Inequality and Taxation: Evidence from the Americas on How Inequality May Influence Tax Institutions

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I. Introduction

When tax scholars explore how taxation influences inequality, they 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.[1] In this Article, we take a different approach.[2] We examine how inequality may influence the design and implementation of tax systems. We are concerned with how and why institutions of taxation differ across and within countries, and how they evolve over time.

Tax systems are among the oldest and most fundamental of institutions. They provide a wonderful window on the organization of a society. Taxes are necessary to raise revenue for public goods and infrastructure, as well as to provide other sorts of public services con-

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1 See, e.g., Lynn A. Karoly, Trends in Income Inequality: The Impact of, and Implications for, Tax Policy, in Tax Progressivity and Income Inequality 95 (Joel Slemrod ed., 1994); Thomas Piketty & Emmanuel Saez, Income Inequality in the United States, 1913-1998, 118 Q.J. Econ. 1 (2003); Joel Slemrod & Jon M. Bakija, Growing Inequality and Decreased Tax Progressivity, in Inequality and Tax Policy 192 (Kevin A. Hassett & R. Glenn Hubbard eds., 2001).

2 This article draws from another paper in our long-term project on evaluating the evolution of public finance systems across the Americas. See Kenneth L. Sokoloff & Eric M. Zolt, Inequality and the Evolution of Institutions of Taxation in the Americas, in Growth, Institutions and Crises: Latin America from a Historic Perspective (Sebastian Edwards, Gerardo Esquivel & Graciela Marquez eds., forthcoming 2007).

ducive to general welfare and economic growth. How governments raise revenue also 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. Such adjustments often can 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. 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, also may influence the organization of economic activities, such as whether firms operate in the formal or informal sector or whether firms enter into formal employment arrangements with workers.

Second, the tax system helps determine how much of the costs of publicly provided goods and services are borne by different segments of the population. The incidence of taxes affects both the distribution of disposable income across the population as well as the constellation of political support for various public projects. Individuals will be more willing to support government programs if they expect that the benefits they, or their peer groups, will realize from the higher level of expenditures will roughly match or exceed the corresponding increase in their tax liabilities.[3]

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 also may influence the structure of government, as well as the extent and direction of government activities.[4]

[3] Recent studies of quite distinct settings yield 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. See, e.g., Alberto Alesina, Reza Baqir & William Easterly, Public Goods and Ethnic Divisions, 114 Q.J. Econ. 1243 (1999); Latika Chaudhary, Social Divisions and Public Goods Provision: Evidence from Colonial India (Nov. 2005) (unpublished paper, UCLA), available at http://latikac.bol.ucla.edu/Social_Divisions.pdf.

[4] For example, it often is suggested that developing countries rely on consumption taxes and trade taxes because they lack the administrative capacity to implement taxes on property or income effectively or comprehensively. E.g., Vito Tanzi & Howell H. Zee, Tax Policy for Emerging Markets: Developing Countries, 53 Nat'l Tax J. 299 (2000). To the extent that local governments are more dependent on taxes on income or property than

To examine how inequality may help explain how and why institutions of taxation differ across countries, we focus on the tax systems of North and Latin America over the 19th and 20th centuries. Our interest in these experiences has two principal sources. First, although the region has the most extreme inequality in the world, the tax structures of Latin America generally are recognized as among the most regressive, even by developing country standards.[5] 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 understand better both the long-term development of the region as well as the processes of institutional formation and change more generally.

Second, as social scientists have come to appreciate, the colonization and development of the Americas constitutes 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 good opportunity to study the sources of systematic patterns in the evolution of tax systems.

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

other levels of government, such societies also might be expected to have relatively small local governments and low levels of public investments and expenditure programs (that is, schools or local roads) whose benefits accrue primarily to local residents.

[5] For estimates of income inequality in Latin America, see Klaus Deininger & Lyn Squire, A New Data Set Measuring Income Inequality, 10 World Bank Econ. Rev. 565 (1996). For a discussion of the regressivity of tax systems in Latin America, see Richard M. Bird, Taxation in Latin America: Reflections on Sustainability and the Balance between Equity and Efficiency (Rotman Sch. of Mgmt., Univ. of Toronto, Int'l Tax Program Paper No. 0306, 2003), available at http://www.rotman.utoronto.ca/iib/ITP0306.pdf; Ke-young Chu, Hamid Davoodi & Sanjeev Gupta, Income Distribution and Tax and Government Social Spending Policies in Developing Countries (Int'l Monetary Fund, Working Paper No. 00/62, 2000), available at http://www.imf.org/external/pubs/ft/wp/2000/wp0062.pdf.

evolved across the Americas.[6] The earlier work on inequality explored how a number of mediating mechanisms ("paths of institutional development") may have contributed to poor economic outcomes through its impact on the evolution of fundamental policies influencing access to suffrage, schooling, and land, but that earlier work did not look at tax policy (or at the level and type of government expenditures). The purpose of this Article is to examine whether the extreme differences in inequality that were present across the economies of the Americas soon after colonization also affected the ways tax institutions evolved.

We argue that they did. Although other explanations may exist for some of the patterns we lay out, the evidence seems consistent with our hypothesis that differences in the extent of inequality across these societies contributed to the different political decisions they made regarding tax and expenditure policies. In general, we found that no major differences existed in the tax instruments used by national governments to raise their revenue during the 19th century. The United States, Canada, and the Latin American countries all relied overwhelmingly on customs duties, other tax levies on foreign trade, and excise taxes to fund government operations. During this period, however, state and local governments in the United States and Canada successfully taxed wealth, generally in the form of property and inheritance taxes, and income, generally in the form of business taxes. These taxes, as a percentage of total central and local tax revenues, were quite substantial. Indeed, as late as the first part of the 20th century, property taxes were more than one-half of total tax revenues in the United States.[7] Tapping these progressive (as least as conventionally understood) sources of government revenue, state and local governments in the United States and Canada, even before independence, began directing substantial resources toward public schools, improvements in infrastructure involving transportation and health, and other social programs. Although it is difficult to establish a clear causal relationship, it seems likely that such investments were broadly progressive and enhanced mobility for low income individuals.

[6] See, e.g., Stanley L. Engerman & Kenneth L. Sokoloff, Factor Endowments, Inequality, and Paths of Development Among New World Economies, 3 Economia 41 (2002); see also Daron Acemoglu, Simon Johnson & James A. Robinson, Reversal of Fortune: Geography and Institutions in the Making of the Modern World Income Distribution, 117 Q.J. Econ. 1231 (2002); Daron Acemoglu, Simon Johnson & James A. Robinson, The Colonial Origins of Comparative Development: An Empirical Investigation, 91 Am. Econ. Rev. 1369 (2001); Douglass C. North, Institutions, Economic Growth and Freedom: An Historical Introduction, in Freedom, Democracy and Economic Welfare (Michael A. Walker ed., 1988).

[7] See Table 6.3.

Very few local or state governments in Latin America took such a path. Although other explanations might be offered, we contend that the extreme inequality in wealth, human capital, or political influence characteristic of nearly all of the countries in the region was largely responsible for the reluctance of Latin American local governments to act as their counterparts to the north did. At a purely political level, extreme inequality can result in elites minimizing their relative tax burdens by either controlling the legislative process in the design of tax structures and specific tax instruments, or by controlling the administrative process to allow tax evasion to continue unabated.[8] Inequality also can influence the demand or constituency for certain publicly-provided goods and services. With a very skewed distribution of wealth or income, elites would bear most of any tax burden, especially taxes levied on wealth or income, and realize a smaller than proportionate benefit, especially because they could procure for themselves and their families many of the same goods and services privately.[9] The lack of a substantial middle class also may decrease the demand for certain social programs and the tax revenues to fund them.[10]

These patterns persisted, moreover, well into the 20th century—indeed up to the present day (though somewhat moderated). Only in the last few decades have Latin American governments begun either to raise sufficient revenue to fund substantial government programs beyond the military or industrial-policy type programs that long dominated their budgets or to extend taxing and spending authority to subnational governments.[11] 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 levels of inequality in Latin America encouraged less than progressive tax and expenditure policies that likely contributed to the persistence of high levels of inequality. It may be the gift that keeps on giving.

Interestingly, the same pattern of inequality and size of local governments that exists between North America and Latin America also may exist within the respective regions and countries. Thus, for exam-

[8] For a discussion of political influence in the design of tax systems in Central America, see Michael H. Best, Political Power and Tax Revenues in Central America, 3 J. Dev. Econ. 49 (1976); see generally Thomas J. Reese, The Politics of Taxation (1980).

[9] 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 (1970).

[10] Branko Milanovic & Shlomo Yitzhaki, Decomposing World Income Distribution: Does the World Have a Middle Class?, 48 Rev. Income & Wealth 155 (2002).

[11] See David de Ferranti, Guillermo E. Perry, Francisco H.G. Ferreira & Michael Walton, Inequality in Latin America: Breaking with History? (2004).

ple, in the United States, states with higher levels of inequality generally have smaller local governments with lower expenditures on social programs.[12]

We proceed as follows. Section II sets forth a brief history of the emergence of extreme differences in inequality across the Americas not long after Europeans began to colonize the hemisphere. Section III examines the tax systems in Latin America and North America in the 19th century. Section IV examines tax structures in the 20th century. Section V offers some tentative conclusions of how inequality may influence tax design and expenditure policy.

II. Differences in Inequality Across the Americas

Our study builds on recent scholarship that highlights radical differences in the extent of inequality across New World societies that were present early on in the histories of the colonies established by the Europeans.[13] Scholars attribute these differences primarily to the respective 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).[14]

Scholars increasingly seem to accept that whereas the great majority of colonies in the Americas were characterized early on by substantial inequality, the circumstances in the colonies that became 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.[15] In explaining the logic and empirical

[12] Kenneth L. Sokoloff & Eric M. Zolt, Inequality and the Size of Local and State Governments in the United States (unpublished manuscript on file with authors).

[13] Engerman & Sokoloff, note 6. R

[14] Id.

