1990-1995 GDP Estimates				
	150-500	**500-5,000**	**5,000-20,000**	**>20,000**	**TOTAL**
Tax Revenue as Percent of Total Revenue	84%	87%	87%	87%	87%
Tax Revenue	100%	100%	100%	100%	100%
Individual and Corporate Tax	23%	21%	35%	33%	26%
Corporate tax	11%	11%	13%	8%	10%
Individual Income Tax	12%	10%	22%	25%	16%
Taxes on Property	3%	1%	2%	3%	2%
Dom Tax on Goods & Services	43%	45%	34%	32%	39%
Excises	17%	13%	12%	9%	12%
Taxes on Intern Trade & Trans	21%	10%	9%	1%	9%
Import Duties	20%	9%	9%	1%	9%
Social Security	11%	23%	20%	30%	24%

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

The most salient distinction of Latin American countries relative to others at similar levels of development is again in the use of income taxes, especially individual income taxes. On average, Latin American countries raise about 25 percent of total tax revenues from income taxes, with about 19 percent from corporate tax revenues and about 6 percent from individual income tax revenues. In contrast, the richer developing

[79] A few Latin American countries, such as Bolivia and Paraguay, belong in the middle-income group (with per capita income between $500 and $5000), but their reliance on domestic taxes on goods and services as well as excises (58 and 59 percent respectively) is roughly equal to the average for this category (58 percent).

countries overall raise about 36 percent of tax revenues from income taxes (13% from corporate and 22% from individual income tax revenues). Not only is the reliance on income taxes less than what would be expected from societies at their level, but Latin American countries are also differ in focusing more on taxing the income of corporations and less on taxing individuals.[80]

So what explains the relatively small role played by individual income taxes in Latin America? There are at least several factors that 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 population, and provide a substantial "tax-free" amount to those few taxpayers left in the individual income tax system.[81] These high tax thresholds explain why the population subject to income tax is typically much greater in the U.S. 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 U.S. and Canada, but generally less than 10 percent across Latin America.[82]

Another factor is that although the Latin American countries started reducing their top marginal rates under the individual income tax systems later than the U.S., Canada, and the European countries did, several Latin American countries have been more

---

[80] It may also be useful to compare the relative use of tax instruments by Latin American countries to choices made by governments in developing countries in other parts of the world. Perhaps the most interesting comparisons are between developing countries in Africa and in Latin America. As compared to Latin America, African countries rely more on income taxes (28--14% from corporate and 14% from individual income tax revenues) and taxes on international tax (31%) and less on domestic taxes on goods and services (22%), excise taxes (11%), and social security taxes (5%). Again, what is striking is the relative use of individual income taxes. Whereas African countries raise 14 percent of total tax revenues from individual income taxes, Latin American countries raise only about 6 percent. For the period between 1996 and 2002, developing countries in Asia raised on average about 37% of total tax revenue from income taxes (16% from individual income taxes and 21% from corporate income taxes), 45% from general consumption and excise taxes, and 14% from trade taxes. IMF 2004 electronic version.

[81] 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 and WoldeMariam 2002: table 11.

[82]Ved P. Gandhi, Supply-Side Tax Policy: Its Relevance to Developing Countries (Washington D.C.: International Monetary Fund 1987): 361, table A6.

aggressive in reducing the top marginal income tax rates.[83] It is also likely that the Latin American tax systems provide more generous personal deductions and exemptions than the North American and European tax systems.[84] Third, Latin American tax systems are not very effective at taxing income in agriculture or in the informal sector. 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.[85]

Finally, Latin American countries do not effectively tax income from capital, partially through statutory design and partially through ineffective enforcement efforts.[86] Moreover, a substantial percentage of portfolio investments from Latin American individuals and corporations are held in U.S. and European investments, where they likely escape both source and residence based taxation.[87] The size of outbound investment flows and their increase over the last few decades suggests that imposing substantial tax rates on income from domestic capital sources might increase capital flight without much increase in tax revenue[88]

---

[83]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%).

[84]Shome 1999.

[85] 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 1998: table 7.3.

[86]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.