[15] See, e.g., David W. Galenson, The Settlement and Growth of the Colonies: Population, Labor, and Economic Development, in 1 The Cambridge Economic History of the United States: The Colonial Era 135, 135-207 (Stanley L. Engerman & Robert E. Gallman eds., 1996); see also Philip D. Curtin, The Rise and Fall of the Plantation Complex (2d ed. 1998).

basis for this theory, it is convenient to distinguish between three types of New World colonies. The 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, large slave plantations and their populations by slaves of African descent came to dominate their economies. The overwhelming fraction of the populations that came to be black and slave in such colonies, as well as the greater efficiency of the very large plantations, made their distributions of wealth and human capital extremely unequal. Even among the free population, such economies exhibited greater inequality than those on the North American mainland.[16]

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 these colonies, were based to some degree 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 nontradable 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

[16] 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 (1972); Richard B. Sheridan, Sugar and Slavery: An Economic History of the British West Indies, 1623–1775 (Canoe Press 1994) (1974); Manuel Moreno Fraginals, The Sugarmill: The Socioeconomic Complex of Sugar in Cuba, 1760-1860 (Cedric Belfrage trans., 1976).

the population, and they enjoyed higher levels of human capital and legal standing.[17]

To almost the same degree as in the colonial sugar economies, the economic structures that evolved in this second group of colonies were greatly influenced by the factor endowments, viewed in broad terms. The fabulously valuable mineral resources and the abundance of low-human-capital labor certainly contributed to the extremely unequal distributions of wealth and income that generally came to prevail in these economies. Moreover, without the abundant supply of native labor, the generous awards of property and tribute to the earliest settlers would either not have been worth so much or have been possible, and it is highly unlikely that Spain would have introduced the tight restrictions on European migration to its colonies that it did.

The 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 and 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, therefore were based on laborers of European descent who had similar, relatively high levels of human capital. Owing to the abundant land and low capital requirements, the great majority of adult men were able to operate as independent proprietors. Efforts to implant a European-style organization of agriculture based on concentrated ownership of land combined with labor provided by tenant farmers or indentured servants invariably failed in such environments. Conditions were somewhat different in the southern colonies, where crops such as tobacco and rice exhibited limited scale economies. Even so, the size of the slave plantations, the share of the population composed of slaves, and the degree of inequality in

[17] 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. The natives' inability or disinclination to evade their obligations to the estate-owning families may have sustained large-scale enterprises. For an excellent and comprehensive overview of the encomienda and the evolution of large-scale estates, see James Lockhart & Stuart B. Schwartz, Early Latin America: A History of Colonial Spanish America and Brazil (1983). The paths of institutional development varied somewhat across Spanish colonies, reflecting significant differences between Native American populations in social capabilities and other attributes. For example, the pre-conquest forms of social organization for Native Americans in highland areas were quite different from those of populations on the plains or in the jungle. For a fascinating discussion of the workings of the early encomienda system in Peru, see James Lockhart, Spanish Peru, 1532–1560: A Social History (2d ed. 1994).

these colonies were quite modest by the standards of Brazil or the sugar islands.[18]

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 reasonably might be treated as exogenous at the beginning of European colonization, this assumption becomes increasingly tenuous the 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, 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, elites were likely better able to establish a basic legal framework that insured them disproportionate shares of political power, which they used to establish rules, laws, and other government policies that advantaged members of the elite—contributing to persistence over time of the high degree of inequality.[19]

The evolution of suffrage institutions provides a powerful demonstration of systematic patterns across societies by which elites established a legal framework that ensured them a disproportionate share of political power. Table 1 provides summary information about restrictions governing the right to vote across New World societies in the late 19th and early 20th centuries. 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 eliminating restrictions based on wealth and literacy, and much higher fractions of the populations voted in these countries than anywhere else in the Americas. Although there was important variation within Latin America, it is clear that there was much greater political equality in the United States and Canada during the 19th century than there was elsewhere in the hemisphere. Moreover, as most countries in the Americas were nominally democracies by the mid-19th century, the variation in the voting rules had a direct bearing on, although likely understates, the extent to which elites wielded dis-

[18] Galenson, note 15, at 135; Jack P. Greene, Pursuits of Happiness: The Social Development of Early Modern British Colonies and the Formation of American Culture (1988). R

[19] See Stanley L. Engerman & Kenneth L. Sokoloff, The Evolution of Suffrage Institutions in the New World, 65 J. Econ. Hist. 891, 910-11 tbl.3 (2005).

proportionate influence 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 1890's), but the granting of voting rights to large proportions of the population was at least a half century ahead of even the most progressive countries of South America.[20] 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.[21]

TABLE 1
Laws Governing the Franchise and the Extent of Voting in Selected American Countries 1840–1940[22]

Period and Country	*Year*	*Lack in Secrecy in Balloting*	*Wealth Requirement*	*Literacy Requirement*	*Percent of the Population Voting*
1840-1880					
Chile	1869	No	Yes	Yes	1.6
	1878	No	Yes	Yes[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	—
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	Yes	Yes	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

[20] Uruguay, Argentina, and Costa Rica generally have been regarded as among the most egalitarian of Latin American societies. Not surprisingly, their initial factor endowments most closely resembled those of the United States and Canada.

[21] Engerman & Sokoloff, note 19. **R**

[22] Engerman & Sokoloff, note 6, at 72-73. **R**

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
1921-1940					
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

a. Although the 1874 electoral law did not explicitly repeal the wealth, income, or professional requirements specified in the Constitution of 1833, it stipulated that those who could read and write would be presumed to meet the income requirement for the suffrage.
b. This figure is for the city of Buenos Aires, and it likely overstates the proportion who voted at the national level.
c. The information on restrictions refers to national laws. The 1863 constitution empowered provincial state governments to regulate electoral affairs. Afterward, elections became restricted (in terms of the franchise for adult males) and indirect in some states. It was not until 1948 that a national law established universal adult male suffrage throughout the country. Other Latin American countries followed this pattern, as did the United States and Canada to a lesser extent.
d. Two states, Connecticut and Massachusetts, introduced literacy requirements during the 1850's. Sixteen states—seven southern and nine northern—introduced literacy requirements between 1889 and 1926.[23]

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 North America were always higher, often four to five times higher, than those in Latin America.[24] Although many factors may have contributed to the low levels of participation in Latin America, wealth and literacy

[23] Engerman & Sokoloff, note 19, at 907 n.35. R
[24] Id. at 906 tbl.2, 909, 910-11 tbl.3.

requirements were serious binding constraints. The states in the United States frequently adopted explicit racial limitations (until the constitutional amendments following the Civil War ended this practice), whereas Latin American countries typically chose to screen by literacy.[25]

The contrast between the United States and Canada and the Latin American countries 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 19th century."[26] In 1789 none of the original thirteen states allowed universal white male suffrage, but as new entrants to the Union (Vermont in 1791, Kentucky in 1792, and Tennessee in 1796) did so, and the movement to do away with political inequality gained strength, the rest of the country followed suit.

> [V]irtually 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.[27]

Labor scarcity was a crucial element in determining the initial level of inequality across New World colonies, and it continued to exert an important effect on the level of political inequality—even within the United States. It is striking that the 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 the policies adopted to be attractive to those contemplating relocation.[28] When elites—such as land or

[25] Id. at 916-17.
[26] Engerman & Sokoloff, note 6, at 73-74. R
[27] Id. at 74 (internal citations omitted).
[28] Id.

other asset holders—desire common men to locate in the polity, they 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 United States.

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. Educational 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 generally seem 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.[29] The United States probably had the most literate population in the world by the beginning of the 19th century, but the common school movement, which got under way in the 1820's (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.[30] 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.[31] Although the movement made slower progress in the South, schooling had spread sufficiently by the mid-19th century that over 40% of the school-age population was enrolled,[32] and nearly 90% of white adults were literate (see Table 2). Schools were also widespread in early 19th

[29] Ellwood P. Cubberley, The History of Education 521-22 (1920).
[30] Id. at 657-74.
[31] Id. at 672-74, 676-702.
[32] For enrollment rates, see Sandra E. Black & Kenneth L. Sokoloff, U.S. Schooling in Historical Perspective: The Rise and Decline (?) of Public Education in the United States,

century Canada.[33] This northernmost English colony soon followed the United States in establishing tax-supported schools with universal access,[34] and its literacy rates were nearly as high by the second half of the 19th century (see Table 2).

TABLE 2
Literacy Rates in the Americas 1850–1950[35]

Country	*Year*	*Age*	*Rate (percent)*
Argentina	1869	6 and above	23.8
	1895	6 and above	45.6
	1900	10 and above	52.0
	1925	10 and above	73.0
Barbados			
	1946	10 and above	92.7
Bolivia	1900	10 and above	17.0
Brazil	1872	7 and above	15.8
	1890	7 and above	14.8
	1900	7 and above	25.6
	1920	10 and above	30.0
	1939	10 and above	57.0
British Honduras	1911	10 and above	59.6
(Belize)	1931	10 and above	71.8
Chile	1865	7 and above	18.0
	1875	7 and above	25.7
	1885	7 and above	30.3
	1900	10 and above	43.0
	1925	10 and above	66.0
Colombia	1918	15 and above	32.0
	1938	15 and above	56.0
Costa Rica	1892	7 and above	23.6
	1900	10 and above	33.0
	1925	10 and above	64.0
Cuba	1861	7 and above	23.8 (38.5, 5.3)

in Handbook of the Economics of Education (Eric Hanushek & Finis Welch, eds., forthcoming 2006) (manuscript at fig. 8, on file with authors).

[33] J. Donald Wilson, Education in Upper Canada: Sixty Years of Change, in Canadian Education: A History 190, 190-213 (J. Donald Wilson, Robert M. Stamp & Louis-Phillipe Audet eds., 1970).

[34] See, e.g., Charles E. Phillips, The Development of Education in Canada 124-36 (1957).

[35] Engerman & Sokoloff, note 6, at 77-78. In some cases, the figures for whites and nonwhites, respectively, are reported within parentheses. R

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

The rest of the hemisphere trailed far behind the United States and Canada in primary schooling and the attainment of literacy.[36] Despite enormous wealth, the British colonies elsewhere in the hemisphere were very slow to organize educational institutions to serve broad segments of the population.[37] 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.[38] 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.[39] 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.[40] Most of these societies did not achieve high levels of literacy until well into the 20th century.[41]

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 generally would 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

[36] Elisa Mariscal & Kenneth L. Sokoloff, Schooling, Suffrage, and the Persistence of Inequality in the Americas, 1800-1945, in Political Institutions and Economic Growth in Latin America 159, 161 (Stephen Haber ed., 2000).

[37] Indeed, significant steps were not taken in this direction until the British Colonial Office began promoting schooling in the 1870's. Cubberley, note 31, at 613-52; Mariscal & Sokoloff, note 36, at 161. 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 1870's, including the 1870 Education Act and the 1876 passage of a law calling for compulsory schooling through the age of ten. Cubberley, note 31, at 641-50. Among the many British colonies around the Caribbean basin are Jamaica, Guyana, British Honduras, and Trinidad. R R R

[38] Mariscal & Sokoloff, note 36, at 161. R

[39] See, e.g., id. at 181.

[40] Id. at 177.

[41] See Table 2.

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, which 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 19th century and beyond. As the respective governments of each colony, province, or nation were regarded as the owners of this resource, they could affect the distribution of wealth directly, 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 also was used as a policy instrument to increase the size of the labor force, either by making land readily available to encourage immigration or by influencing the regional distribution of labor (or supply of wage labor) through measures affecting access and raising land prices.[42]

As one would expect of a country with relative equality, and labor scarcity, there were never major obstacles to acquiring land in the United States, and the terms of land acquisition became easier over the course of the 19th century.[43] 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

[42] That land policy was recognized as having these effects is evident from the histories of the evolution of the policies in the United States, Canada, and Argentina. See, e.g., Jeremy Adelman, Frontier Development: Land, Labour, and Capital on the Wheatlands of Argentina and Canada, 1890-1914 (1994); Donald S. Castro, The Development and Politics of Argentine Immigration Policy, 1852-1914: To Govern is to Populate (1991); Paul W. Gates, History of Public Land Law Development (1968); Carl E. Solberg, The Prairies and the Pampas: Agrarian Policy in Canada and Argentina, 1880-1930 (1987).

[43] For a comprehensive overview of U.S. land policy, see generally Gates, note 42. **R**

land.[44] Canada pursued similar policies: the Dominion Lands Act of 1872 closely resembled the Homestead Act in both spirit and substance.[45] Argentina and Brazil instituted similar changes in the second half of the 19th 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.[46]

Argentina, Canada, and the United States all had an extraordinary abundance of virtually uninhabited public lands to transfer to private hands in the interest of bringing this public resource into production and serving other general interests. In societies such as Mexico, however, the issues at stake in land policy were very different. Good land was relatively scarce, and labor was relatively abundant. Here Native Americans had long controlled the lands in question, but without individual private property rights. Mexico was not unique in pursuing policies, especially in the final decades of the 19th and the first decade

[44] See id. at 394.

[45] See Adelman, note 42, at 23-24. **R**

[46] For discussions of these cases, and of why rather small farms endured in the United States, see the excellent discussions in Adelman, note 42; Warren Dean, Latifundia and Land Policy in Nineteenth-Century Brazil, 51 Hisp. Am. Hist. Rev. 606–25 (1971); Solberg, note 42; Carl E. Solberg, Land Tenure and Land Settlement: Policy and Patterns in the Canadian Prairies and the Argentine Pampas, 1880-1930, in Argentina, Australia, and Canada: Studies in Comparative Development, 1870–1965, at 53, 53-70 (D.C.M. Platt & Guido di Tella eds., 1985); Emilia Viotti da Costa, The Brazilian Empire: Myths and Histories 78-93 (1985). Adelman, in particular, makes a number of interesting arguments for why the outcome in Argentina was rather different from that of Canada (as well as in the United States). 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. Adelman, note 42, at 89. Even those policies nominally intended to broaden access tended to involve large grants to land developers (with the logic that allocative efficiency could be achieved best through exchanges between private agents) or transfers to occupants who already were using the land (including those who were grazing livestock). Id. at 92-94. 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. Id. 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. Id. Moreover, livestock production on the Argentina Pampas increased dramatically during the late 19th century, and scale economies in the raising of livestock may have helped to maintain the large estates. Id. In the United States 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. Id. This helps to explain why the policy of smallholding, reflected in the liberal land policies was implemented and effective. See Jeremy Atack & Fred Bateman, To Their Own Soil: Agriculture in the Antebellum North (1987) (investigating the development of agriculture and rural society in the northern farm economy of the United States).

of the 20th century, that had the effect of conferring ownership of much of this land in large tracts on non-Native American landholders.[47] The 1856 Ley Lerdo and the 1857 Constitution had set down methods of privatizing these public lands in a manner that originally could have been intended to help Native American farmers enter a national land market and commercial economy.[48] 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% 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.[49]

In contrast, the proportion of adult males that owned land in rural areas was quite high in the United States, at just below 75% in 1900.[50] 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 87.1% of household heads owning the agricultural lands they occupied in 1901.[51] 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.[52]

[47] For further discussion of Mexico, see generally Robert H. Holden, Mexico and the Survey of Public Lands: The Management of Modernization, 1876-1911 (1994) (detailing the evolution of land management and development in Mexico); George McCutchen McBride, The Land Systems of Mexico (1923) (analyzing the historical development of Mexico's system of land tenure); Frank Tannenbaum, The Mexican Agrarian Revolution (1929) (giving a broad and detailed view of Mexican land institutions).

[48] For a discussion of the evolution of policies in Mexico, see generally Holden, note 47; Tannenbaum, note 47. **R** **R**

[49] McBride, note 47, at 73-81. **R**

[50] Engerman & Sokoloff, note 6, at 69 tbl.6 **R**

[51] Id.

[52] 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.

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.[53] Revenues came from regulation of trade and from the taxes it imposed on the importation of New World-produced commodities such as sugar and tobacco.[54] Given that the demand for these goods was likely highly inelastic, British consumers likely bore most of the burden of these duties. When Britain attempted to increase tax revenues to offset more of the costs of defending its colonies on the North American mainland through excise taxes, import duties, and higher fees, the change in policy was fiercely and famously resisted.

Spain and Portugal, in contrast, were much more intent on, and effective at, raising revenue directly from the colonies. This was at least partly attributable to the enormous wealth their colonies possessed. The Spanish Crown levied a vast range of taxes, with revenue derived from impositions on a variety of activities, commodities, commercial and administrative transactions, and from tribute exacted from Native Americans varying across colonies and districts with the composition of the economy and of the population.[55] 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.[56]

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.[57] By the end of the

[53] For a monumental study of how Britain collected revenue from its colonies, including those that came to compose the United States, see generally Lawrence Gipson, The British Empire Before the American Revolution (1936); see also Edwin J. Perkins, The Economy of Colonial America (1980).

[54] See generally Gipson, note 53. R

[55] See Mark A. Burkholder & Lyman L. Johnson, Colonial Latin America 150-51, 248-303 (3d ed. 1998).

[56] For example, in Mexico during the late 1780's, about a quarter of the colonial government's revenue came from the alcabala, nearly 45% from state monopolies, and roughly 20% from taxes on gold, silver, and other mining activities. Barbara A. Tenenbaum, The Politics of Penury: Debt and Taxes in Mexico, 1821-1856, at 13 (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 Burkholder & Johnson, note 55, at 252-53, 284-85. R

[57] Burkholder & Johnson, note 55, at 150-51. Even municipal or local governments at times assessed taxes on sugar production. R

16th century Portugal introduced new taxes on imports into Brazil, as well as sales taxes on goods exported by Brazil to Portugal.[58] The diversification of taxes, and the eventual boom in gold production (another activity ripe for taxation), contributed to a relative, if gradual, decline in the tax burden on the sugar industry. Taxation of trade, or of production of commodities intended for export, however, remained a central feature of the Brazilian tax system.[59]

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 raised more revenues from their populations (at least those segments that were not Native Americans).[60] 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.[61] They used the revenues to support investments in quasi-public or public goods and services such as schools and roads.[62] 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.[63] Tax institutions of the Middle Atlantic colonies 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.[64]

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.[65] In the United States, a 1789 law establishing the tariff was one of the first laws enacted by the federal government.[66] Although the federal government had other sources of

58 Id.

59 See Table 3.

60 See Perkins, note 53, at 124-28; Sidney Ratner, Taxation, in 1 Encyclopedia of American Economic History: Studies of the Principal Movements and Ideas 451, 452 (Glenn Porter ed., 1980). **R**

61 See Perkins, note 53, at 123-28; Ratner, note 60, at 451. **R**

62 See Perkins, note 53, at 123-28. **R**

63 See Ratner, note 60, at 451-52. **R**

64 Id.

65 See Table 3.

66 W. Elliot Brownlee, Federal Taxation in America: A Short History 13-18 (2d ed. 2004); Edwin J. Perkins, American Public Finance and Financial Services, 1700-1815, at 232-33 (1994); Ratner, note 60, at 453. **R**

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 war time) on dwelling houses, land, and slaves, customs duties provided by far the dominant share (typically well above 80%) of national government revenue up through the Civil War.[67] These revenues amounted to roughly 1 to 2% of GNP (except for spurts during war time), and were almost exclusively consumed in covering the costs of defense, paying off the debt, and of general government expenses.[68] Only a small fraction, about 5% of federal government expenditures, went to support capital investments such as public buildings, roads and canals, and improvements to rivers and harbors.[69] As was recognized, and often has 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.[70] 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% of dominion revenue (and over 80% of dominion tax revenue) into the 20th century.[71]

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 United States and Canada over the 19th century.[72] Indeed, there were, perhaps, only two notable differences in how Latin American central governments financed themselves. First, unlike in the United States 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.[73] The other salient divergence was in the greater inclination of Latin

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67 See Table 3; Ratner, note 60, at 454. R

68 Ratner, note 60, at 454-55. R

69 Id. at 455.

70 E.g. Sidney Ratner, James H. Soltow & Richard Sylla, The Evolution of the American Economy 158-79 (1993).

71 1 J. Harvey Perry, Taxes, Tariffs, & Subsidies: A History of Canadian Fiscal Development, 71 tbl.III (1955). Excise taxes (levied primarily on liquors and tobacco) and revenue from tariffs generally accounted for between 75 and 85% of dominion revenue. Id. In 1870, the tariffs on sugar and molasses, spirits and wine, tea, cottons, and woolens were the largest contributors, jointly accounting for 65.8% of all tariff revenue. Id. 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. Id.

72 See Table 3.

73 Most countries did collect some government revenue from duties on exports, but international competition and the power of exporters constrained their ability to rely on such taxes. 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,

American countries to incur debt to finance operating deficits by issuing paper money.[74] Notwithstanding these differences, what stands out is that the Latin American central governments were like those of their neighbors to the North in raising most of their revenue from tariffs and 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% of national government revenue over the latter half of the 19th century.[75] Taxes on property and on businesses existed, but these typically accounted for less than 10% of revenue.[76] In Brazil, between 1823 and 1888, more than 50% of total national revenue consistently came from tariffs on imports, with excise taxes and assessments on exports contributing most of the remainder.[77] In Chile, taxes assessed at ports and revenue raised by state monopolies consistently accounted for just under 80% of national government revenue throughout the second half of the 19th century and well into the 20th century.[78] 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% of national revenues.[79] By the 1840's, their cumulative share rose to nearly 80%.[80]

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 United States, and various internal uprisings) sometimes stimulated the imposition of direct taxes that extended the reach of national governments in progressive directions (the income tax in the United States during the Civil War, and the property tax in Mexico during its war with the United States), but the general pattern throughout the hemisphere was reliance by national governments on taxes that targeted commod-

or nitrates in Chile), that duties on exports accounted for substantial shares of national government revenue.

74 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 typically were quite reliant on internal sources. This may have had unfortunate effects on the development of banks and other financial institutions. See, e.g., Tenenbaum, note 56 (detailing the experience of Mexico). **R**

75 See Table 3.

76 Id.

77 Liberato de Castro Carreira, Historia Financeira e Orgamentaria do Imperio do Brazil desde a sua FundaHão (1889) (providing annual information about revenue sources).