[87]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, 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," Inter-American Law Review 20 (Spring 1989) and Manuel Pastor, Jr., "Capital Flight from Latin America," World Development 18 (January 1990): 1.

[88]Failure to tax income from capital disproportionately benefits the wealthy. As in many developing countries, the top quintile of the population receives between 70-95% of capital income, profits, and rents. 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

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 results in 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.[89]

Given that the individual income tax is the major tax instrument with the greatest potential today for redistribution, its small role would seem to support the conclusion that Latin American tax institutions continue in their long tradition of lack of progressivity. Why is this so? Could it be different? 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 across regions or time periods must be done with caution. 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 how much intrinsic value taxpayers place on compliance. But even if Latin American countries now face fewer administrative challenges to taxing income or wealth than the North American countries did in the 19th century, the obstacles to adopting progressive tax structures may be quite formidable.

First, it is difficult for countries with extreme inequality to raise adequate revenue from individual income taxes 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. In a society with extreme inequality, even if one could

---

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).

[89]Determining the progressivity of these taxes requires some assumptions about 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 (likely 85-95% of total revenues), the individual income tax appears to fall primarily on workers in the formal sector. 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.

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.[90] The smaller the number of truly 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

---

[90]Best 1976. 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.

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," Journal of Developmental Studies 59 (1999): 55. [hereinafter Engel et al. 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). Engel et al. 1999. 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 and the less redistributive effect from a progressive individual income tax system. Engel et al. 1999. 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.

equity gain from redistribution relative to efficiency losses should generally be greater the greater the dispersion of income distribution.[91]

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.[92] The ability of entrepreneurs and workers to evade taxes by negotiating informal arrangements limits the options available to tax authorities. Second, high income tax rates (both individual and corporate tax rates) may influence decisions to operate in the formal or informal economy. 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 U.S. tax law providing for no U.S. taxation of portfolio interest, also increased the attractiveness for Latin Americans investing in U.S. government and corporate securities.[93]

---

[91] Slemrod and Bakija 2001.

[92] Friedrich Schneider & Dominik Enste, The Shadow Economy—An International Survey (New York: Cambridge University Press 2002).

[93] 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 International 347 (July 28, 2003); Dennis Cox, "Raising Revenue in the Underground Economy," National Tax Journal 37 (September 1984): 283-288. 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, Taxpayer Compliance: An Agenda for Research (Philadelphia: University of Pennsylvania Press 1989): 1. 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 (Amsterdam: Kluwer 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.

iii. Relative Size of Different Levels of Government

As discussed in part III, perhaps the most distinctive feature of Latin American government structures during the 19th century was the high degree of centralization. Local governments in Latin America were quite small by the standards of North American countries. What accounts for this pattern? Some have suggested that the explanations can be found in the pre-Columbia or colonial histories of Latin American societies. In colonial times the Spanish and Portuguese adopted highly centralized systems of imperial administration for their Latin American colonies.[94] Even in pre-Columbian times, the Aztecs and the Incas ruled large portions of Latin America under centralized control. Others argue that even after independence from the Spanish and the Portuguese, strong centralized governments may have been required in these societies to keep conflicts among local factions from fragmenting the new nations.[95] Moreover, just as constitutional restrictions influenced the development of state and local governments in the U.S., the initial constitutional provisions and subsequent constitutional amendments may have influenced the allocation of political and fiscal authority in Latin American countries.[96]

Although there may be some power to these explanations, proponents of these views often ignore the problems with them. Spanish and Portuguese authorities during colonial times did allow for local and provincial government structures, often with elected representatives. And after their colonies gained independence, their constitutions typically allowed local and provincial governments independent taxing authority, and even charged

[94]Halperin Donghi 1993: 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.

[95] Moritz Kraemer, "Intergovernmental Transfers and Political Representation: Empirical Evidence from Argentina, Brazil and Mexico," (Inter-American Development Bank Working Paper No. 97-345): 2.