78 Brian R. Mitchell, International Historical Statistics: The Americas, 1750-1988, at 692 (2d ed. 1993); Oficina Central de Estadística, Sinópsis Estadística de la República de Chile (1921).

79 Jorge Orlando Melo González, La Evolución Económica de Colombia, 1830-1900, in 2 Nueva Historía de Colombia, Era Republicana 65, 87 (1980).

80 Id.

ities or trade rather than income or wealth.[81] 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 United States, Canada, and Latin American countries introduced permanent peacetime taxes on income and wealth (including estates and gifts).[82]

TABLE 3
Customs and Income and Wealth Taxes as a Share of National Government Revenue[83]

	Customs (%)	*Income and Wealth Taxes* (%)
Argentina		
1872	94.0	—
1895	71.2	3.2
1920	58.4	2.9
Brazil[a]		
1870	71.9	—
1888	66.7	—
1900	65.5	—
1920	56.8	—

[81] 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, governments financed military activities by either inflating the money supply or borrowing from foreign lenders or domestic banks. This pattern stands in contrast to the U.S. government approach in trying to finance a substantial portion of the costs through war-time taxes. It is interesting to compare the Latin American approach to the approach followed by the Confederacy in financing its operations during the U.S. Civil War. In her intriguing article that explores the voting patterns among members of the Confederate Congress, Rose Razaghian finds that those states and districts with large slave plantations (and likely the greatest inequality) were most opposed to taxing income (until the very late stages of the war), and thus more inclined toward financing the Confederacy through inflationary monetary policy, loans, and excise taxes. Rose Razaghian, Financing the Civil War: The Confederacy's Financial Strategy 2-4 (Yale ICF Working Paper No. 04-45, 2005).

[82] These new assessments, together with payroll taxes, came to be the dominant source of revenue—especially in the United States and Canada—during the 1930's and 1940's, and coincided with a sharp increase in the size of the central governments. Mitchell, note 78, at 672, 674. R

[83] The general source for the estimates in the Table is Mitchell, note 82, at 668-85. R Additional sources are Carreira, note 77 (Brazil, 1870, 1888); Luis Fernando López R Garavito, Historia de la Hacienda y el Tesoro en Colombia, 1821-1900, at 234 (1992) (Colombia, 1872). Mitchell, note 78, at 692 (Colombia, 1928); Javier Tantalean Arbulu, R Política Económico-financiera y la Formación del Estado: Siglo XIX, Cuadro 4 (1983) (Peru 1899); Ana Cecilia Roman Trigo, Lar Finanzas Publicas de Costa Rica: Metodologia y fuentes (1870-1948) at 24-35 (1993); Instituto Nacional de Estadistica Geografia e Informatica, 2 Estadísticas Históricas de México (1985); 7 Registro Estadístico de la República Arjentina, Ano de 1872 y 1873 (1875).

Chile		
1895	73.8	0.6
1920	70.2	6.0
Colombia		
1872	69.5	—
1928	56.0	5.3
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
Mexico[b]		
1870	92.3	3.6
1890	79.7	4.7
1910	86.0	11.1
Peru[d]		
1871	95.6	—
1899	59.1	3.6
1920	51.9	6.0
Uruguay		
1895	66.7	—
1910	60.0	—
Canada		
1870	63.2	—
1905	57.5	—
1920	37.3	10.5
United States[e]		
1820	83.3	—
1860	94.6	—
1870	47.5	9.3
1900	41.1	—

a. The revenue included under customs includes sales and excise taxes as well as customs.
b. The estimates of customs revenue for 1870-1910 include the amounts collected from indirect taxes (almost exclusively levies on imports and exports), as well as revenue from stamps (the major component), ports, the post office, lotteries, railroads, and coinage. The income and wealth figures for those years encompass indirect taxes, most of which are taxes on property held in districts under the federal government authority. The

share in total revenue accounted for by indirect taxes trends from 72.7% in 1870 to 50.8% in 1890 to 44.4% in 1910.

c. The revenues reported under customs revenue include tariffs on imports, a tax on coffee exports, sales or excise taxes (mostly composed of a levy on tobacco consumption until 1908), and revenue obtained from the state monopoly on liquors.

d. The customs revenue for Peru includes the revenue from the export of guano.

Stark contrasts existed, 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 4), and this feature is of fundamental importance because of the radically different tax instruments used by state and local governments (see Tables 5.1, 5.2, 5.3, 5.4, and 5.5) as compared to the national government. 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.[84]

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 roads and other infrastructure demanded by an early industrializing economy. Local governments were the largest component of the overall government sector throughout the 19th century (for example, local governments share of total government revenue was 57.1% in 1855)[85], 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.[86] The local governments are also of partic-

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[84] See, e.g., Perkins, note 53, at 123-28; Richard T. Ely, Taxation in American States and Cities 105-234 (1888); John Joseph Wallis, A History of the Property Tax in America, in Property Taxation and Local Government Finance: Essays in Honor of C. Lowell Harris 123, 123-51 (Wallace E. Oates ed., 2001). R

[85] See Table 4.

[86] The traditional view is that a land tax is borne by landowners (at the time the tax is imposed) with the tax on structures being borne by tenants (if any). Given the concentration of land in many Latin American countries (both in the 19th and 20th century), this suggests the incidence of such taxes is likely progressive. In contrast, the so-called "new view" treats the property tax like the corporate tax and argues that it generally lowers the return on capital, with the added twist that to the extent there are differential rates on

ular 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 generated rather broad distributions of social returns.[87] 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 property taxes accounted for over 82% of local government revenue in 1913,[88] 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.[89]

State governments in the United States also made extensive use of property taxes, but their use varied both across regions and over time. While the property tax was likely the largest single source of state government revenue at the beginning of the 19th century, with the onset of industrialization many states began to exploit other means of raising revenue. 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 several years, 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

different types of capital, additional distortion costs may arise. See George R. Zodrow, The Property Tax as a Capital Tax: A Room with Three Views, 54 Nat'l Tax J. 139, 141 (2001). Finally, to the extent the local property tax is regarded as a payment for services received by property owners, it really does not have any burden and in fact, may lead to a better, more desired bundle of local services. See William A. Fischel, Homevoters, Municipal Corporate Governance, and the Benefit View of the Property Tax, 54 Nat'l Tax J. 157 (2001). These views are not mutually exclusive, and all may hold to some extent in any one country.

87 We do not yet have comprehensive evidence extending well back into the 19th century on the share of revenue to local governments coming from different taxes, but what we have is consistent with the implication of the estimates in Table 5.1, that property taxes were by far the dominant source. See Wallis, note 84, for further discussion of how the relative importance of the property tax as a source of state revenue varied over the 19th century. R

88 See Table 5.2.

89 See Perry, note 71, especially chs. 2, 5 & 12. As described by Perry, property taxes and municipal or local governments were closely related, and property taxes already had come to be relied on extensively 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 there—especially in Nova Scotia—and Perry attributes this to the heterogeneity of the population. R

to generate positive private returns in an environment of accelerating economic growth.[90] 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 1830's and early 1840's 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.[91]

Although the provincial governments in Canada seldom levied the sorts of taxes on property that U.S. state 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.[92] As the scale of their programs increased, the provincial governments sought to increase revenues by introducing succession duties and taxes on corporations. These measures did not generate large amounts of revenues, 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.[93]

[90] As is detailed in Wallis, note 84, by the 1830's, Massachusetts raised more than one-half, and Rhode Island more than one-third, of state government revenue from a tax on bank capital. **R**

[91] See Wallis, note 84; Table 5.3. **R**

[92] See generally 1 Perry, note 71, at 7-48, 108-23. A summary of provincial revenues for 1874, 1896, and 1913 is set forth in id. at 123 tbl.VII. **R**

[93] 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 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, note 71, app. C, tbls.17, 18 & 19 for figures on the revenue sources for different provincial governments. **R**

TABLE 4
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[a]			
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[b]			
1913	92.5	—	7.5
1915	90.8	—	9.2
1920	87.9	—	12.1
Colombia[c]			
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
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
1933	39.4	18.9	41.7
1950	67.7	19.3	13.0
1960	64.8	18.2	17.0
United States[f]			
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

a. Carreira, note 77. The substantial change in the distribution of tax revenues between 1826 and 1856 reflects the growth in the power of the national government, relative to the provinces, after independence. There were explicit divisions of authority across the levels of government as regards what could be taxed, but those divisions changed somewhat over time. In 1834, the national government was given the authority to raise revenue **R** by 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.

b. Felipe Perez, Geografia General (1888); Jose Maria Vergara y Velasco, Nueva Geografia de Colombia: Anuario Estadisticos (1875, 1876 & 1905); Luis Ospina Vasquez, Industria y Proteccion en Colombia 1810-1930 (1955). As seen in the table, in the 1830's and 1840's, 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 also was 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 nine sovereign states confirmed: 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.

c. 2 Perry, Taxes, Tariffs and Subsidiaries 619 app C tbl.1 (1933 and 1950 data); Karin Treff & David Perry, Finances of the Nation 2003 B:9 tbl.B.4 (2004), available at http://www.ctf.ca/FN2003/finances2003.asp.

d. The figures for 1855, 1875, and 1895 were computed as a weighted average of regional estimates of per capita revenue raised for different levels of government. The federal figures include revenue raised through land sales. See Lance E. Davis & John Legler, The Government in the American Economy, 1815-1902, 26 J. Econ. Hist. 514 (1966). We weighted the regional estimates of local and state taxes constructed by Davis and Legler by the regional shares of population to obtain the national figures. The regional shares of population came from U.S. Bureau of the Census, Historical Statistics of the United States: Colonial Times to 1970, Series A 172-194 (1975), available at http://www2.census.gov/prod2/statcomp/documents/CT1970p1-01.pdf. The estimates for the revenue shares of the national, state, and local government in 1913, 1927, and 1950, were drawn from Series Y 567-589, Y 710-735, and Y 796-816. Id.

e. The revenues of the central government do not include revenues from railroads. Oficina Central de Estadistica, Sinopsis Estadistica de la Republica de Chile (1921).

f. These estimates were prepared from the reports on the revenues collected by different levels of government in Secretaría de Fomento, Colonización e Industria (1910). For the purposes of this table, the revenues to the Federal District governments were included in central government revenues.

TABLE 5.1
Sources of Tax Revenue for the U.S. Local Governments 1890-1950[94]
(percent)

	1890	*1902*	*1913*	*1927*	*1940*	*1950*
Indiv/corporate income taxes	—	—	—	—	0.4	0.9
Sales and excise taxes	—	—	0.2	0.6	2.8	5.9
Property taxes	92.5	88.6	91.0	96.8	91.3	86.2
Payroll taxes	—	—	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

[94] For the 1890 estimates, see Morris A. Copeland, Trends in Government Financing 55 tbl.13 (1961). Copeland also provides extensive discussion, as well as estimates that conform with those presented in Sidney Ratner, Taxation and Democracy in America tbl.1 (4th ed. 1980). We employ Ratner for the estimates after 1890, as this source covers the years up to 1972. The estimates represent the share of local government tax revenues accounted for by the respective taxes. Transfers of resources to local governments accounted for less than 10% 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% by 1932, but jumped to more than 25% by the early 1940's.

TABLE 5.2
Sources of Revenue and Expenditures Municipal Governments, Canada 1913-1950[95]

	1913 (%)	*1933 (%)*	*1950 (%)*
Revenues			
Income taxes		1.4	—
Sales and excise taxes		—	4.3
Property/wealth taxes	82.2	78.6	69.6
Other taxes	6.0	6.1	9.2
Nontax revenues	11.8	13.9	14.3
Subsidies from other govts.		—	2.6
Total	100.0	100.0	100.0

TABLE 5.3
Sources of Tax Revenue for U.S. State Governments 1890-1950[96]
(percent)

	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 excise taxes	—*	17.9	19.9	42.8	51.0	55.6
Property taxes	70.0	52.6	46.5	21.2	5.9	3.1
Payroll taxes	—	—	—	7.9	24.5	18.8
Death and gift taxes	—	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

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

[95] Statistics Canada, Historical Statistics of Canada, Series H113-123 (F.H. Leacy ed., 1983); 1 Perry, note 71, at 190. R

[96] See note 94. The estimates represent the share of state government tax revenues R accounted for by the respective taxes. Nontax revenues appear to have been substantial, however, accounting perhaps for as much as 40% of revenue in 1913.

TABLE 6
Sources of Tax Revenue in the United States, for All Levels Considered Together 1902-1950[97]
(percent)

	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 excise taxes	19.8	16.1	13.2	28.5	23.6
Customs duties	17.7	13.6	6.0	2.3	0.7
Property taxes	51.4	58.6	48.8	30.3	13.0
Payroll taxes	—	0.1	2.4	13.3	9.7
Death and gift taxes	11.1	10.1	5.8	8.9	4.2
Other	—	—	—	—	—
Total	100.0	100.0	100.0	100.0	100.0

Given the very large size of the local governments in the United States and Canada, and their heavy reliance on property and wealth taxes into the 20th century, it perhaps should not be surprising that these same taxes loom large when one considers the total revenue collected by governments at all levels. For the United States, in both 1902 and 1913, property, gift, and estate taxes account for between 60 and 70% of the revenue to the overall government sector.[98] Although our estimates for Canada do not extend that far back, taxes on property and wealth were very important sources of revenue for the consolidated Canadian government (nearly 40% as late as 1933).[99]

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 total government revenue. Local/municipal authorities accounted for only about 10% of total government revenue in Brazil, Colombia, and Mexico throughout the 19th century (and in Chile, between 10 and 20% during the second decade of the 20th century, despite the absence of state/provincial governments).[100] The contrast with the nations in northern North America is dramatic. In the United States, local governments generated 57.1% of total government revenue in 1855, and the figure remained near 50% for the rest

[97] Ratner, note 94, at tbl.1. The estimates represent the share of total government tax revenue (national, state, and local considered together) accounted for by the respective taxes. R
[98] See Table 6.
[99] Derived from Table 5.2, Table 4, and 1 Perry, note 71, at 238 tbl.XVIII. R
[100] Id.

of the century.[101] Even as late as the 1930's, the share of local government revenue was near 40% in both the United States and Canada.[102]

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. Our claim that during the 19th century the overall tax structures in the United States and Canada were likely more progressive than in Latin America, however, does not rest solely on the relative sizes of the different levels of government. The evidence on the relative use of tax instruments suggests that local governments in Latin America relied much less on the property tax than did their counterparts in the United States and Canada. Early in the 20th century, local governments in Chile and Colombia raised less than one-half of their revenue from property and income taxes (less than 25% in Cundinamarca, Colombia),[103] while these taxes were dominant in the accounts of Canada (78%)[104] and the United States (over 90%).[105] When one considers these local governments in Latin America relative to U.S. state governments that were raising more than 80% of their revenue from property, death, and gift taxes as late as 1913)[106] the disinclination of Latin American governments to tax wealth or income is quite apparent.

[101] Id.

[102] Id.

[103] See Tables 7.1 & 7.2.

[104] See Table 5.1.

[105] See Table 5.2.

[106] See id. For estimates of regional wealth inequality, see Lee Soltow, Men and Wealth in the United States, 1850-1870 (1975). Remarkably, this pattern persisted into the second half of the 20th century, with the states with greater inequality relying less on the property tax for state and local government finance than others. To take 1961, for example, the shares of property tax revenue raised by state and local governments are much lower than the national average (46.3%) in states distinguished by higher inequality: Alabama (20.8%), Arkansas (28.7%), Georgia (30.4%), Hawaii (12.7%), Louisiana (23%), Mississippi (28.4%), New Mexico (26.4%), North Carolina (28.3%), South Carolina (23%), and West Virginia (29%). See Advisory Comm'n on Intergovernmental Relations, State Constitutional and Statutory Restrictions on Local Taxing Powers 22-23 (1962).

TABLE 7.1
Chile: Revenues of the Municipalities[107]

	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	27,520	39.0	7.1	6.0	4.0	2.1	3.0	38.8
1915	27,858	50.0	6.7	4.1	3.3	2.5	2.5	30.9
1920	45,357	38.7	15.7	2.7	2.1	2.3	2.4	36.1

TABLE 7.2
Sources of Revenue of Municipal Governments in Colombia, 1918: Department of Cundinamarca[108]

Type of Tax	*Total for All Municipalities in Cundinamarca (%)*	*City of Bogota (%)*
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

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 certainly can be made that elites might have had an interest in 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 rela-

[107] Oficina Central de Estadistica, Sinopsis Estadistica de la Republica de Chile (1921).
[108] Republica de Colombia, Boletin de Estadistica de Cundinamarca, Bogota: Imprenta del Departamento (1919).

tively 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 United States with less inequality such as the Midwest, or even the Northeast.[109]

TABLE 8
Income Shares of Local and State Taxes: United States, 1860 and 1880[110]

	% State (1860$)	*% Local*	*Per Capita Income $*
1860			
Northeast	.91	3.65	181
North Central	1.25	6.22	89
South Atlantic	2.21	3.07	81
Eastern South Central	1.12	1.79	89
Western South Central	.68	2.20	184
National average	1.22	2.58	128
1880			
Northeast	.93	4.08	244
North Central	.84	4.40	170
South Atlantic	2.04	3.33	84
Eastern South Central	1.23	1.97	95
Western South Central	.97	4.31	112
National average	.90	3.97	173

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 wealthy elite. Tables 9.1, 9.2, 9.3, and 9.4 set forth the sources of revenue for several state or provincial governments in Argentina, Brazil, Colombia, and Mexico during the second half of the 19th century. These tables confirm that taxes on land or property (the so-called di-

109 See Table 8.

110 Both the regional and national average shares of state and local revenues in the region were calculated from the estimates of government receipts in Davis & Legler, tbl.5 n.d, at 514, and the per capita income estimates in Robert W. Fogel, Without Consent or Contract 85, 89 (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. Our estimates of the national figures for the total tax revenue relative to income, however, are 6.67% and 8.96% in 1860 and 1880 respectively. We exclude some of the later-settled regions because of incomplete information.

rect contributions) accounted for markedly lower proportions of state government revenue than such taxes did in the United States. In these four countries (the first three of which are among the most decentralized in Latin America), taxes on different types of property or on business income rarely accounted for more than 10 to 15% (and generally less) of state/provincial revenue, as compared to 70% in the United States 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), 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 generally would be expected to impose a proportionally rather light burden on the wealthy classes.

In Brazil, for example, the allocation of taxing and spending authority between state governments and the national government changed several times over the 19th century. Under the 1840 constitution, the main provincial taxes were on sugar and coffee production, but revenues also were 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. Taxes on property 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% of the total revenues of the province, while the tax on slavery trade and the tax on legacies accounted for 6% and 8%, respectively. In the province of Minas Geraes, in 1876 the main sources of provincial revenue were taxes on coffee (20%), itinerary fees (16%), and taxes on transfer, registration, and trade of slaves (15%).

TABLE 9.1
Sources of Revenue to State/Provincial Governments: Argentina 1872[111]
(percent)

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
Other/miscellaneous	16.6

TABLE 9.2
Revenues of State or Provincial Governments in Brazil[112]
(percent)

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	—

[111] 7 Republica Argentina, Registro Estadistico de la Republica Argentina, 1872, 1873 (1875).

[112] For 1876 and 1892, the sources are João Camillo de Oliveira Tôrres, A Formasão do Federalismo no Brasil (1961), and for 1905, the source is Antonio José Baptista de Luné, Almanak da Provincia de São Paulo para 1873 (1985); Francisco de Assis Barbosa & João Pinheiro, Documentário sôbre sua Vida Pública (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.

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

TABLE 9.3
Sources of Revenue to State Governments: Colombia, Public Revenues of All States 1870[113]
(percent)

Tax on slaughtered livestock	18.3
Tax on liquors	15.1
Tax on foreign merchandise	12.9
Direct taxes on industry and capital	11.7
Tax on real estate	7.1
Excise taxes on consumption of cacao, tobacco, and anis	7.0
Stamps	5.7
Miscellaneous/other	22.1

TABLE 9.4
Sources of Revenue for the State of Yucatan: Mexico 1870[114]
(percent)

Income from public lands	11.8
Income from sea salt fields	15.7
Alcohol taxes	12.4
Livestock sales tax	17.7
Distillation tax	2.2
Tax on flour	2.9
Taxes on national imports	3.5
Other miscellaneous taxes	14.4
Fines	14.7
Transfer fees	4.4
Other miscellaneous	0.2

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

[113] Garavito, note 83, ch. 3. R

[114] Interview with Juliette Levy, Assistant Professor of History, University of California, Riverside, who collected the figures from primary budget records located in the Archives of the State of Yucatan, located in Merida.

taxes on exports (rights previously reserved for the national government), as well as taxes on property, on the transfer of property, and on industries and profits.[115] This change transformed the tributary structure of the most prosperous states, such as Minas Geraes, whose economies were directed largely at foreign trade. In Minas Geraes, levies on exports had raised only 5% of the total revenues of the province in 1889, but with the expanded power to tax, this share jumped to 64% in 1892.[116] Similarly, in 1910 the tax on exports raised 40% of the total revenues of Sao Paulo, whereas in 1871 it had yielded no revenue for the province.[117]

The states also increased the shares of revenue they derived from taxes on property, legacies, and other transfers of property, and on industrial profits. In Minas Geraes, the tax on property (imposto predial or territorial tax) accounted for 2.8% of the total revenues of the province in 1876, but its take rose to 6.1% in 1905.[118] No taxes on industries and profits existed before the establishment of the republic, but by 1905 such taxes accounted for 8% of revenue. Taxes and fees on inheritance and transfers of property generated 8.7% of total revenues. Such taxes were of similar importance in Sao Paolo. In 1910, the state of Sao Paolo raised 2% of state revenue from property taxes, 5.7% of revenue from a tax on the capital of producers, and 15.9% of revenues from taxes/fees on inheritances, legacies, and transfers of property.[119] Thus, in Minas Geraes and Sao Paolo, perhaps the two major states of Brazil, these progressive taxes accounted for 22.8% and 23.6% of state revenue, respectively. The corresponding figure for state governments in the United States in 1902 was 82.1%.[120] 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 10, 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 de-

[115] Fernando Amed & Plinio Negreiros, Historia dos Tributos no Brasil (2000).
[116] See Table 9.2.
[117] Id.
[118] Id.
[119] Id.
[120] See Table 5.3.

cades from exports of guano, a natural resource that was all too soon depleted.[121]

TABLE 10
National Government Tax Revenue Per Capita, c. 1870[122]

	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
United Kingdom	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

[121] 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, 9 J. Latin Am. Studies 35-57 (1977).