[96] 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.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 Duran, Fiscal Federalism in Latin America: From Entitlements to Markets (Washington D.C.: Inter-America Development Bank 2003): 55. [hereinafter Wiesner 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. Wiesner 2003: 55-56.

them with responsibilities for public services such as providing schooling. One indication of the deficiency of the explanations based on differences in constitutions is that even in the federal Latin American countries, provincial and local governments in Latin America have always been much smaller than in North America.

In recent decades there has been increased awareness in Latin America of the possible implications of stunted local governments, especially for the provision of public services. This has led to a wave of policies across the region that are aimed at transferring more resources from the central government to local governments. Table 22 presents estimates for five Latin American countries of the distributions of tax revenues and expenditures across levels of government, before and after the "first generation" of decentralization that began in the early 1980s.[97] Substantial variation in the size of local and provincial governments is evident, 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 sub-national governments.[98] Nevertheless, sub-national governments are quite modest throughout the region as compared to their counterparts in the U.S. and especially Canada. The 19th century pattern endures, whether gauged by tax revenues or expenditures.

---

[97] See Wiesner 2003: 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. Wiesner 2003: 12.

[98] Eliza Wills, Christopher da C.B. Garman and Stephan Haggard, "The Politics of Decentralization in Latin America," Latin American Research Review 34 (1995): 1, review decentralization in Argentina, Brazil, Colombia, Mexico, and Venezuela examining the influence that central government has over 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.

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

	Share of Total Government Tax Revenue Collected by Level of Government (%)		Share of Total Government Expenditure by Level of Government (%)	
Country	**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
Columbia[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 (Washington, D.C.: Inter-American Development Bank, 1995): 22, 25, 33. For Brazil, Anwar Shah, The New Fiscal Federalism in Brazil (Washington D.C.: World Bank 1991): 15. 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.

We have argued that the differences observed in the relative size of local and provincial governments have historically mattered, both because the local, provincial (state), and central governments typically vary systematically with respect to the types of taxies they levy to finance their operations. We also, suggested, however, that the stunted character of local government in Latin America mattered because local authorities are better suited for the provision of crucial public services such as public schooling or

investments designed to deal with location-specific conditions. The small local governments in many Latin American countries may, in our view, have been associated with underinvestment (or under-provision) in public or quasi-public goods and services conducive to growth. At least on the expenditure side, sub-national governments in Latin America have grown substantially over the last 10 to 15 years, and one might expect this to have lead to an increase in spending on public goods and services. Table 23 compares sub-national expenditures in the U.S. and Canada with those in several Latin American countries for the years 1990 and 2000. The figures suggest that as expenditures by sub-national governments in Latin America as a percentage of total spending more than doubled, government expenditures on such goods and services as a percentage of GDP have indeed increased from 10 percent to 13 percent in Latin America.

Table 23. Local Government and Social Expenditures, 1990 and 2000

	Sub-National Total Expenditures		Social Total Public Expenditures		Social Public GDP	
	199	200	199	200	199	200
Canad	55	58	66	66	38	33
United	42	48	66	66	24	24
North	*49*	*53*	*66*	*66*	*31*	*29*
Argentin	41	40	62	64	18	21
Bolivi	12	23	49	57	12	16
Brazi	31	40	49	60	18	21
Chil	6	7	61	67	13	16
Colombi		27	29	36	8	15
Costa	3	3	39	43	16	17
Dominican	3		38	40	4	7
El			21	27	3	4
Guatemal	6		30	46	3	6
Hondura			37	34	8	7
Mexic	15	32	41	59	7	9
Nicaragu	3		35	37	11	13
Panam	2		40	39	19	19
Paragua	1		40	46	3	7
Per	7	18	31	38	3	7
Urugua			62	73	17	23
Venezuel			34	37	9	9
Latin	*11*	*24*	*41*	*4*	*10*	*13*

Sources: International Monetary Fund, Global Financial Statistics; U.S. Bureau of Economic Analysis; Statistics Canada; World Bank.

Notes: Regional estimates are arithmetic averages.