[122] The information on taxes per capita is from Garavito & Fernando, note 113, at 202-03. The values of the index of tax revenue relative to national income was computed as the ratio of the estimates of taxes per capita to the estimates of per capita income for 1870 contained in Angus Maddison, Monitoring the World Economy, 1820-1992, at 194-96 tbl.D-1a, 202 tbl.D-1d (1995). R

As a share of income, however, the amount of revenue going to the national government was not especially high in the United States. We only have per capita income estimates for a small number of Latin American countries, but both Argentina and Brazil easily surpass the United States 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 United States 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 United States 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 collecting data on the relative use of tax instruments by local governments in Latin America, 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% range) than its neighbors to the south. Much of this higher tax burden is accounted for by the much larger role for local and state governments. This suggests that the subnational governments in the United States were making substantial investments in such projects as public schooling, roads, and other infrastructure.[123] 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[124]) 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% of the national government budget—in contrast to national defense with two to five times more—and only minimal funding from local governments.[125] 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 United States, but also by a different pattern and level of expenditures.

123 For illustrative figures from the 20th century, see Table 11.
124 See Section II.
125 See Table 12.1.

TABLE 11
State and Local Government Nonfinancial Expenditures, the United States 1915-1950[126]

	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 departments	4.4	4.1	3.4	2.9
Hospitals	2.2	1.9	2.0	2.6
Public Assistance/ 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

TABLE 12.1
Chile: Expenditures of National Government by Category[127]
(percent)

	Interior	*Foreign Affairs*	*Justice*	*Public Instruction*	*Hacienda (Finance)*	*National Defense*	*Industry and Public Works*
1865	11.9	3.4	3.9	5.5	47.8	27.5	0
1870	19.1	2.6	3.5	5.8	44.5	24.5	0
1875	27.2	3.0	3.0	5.7	42.5	18.6	0
1880	8.6	1.1	2.5	3.5	29.1	55.1	0
1885	13.2	2.7	4.3	6.3	50.1	23.5	0
1890	10.1	4.3	5.3	10.7	20.0	20.3	29.3
1895	9.9	3.4	4.6	7.4	18.9	39.7	16.1
1900	14.0	3.5	5.3	8.0	34.8	21.2	13.1
1905	15.2	5.1	4.6	11.4	26.4	21.1	16.0
1910	15.5	4.9	3.4	10.8	23.6	23.3	18.5
1915	15.5	2.3	3.3	11.8	34.5	25.1	7.6
1920	17.4	1.8	3.0	11.5	25.2	34.0	7.2

[126] These distributions were computed from information on expenditures by state and local governments provided in Morris A. Copeland, Trends in Government Financing 56 tbl.14 (1961).

[127] Oficina Central de Estadistica, note 107. R

TABLE 12.2
Chile: Ordinary Revenue of National Government[128]
(percent)

	Customs (Imports and Exports)	*Railroads*	*Guano (Nitrates)*	*Direct Taxes Income and Inheritance*	*State Monopolies*	*Agriculture Tax*	*Other*
1850	61.7	0	0	0	16.6	0	21.7
1860	64.9	0	0	0	14.6	0	20.5
1870	55.8	13.9	0.8	0	12.2	5.6	11.7
1880	38.0	13.8	14.5	2.2	9.3	3.7	18.5
1890	74.5	14.1	0.2	0.2	0	2.0	9.0
1897	77.2	16.5	0.0	0.0	0.0	0.0	6.3

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

This Section compares the tax structures in Latin America to tax regimes in North America and other parts of the world in the 20th century. As discussed below, there have been important changes in the relative use of tax instruments and in the size of the government relative to the economy, but in some respects little changed from the 19th century. As compared to the United States and Canada, Latin American governments remain 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. While generalizing across the experiences of many countries involves a great deal of abstraction, and can seem a bit reckless, we attempt below to sketch out some of the common characteristics of current tax systems in Latin America and North America. This discussion relies on several excellent cross-coun-

[128] Id. 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 1880's to revenue from exports amounting for about 60% 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, and postal service.

try studies of tax systems in Latin America[129] as well as government finance statistics from the International Monetary Fund.[130]

In thinking about how inequality may influence tax institutions, we focus in this Section on four important characteristics of tax systems in the Americas: (1) the growth in the size of governments in the 20th century and the need for tax revenues to support government expenditures; (2) the relative use of consumption taxes and income taxes in the tax structure; (3) the relative use of corporate and individual income taxes; and (4) 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 the United States and Canada over the 20th century, and then turn to Latin America.

A. Developments in the United States and Canada

The major change in the United States and Canada during the 20th century was the dramatic growth in the size of government, particularly the growth of the federal government. At the beginning of the 20th century, the U.S. federal, state, and local governments together accounted for only about 7% of GDP. Even by 1930, they had grown to no more than 10% of GDP. During the Depression and World War II, however, the size of the government sector exploded, to roughly 25% of GDP, with the federal government coming to assume the dominant role it plays today.[131] In Canada, similar developments took place.[132] As was the case with many European countries (but not Latin American 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.

In the United States, the Civil War, World War I, and World War II brought about the introduction of new taxes that not only financed a

129 See Richard M. Bird, Tax Reform in Latin America: A Review of Some Recent Experiences, 27 Latin Am. Res. Rev. 7 (1992); Bird, note 5; Parthasarathi Shome, Taxation in Latin America: Structural Trends and Impact of Administration (Int'l Monetary Fund, Working Paper No. 19, 1999); Janet Stotsky & Asegedech WoldeMariam, Central American Tax Reform: Trends and Possibilities (Int'l Monetary Fund, Working Paper No. 227, 2002); Vito Tanzi, Taxation in Latin America in the Last Decade (Ctr. for Research on Eco. Development and Pol'y Reform, Working Paper No. 76, 2000). R

130 Int'l Monetary Fund, Government Finance Statistics Yearbook Vol. XXV (2001) [hereinafter IMF 2001 Yearbook]; Int'l Monetary Fund, Government Finance Statistics (Database and Browser CD-ROM, current through January, 2005).

131 See C. Eugene Steuerle, Contemporary U.S. Tax Policy 35-36 (2004); Joel Slemrod & Jon Bakija, Taxing Ourselves 21-23 (2d ed. 2000); see also Steven R. Weisman, The Great Tax Wars (2002).

132 Karin Treff & David B. Perry, Finances of the Nation 2003, at 3:4 tbl.3.1 (2004), http://www.ctf.ca/FN2003/finances2003.asp.

substantial portion of war time expenditures, but also contributed to the peacetime expansion of the federal government in the aftermaths of the conflicts. Facilitated by the passage of the constitutional amendment in 1913[133] that cleared away legal obstacles to a federal individual income tax (which followed the passage of a corporate income tax in 1909[134]), 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.[135]

During the 20th century, the individual income tax in the United States replaced the property tax as the primary tax on individuals.[136] 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.[137] 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. At the time of the Civil War, however, the growth in financial assets, such as stocks, bonds, mortgages, and cash, meant that a property tax no longer taxed individuals in a roughly equal manner. The federal government in the 1860's adopted an income tax following the British approach for raising funds to finance the Crimean War.[138] After the Civil War, the income tax was subject to political and constitutional attacks. The Underwood-Simmons Tariff Act of 1913[139] reestablished the income tax in a less progressive and less ambitious form than the Civil War version or the 1894 legislation.[140]

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133 U.S. Const. amend. XVI.

134 Tariff Act of August 5, 1909, ch. 6, § 38, 36 Stat. 11, 112.

135 Brownlee, note 66, at 1-9. The first major social spending for the federal government came after the Civil War. During the 1880's and 1890's, the relatively generous pension benefits to Civil War veterans (only from the Union army) and their dependents and survivors required significant taxes imposed at the federal level. Id. at 31. R

136 Id. at 52-57. The property tax worked well when governments were small and the bulk of one's wealth consisted of real property. Relatively low rates and visible tangible benefit provided by local governments made the property tax relatively politically palatable. In the late 1700's and early 1800's, taxing real property was also a relatively good proxy for taxing according to ability to pay. Id. at 20-21. By the mid-1800's, however, there was growing dissatisfaction with the property tax. Although the states nominally increased the scope of the tax to cover all types of property, such as cash, bonds, stocks, and mortgages, in reality the burden of the property tax fell primarily on owners of real estate.

137 Id. at 28-29.

138 Id. at 31-34.

139 Underwood Tariff Act, ch. 16, 38 Stat. 114 (1913).

140 Brownlee, note 66, at 56. R

Revenue demands from World War I and World War II greatly changed the scope of the individual income tax. For example, in the United States, the number of individual income taxpayers grew from 3.9 million in 1939 to 42.6 million in 1945 and increased in tax revenues from $2.2 billion in 1939 to $35.1 billion in 1945.[141] This increase in federal tax revenue from the income tax changed the balance in the relative size of federal versus state and local governments. Only during World War II did federal tax revenues begin to exceed tax revenues from state and local taxes.[142] The first federal income tax in Canada was introduced in 1917 to fund Canada's participation in World War I.[143] Adopted a few years after the U.S. income tax, the Canadian tax law shared much in common with the U.S. tax legislation.

The rise of income taxes corresponded with a decline in trade taxes. In the United States and Canada, trade tax revenues as a percentage of total revenue declined steadily from the 1890's to the 1950's. In 1896, trade taxes were 62% of total U.S. federal tax revenues.[144] Between 1913 and 1927, trade taxes fell from 48% to 17% of U.S. federal tax revenues,[145] reflecting both a change in tariff policy and the growth of other sources of tax revenue, primarily individual and corporate income taxes. A similar, though less dramatic, decline in the role of trade revenue took place in Canada.[146]

As discussed in Section III, central governments in North America during the 1800's were relatively small compared to the size of state and local governments. The U.S. federal government had limited responsibilities and spent funds primarily for defense, interest on debt, and general government expenditures, with only a small amount going to infrastructure improvements. In contrast, state and local government had primary responsibility for providing schools, roads, and other infrastructure improvements.

Part of the difference in the relative size of the federal government and state and local governments is attributable to constitutional restrictions imposed on the federal government's taxing authority. The framers severely limited the power of the federal government to im-

141 Id. at 115.
142 Id. at 115-16.
143 Perry, note 71, at 155-60. R
144 Bureau of the Census Library, U.S. Dep't of Commerce, Statistical Abstracts of the United States 160 tbl.163 (1934), available at http://www2.census.gov/prod2/statcomp/documents/1934-03.pdf.
145 Id.
146 2 J. Harvey Perry, Taxes, Tariffs, & Subsidies: A History of Canadian Fiscal Development 624-27 & 61.6 (1955), at 624-27 tbl.6. In Canada trade taxes as a percentage of total tax revenues for the years 1890, 1913, and 1927 were 76%, 84%, and 41% respectively. Id.

pose and collect direct taxes and they required any duties, imposts or excises to be uniform throughout the United States.[147] Both measures were adopted to prevent regional interests from using the federal government to shift a disproportionate tax burden to other groups. While the constitutional limitation on direct taxes became better known as a barrier to adopting a federal income tax,[148] the founding fathers primarily adopted the limitation to prevent federal government property taxes. Representatives from slave states were concerned that a federal property tax would treat slaves as property, farm states representatives were concerned that a federal property tax would be based on the size rather than the value of landholdings, and representatives of urban commercial areas were concerned that the property tax would be based on assessed value.[149]

Table 13 sets forth the relative tax shares for U.S. federal, state and local governments over the last 70 years.

TABLE 13
Relative Tax Shares for U.S. Federal and State and Local Governments, 1902 through 2000 (Percent of Total Tax Revenues)[150]

	Federal Tax Revenues	*State Tax Revenues*	*Local Tax Revenues*	*Social Security Tax Revenues*
1902	37.4	11.4	51.3	0
1912	29.2	13.3	57.6	0
1922	45.6	12.8	41.5	0
1932	22.7	23.7	53.6	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

147 U.S. Const. art. I, §§ 8, 9; see generally Brownlee, note 66, at 11-20. **R**

148 In Pollock v. Farmers' Loan & Trust Co., 157 U.S. 429, 585 (1895), aff'd on reh'g 158 U.S. 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.

149 Brownlee, note 66, at 20-21. **R**

150 Historical Statistics, Table 5, n.d, pt. 2; Steuerle, note 131, at 260. **R**

State and local taxes declined in their relative share of total taxes from the early 1900's through World War II. Following World War II, however, state and local taxes increased dramatically, from 6.1% of GDP to a post-war high of 9.7% of GDP in 1972.[151] In the late 1970's through the 1980's a series of constitutional and statutory limitations led to a decline in state and local taxes, specifically restrictions on the use of property taxes.[152] In 1978, California voters passed Proposition 13, which imposed a maximum property tax rate of 1%. As of 2002, forty-four states had some type of restriction on the ability of local government to impose property taxes. These limitations take different forms: thirty-three states impose property tax rate limitations, twenty-seven states impose limitations on property tax revenue limits, and six states impose limits on increases in assessed property values.[153]

The composition of tax revenues for state and local governments in the U.S. has changed over the last 70 years. Although property taxes generally continue to be a major source of tax revenues for local governments, they are no longer the dominant source of total state and local revenue. On average, property taxes account for 28.6% of total state and local revenue, general sales taxes for 24.7%, selective sales taxes for 10.8%, individual income taxes for 24.3%, and corporate income taxes account for 4.1% (other taxes account for 7.6%).[154] As discussed in Section III, variation exists in the relative tax levels and use of tax instruments among the different regions. State and local governments in the Northeast and Midwest have for a long time, and continue to rely more on property taxes than state and local governments in the South and West.[155]

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[156] provided for a centralized federal government with general taxing authority. The federal government was responsible for defense and the building of railways while the provincial governments were given limited taxing authority and were responsible for health care and education. Table 14 sets forth the relative shares of tax revenue by level of government.

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151 Steuerle, note 131, at 37. **R**

152 David Brunori, Local Tax Policy: A Federalist Perspective 61 (2003).

153 Id. at 61-62.

154 Bureau of the Census, U.S. Commerce Dep't, Statistical Abstract of the United States 2003, 286 tbl.443, available at http://www.census.gov/prod/2004pubs/03statab/stlocgov.pdf.

155 Brunori, note 152, at 47. **R**

156 British North America Act, 30 & 31 Vict., c. 3 (1867) (Eng.).

TABLE 14
Relative Tax Shares for Canada Federal, Provincial, and Local Governments, 1926-2000 (Percent of Total Tax Revenues)[157]

	Federal Tax Revenues	*Provincial Tax Revenues*	*Local Tax Revenues*	*Canadian and Quebec Pension Plan Revenue*
1926	49.5	15.3	35.2	0
1939	47.6	23.7	28.7	0
1946	76.6	13.0	10.4	0
1950	69.0	18.6	12.4	0
1960	64.8	18.2	17.0	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

In Canada, the property tax remains the primary source of revenue for local governments, with property tax receipts accounting for more than 40% of total revenues. Substantial variation exists among the provinces as to the percentage of total local government revenue from property and related taxes.[158]

B. Developments in Latin America

Like all tax systems, countless internal and external factors have shaped those in Latin America.[159] One common framework sets forth five phases of economic and political development among Latin American countries: (1) the initiation of export-import growth (1880-1900), (2) export-import expansion (1900-1930), (3) import-substituting industrialization (1930-1960's), (4) stagnation in import-substituting growth (1960's to early 1980's), and (5) economic crisis, neo-liberal reform, and gradual recovery (early 1980's to present).[160] The eco-

157 Treff & Perry, note 132, at B:9 tbl.B.4. R

158 In New Brunswick, Ontario, and Saskatchewan, property tax revenues are about one-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. Id. at 6:3 tbl.6.1.

159 For general histories of economic, political, and social changes in Latin America from the 1880's until the present day, see Thomas E. Skidmore & Peter H. Smith, Modern Latin America (6th ed. 2005); Victor Bulmer-Thomas, The Economic History of Latin America Since Independence (2d ed. 2003); Rosemary Thorp, Progress, Poverty and Exclusion: An Economic History of Latin America in the 20th Century (1998).

160 Bulmer-Thomas, note 159, at 17; Skidmore & Smith, note 159, at 43-62. R

nomic, political, and social changes over these eras have been dramatic indeed, and thus it is remarkable, at least to us, that there has been such modest qualitative change in the level of taxation, the relative use of different tax instruments, and, except until recently, the allocation of taxing rights among different levels of government.

The growth of world trade during the late 1800's resulted in large degree from the industrialization of Europe. The rise of industry and income in Europe increased its demand for crude raw materials and foodstuffs, and in so doing benefited Latin America. Argentina became a major exporter of agricultural products; Chile boosted copper production; Brazil exported coffee; Cuba produced coffee, sugar, and tobacco; Central American countries sold coffee and bananas; and Peru produced sugar and silver. As exports increased, Latin American consumers imported manufactured goods. Imports included textiles, machinery, luxury items, and other finished products. The growth in trade resulted in increased revenue from tariffs, and from (to a lesser degree) export taxes to fund government operations. The growth in trade also contributed to the expansion of centralized national governments in Latin America. Despite the major economic changes, however, political power remained highly concentrated, whether in countries such as Argentina and Chile (where landowners and other members of the economic elite joined in what has been called an "oligarchic democracy"), or in other countries, such as Mexico, Venezuela, and Peru, where military officers were prominent in political affairs. The resulting government policies tended to be generous in expending resources on the military and parsimonious as regards to social programs.[161]

The second phase of economic development was an expansion of export-import growth from 1900 until around 1930. This increase in trading activity favored the landowning elite, but also supported the emergence of a new middle class of professionals, merchants, shopkeepers, and small businessmen. Changes in suffrage requirements and in the conduct of elections began to broaden access to the political process.[162]

The economic effects of the Great Depression during the late 1920's and 1930's contributed to changes in economic policies in many Latin American countries, most notably in the spread of policies of import substitution as a means to spur industrialization and stimulate the economy. Faced with declining demand from abroad for their exports of raw materials and agricultural commodities, many governments

[161] Skidmore & Smith, note 159, at 43-47. R

[162] Id. at 47-51. See Table 1 for changes in the percentage of population voting during the period of 1840-1940.

sought to promote industrial growth by erecting substantial tariff barriers, establishing government-run companies, and investing directly in industrial firms. The Great Depression also contributed to political changes in Latin America, as economic and political instability provided an opportunity for the military to gain a greater role in Latin American politics.[163] Industrialization promoted the rise of a new entrepreneurial capitalist class, the formation of unions, and the creation of multi-class "populist alliances" in many countries.[164]

There was a gradual abandonment of policies of import-substituting growth after 1960. The focus turned on the problems they had failed to resolve, and pressures from outside the region were all in the direction of greater openness. Latin American countries were still dependent on the United States, Europe, and Japan for capital goods. The relative price of such goods rose as world market prices for many of the principal exports, such as coffee, wheat, and copper fell. In addition, the limited demand for manufactured products within the individual Latin American countries made it difficult to realize economies of scale, and constraints on competition from abroad protected inefficient producers. Again, economic instability led to political instability. In Brazil, Argentina, and Chile, military coups resulted in highly repressive regimes.[165]

The fifth phase was a period of crisis, debt, and democracy. Latin American countries increased their external debt from $27 billion to $231 billion from 1970 to 1980. In the early 1980's, Latin American countries faced increasing difficulty in meeting their debt obligations. During the 1980's and 1990's, foreign governments, private bankers, and the International Monetary Fund required economic reforms as a condition for partial debt relief or new financing. These reforms included liberalizing rules for foreign trade and investment, reducing the role of the government through privatization and other means, adopting measures to reduce inflation, and also tax reform.[166] For example, from 1990-1995, tax reform was a part of structural reform packages in Argentina, Bolivia, Ecuador, Guatemala, Honduras, Nicaragua, Paraguay, Peru, and Venezuela.[167]

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[163] During this period, there were successful or attempted military coups in Argentina, Brazil, Chile, Cuba, Peru, Guatemala, El Salvador, and Honduras. Skidmore & Smith, note 159, at 52. R

[164] Id. at 51-55.