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 U.S. and Canada than in Latin America countries. Second, general consumption tax revenues as a total of tax revenue (and as a percentage of GDP) are substantially higher, and income tax revenues (especially individual income tax revenues) are substantially lower, in Latin American countries than in the U.S. and Canada. 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

In this paper we have begun to explore how the extreme inequality that came to characterize nearly all Latin American countries during their colonial periods may have influenced how their tax institutions evolved. We seek to understand why the tax structures of Latin American countries are so distinctive today, even relative to other developing countries with roughly similar per capita incomes, and why their national governments have historically been so dominant and their local governments stunted. One traditional explanation for the types of tax regimes adopted by Latin American countries highlights technical or resource constraints. Developing countries have a much more limited administrative capacity to collect income and other complex taxes involving the monitoring of individuals than developed countries. The existence of large informal service and agricultural sectors further complicates the task of tax design and enforcement. Thus, it is not surprising that Latin American and other developing countries focus more on revenue sources such as taxes on trade, taxes imposed on foreign corporations, and general consumption and excise taxes.

That being said, our examination suggests that the government and tax structures of the Latin American societies had already diverged from those in the U.S. and Canada by, if not before, the middle of the 19th century -- not long after attaining independence and before there were substantial differences in per capita income. Although the causal mechanisms remain to be explored, we emphasize the striking parallels between how the institutions of taxation evolved across the hemisphere and how other fundamental social and economic institutions evolved (such as those involving suffrage, education, and ownership of land). In Latin America, where a substantial gap existed and persisted in the economic circumstances and political influence between elites and the bulk of the population, these institutions tended to develop along paths that greatly advantaged those elites. Control over voting rules assured elites greatly disproportionate political representation. Very modest commitments to public investments, such as schooling, kept taxes low and competition in the labor markets for individuals from good backgrounds limited. Land policies kept land ownership in the hands of a relative few. Where government services were provided, funds were raised primarily through means other than direct taxation of income, wealth or property.

This path of institutional development was radically different from those followed by the relatively homogenous Canada and the United States. Although there may be other explanations for these patterns, 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 the nature and size of different levels of government and the relative use of different tax instruments, (if not the types and scale of government expenditure programs as well). As we have shown, there were no major differences during the 19th century in how national governments chose to raise their revenue. The United States, Canada, and Latin American countries all relied overwhelmingly on customs duties, other levies on foreign trade, and excise taxes. However, the U.S. and Canada were quite unlike their Latin American counterparts in financing local governments whose programs (generally public schools, roads, water and sanitation projects, other public health measures, etc.) were so extensive that they rivaled or exceeded their respective central government in resources consumed and services rendered. The funding for these substantial local governments came overwhelmingly from taxes on property, wealth and income. State and local governments were successful in

raising revenue through such instruments primarily because the large share of 19th century wealth held in land, but it is telling that Latin American societies did not experience the same growth of local governments. Given that the record in Canada and the U.S., where local governments funded primarily by property taxes trace back to the 17th and 18th centuries, it appears very difficult to argue that the Latin American policies were dictated by technical or resource constraints on their ability to administer such taxes.

Latin American countries continue to have the highest rates of income inequality in the world. They still have relatively low aggregate tax burdens and generally rely on taxes on consumption, rather than on taxes on individual income, wealth, or property. Likewise, the central governments are still more dominant, relative to state and local authorities, than they are in the U.S., Canada, and other regions of the world. It is not clear whether the persistence in the character of tax institutions and government structures can be attributed to the same factors and processes that operated during the 19th century. Much has changed in Latin America over the 20th century. The progress in broadening the distribution of political influence (democratization), for example, would lead one to expect the relative influence of elites on the design of institutions should be diminished and the demand for certain types of government programs should be increased. Even with political changes, however, it is difficult to design progressive tax structures in societies marked by great inequality. In addition, in recent years, the range of options available to government tax authorities has narrowed as economies have become more open and capital more mobile. While changes in Latin America over the last 10-15 years have increased expenditures on social programs and, often, increased the resources available to local governments to fund those programs, the changes on the tax side have been less dramatic. Perhaps, future political and economics developments will change the patterns of taxation in Latin America. In looking at the current structures, however, the evidence suggests that the long history of extreme inequality in Latin America is central to understanding the distinctive set of tax institutions that have evolved in Latin America.