[165] Id. at 56.

[166] Id. at 58-59; see generally James E. Mahon, Jr., Causes of Tax Reform in Latin America, 1977-95, 39 Latin Am. Res. Rev. 1 (2004).

[167] Thorp, note 159, at 228 tbl.7.5. R

1. Level of Taxation

Latin American countries have substantially lower levels of taxation than do the United States and Canada. This is perhaps not surprising given that levels of taxation are generally higher in countries with higher per capita income, but the relative tax burdens of Latin American countries are also low as compared to those in other developing countries.[168] Table 15 reports central government tax revenues as a percentage of GDP for a range of Latin American countries over the 20th century. While taxes as a percentage of GDP increased sharply in the United States and Canada from the 1930's through the 1950's, the increase in Latin America mainly occurred, if at all, during the 1970's through the 1990's.

Table 15
Federal Government Tax Revenues (Percent of GDP)[169]

	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

[168] 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 income and tax levels. Robin Burgess & Nicholas Stern, Taxation and Development, 31 J. Econ. Literature 762, 774-75 (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. Id. at 775. They note that the richer developing countries often have substantial nontax revenue sources, either from state-owned resources or from natural resources. Id. at 775, 782-85. 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. Id. at 775. For example, among Latin American countries, Brazil, Chile, Ecuador, Mexico, Panama, and Venezuela have substantial nontax revenues to support government operations. Inter-American Development Bank, Economic and Social Progress in Latin America Annual Report, stat. app. at 236 tbl.C-10 (1997).

[169] Latin American Centre, University of Oxford, Oxford Latin American Economic History Database (2005), available at http://oxlad.qeh.ox.ac.uk; Brazil Ministry of Finance, Bull. Fisc. Statistics (2002), available at http://www.fazenda.gov.br/portugues/releases/2002/Boletim%20de%20Estat%C3%ADsticas%20Fiscais%20Para%20Divulga%C3%A7%C3%A3o%20Ingl%C3%AAs.PDF#search='Brazil%20Ministry%20of%20Finance%20Bulletin%20of%20Fiscal%20Statistics'.

To try and isolate how much of the difference in relative aggregate tax burdens may be due to differences in income, we compare the aggregate tax burdens for Latin American countries to those of countries in different income ranges. Using data from the 1997 IMF Government Finance Statistics, we find that low-income developing countries (GDP per capita less than $1,000) have a tax/GDP ratio of 12.1%, medium-income developing countries (GDP per capita between $1,000 and $5,000) have a tax/GDP ratio of 17.1%, and high-income developing countries (GDP per capita greater than $5,000 and less than $20,000) have a tax/GDP ratio of 25.6%.[170] With the possible exception of Uruguay,[171] the aggregate tax burdens in Latin American countries are lower than would be predicted just by looking at GDP levels.

We also compare tax revenue to GDP for developing countries by region. The aggregate tax burden for Africa is 19.8% (with an average GDP per capita of $1,368). In contrast, the aggregate tax burden for developing countries in the Western Hemisphere (Latin America and the Caribbean) is 18% (with an average GDP per capita of $5,795).[172] Except for Asia and the Middle East, the aggregate tax burdens in Latin American countries are low compared to other regions, especially when one considers the relative GDP levels. While the per capita GDP in Africa is less than one-half the per capita GDP in Latin America, the aggregate tax burden in Africa is higher by more than 2% of GDP.

This is not news. Scholars have long noted that tax levels in Latin America lag behind other countries.[173] Certainly, part of the small tax

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170 These statistics are roughly comparable to estimates available from other studies. For example, Tanzi and Zee estimated that the tax revenue to GDP ratio for all developing countries was 18.2% and for OECD countries was 37.9% for the period 1995-1997. Tanzi & Zee, note 4, at 303 tbl.1. Using a larger sample of countries, William F. Fox & Tami Gurley, An Exploration of Tax Patterns Around the World, 37 Tax Notes Int'l 793, 794-95, 795 fig.2 (2005) found that low-income countries (per capita GDP of less than $1,000) raise about 15.78%, medium-income countries (per capita GDP of between $1,000-17,000) raise 19.97%, and high-income countries (per capita GDP greater than $17,000) raise 27.17% of GDP in taxes (these estimates do not include social insurance payments). R

171 Nicaragua and Panama, countries not included in Table 15, also have aggregate tax burdens that roughly correspond to GDP levels. See Latin American Centre, note 169. R

172 Tanzi & Zee, note 4, at 303 tbl.1; Global Policy Reform, Per Capita GDP, by Region R 1820-1998, available at http://www.globalpolicy.org/globaliz/charts/percaptable.htm (last visited 4/20/06). The aggregate tax burdens represent regional averages from 1995-1997, while per capita GDP represent 1998 values. Aggregates may not include identical sampled countries.

173 See Bird, note 5, at 8 tbl.2; Shome, note 129, at 5 tbl.1, 8 tbl.3; Stotsky & R WoldeMariam, note 129, at 23 tbl.8, 27 tbl.10. Ricardo Carciofi and Oscar Cetrangolo used R tax data from the 1980's 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

burden is explained by the lack of "tax handles" and technical factors that make it administratively easier to collect taxes in many developed countries than in developing countries. But the administrative difficulty of collecting taxes in Latin America is likely less severe than in either present-day Africa or in North America 100 years ago. So what explains the comparatively low level of taxation in Latin America—as well as the level and patterns of government expenditures? While many factors contribute to developing taxing and spending regimes, the political and economic inequality likely played a major role in accounting for the distinctive Latin American pattern.

2. *Relative Use of Different Tax Instruments*

Looking at aggregate tax burdens tells only part of the story. In order to better appreciate how tax systems differ, it is necessary to examine the relative use of different tax instruments. Summary statistics are presented below in Table 16 for the United States, Canada, and fourteen Latin American countries.

a. *Taxes on Consumption*

We begin by examining the relative use of consumption taxes by North and Latin America. As discussed in Section III, trade taxes and excise taxes accounted for nearly all (generally over 90%) of national tax revenue in the late 1800's for the United States and Canada, as well as for most Latin American countries. North American countries and Latin American countries differ substantially, however, in the relative current use of trade taxes. Although they have substantially reduced their reliance on taxes on international trade over the last ten years, countries in Central America and, to a lesser extent, in South America, still rely on trade taxes for a significant portion of their government revenue. The regional average for trade taxes for Latin American countries is roughly 11% of total tax revenue.[174] In con-

Papers, Economic Policy Series, No. 39, 1994). They found that for the early 1980's, tax/GDP ratios were on average 1.2% lower for Latin American countries than for all developing countries, despite the fact that the regional per capita income in Latin America was 29% 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% lower than the estimated value.

[174] IMF Government Finance Statistics (Feb. 2006). 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). Stotsky & WoldeMariam, note 129, at 12 tbl.4. R

trast, trade taxes in the United States and Canada are less than 1% of total tax revenue.[175]

TABLE 16
Current Federal Tax Revenue by Type of Tax (Percent of Total Tax Revenue)[176]

Country	*Total*	*Income Tax Corporate*	*Individual*	*Property*	*Domestic Tax on Goods and Services Goods*	*Excises*	*Taxes on Int'l Trade & Trans.*	*Social Security*	*Other Taxes*
United States	58	10	48	1	4	3	1	36	0
Canada	57	12	43	0	18	4	1	23	0
Argentina	18	12	5	6	40	13	10	24	2
Bolivia	10	10	0	10	58	23	7	13	3
Brazil	24	—	—	0	26	9	4	41	5
Chile	23	—	—	0	57	12	7	8	5
Colombia	41	—	—	5	46	4	9	—	—
Costa Rica	16	13	1	1	45	11	6	33	0
Dominican Republic	22	10	11	1	36	28	36	4	1
Mexico	32	—	—	0	53	13	4	10	1
Nicaragua	15	—	—	0	58	24	8	18	0
Panama	27	—	—	2	16	8	15	35	4
Paraguay	19	19	0	0	59	17	18	0	4
Peru	22	13	9	0	54	13	9	11	3
Uruguay	12	8	3	7	46	12	4	28	3
Venezuela	29	27	2	8	45	8	11	5	1

Trade taxes played different economic roles during different time periods. Table 17 sets forth the changing contributions of different tax instruments for six Latin American countries for the period 1900-1990. Through the 19th century, import tariffs were set primarily to raise the necessary amount of government revenue, and perhaps to protect influential economic interests from foreign competition.[177] Especially, but not exclusively, during the period of import-substitution industrialization, Latin American countries used high import tariffs to protect local industry and workers at the expense of general

[175] See Table 16.

[176] Government Finance Statistics, International Monetary Fund (Feb., 2006 Database and Browser). Figures represent averages for tax years 1998-2003. Certain country data for 1998-2003 were incomplete and only the years in the parentheses are included: Brazil (1998), Colombia (1998-2000), Mexico (1998-2000) and Panama (2001). Paraguay makes use of budgeted data only. Social security and other taxes were removed for Colombia to better reflect percentages over the time period. Additionally, individual and corporate income tax data were not available for certain Latin American countries for all years. In some cases, rounding causes the sum of component shares to appear to exceed or fall below aggregate shares.

[177] Bulmer-Thomas, note 159, at 143-44. R

consumers.[178] The contrast in the relative contribution to total government revenues of the two types of tariffs is striking. For example, in 1910 during the height of export-import growth, trade taxes constituted an average of 64% of government revenues. In contrast, in 1950, during the period of import-substitution industrialization, trade taxes were only about 20% of government revenues.[179] By the early 1970's, trade taxes in Latin America averaged about 28% of government revenues, with import taxes about 23% and export taxes about 5%.[180] The reduction in trade tax revenue over the last decade reflects the opening of economies to foreign trade and investment.

North American and Latin American countries also differ in their relative use of excise taxes. Excise taxes generally apply to tobacco, alcohol, soft drinks, and petroleum and also can apply to motor vehicles and other consumer durables.[181] In most developing countries, some types of excise taxes, such as taxes on inexpensive tobacco and alcohol, may be quite regressive;[182] other types of excise taxes, such as taxes on airline tickets, premium alcohol, and motor vehicles, are progressive in incidence. In almost all Latin American countries, revenues from excise taxes exceed individual income tax revenues—often by many multiples.[183] On average, revenues from excise taxes in Latin American countries account for about 10-15% of total tax reve-

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[178] A similar pattern of revenue-maximizing tariffs and protectionist tariffs existed in the United States over the 19th and early 20th century. See Brownlee, note 66, at 15-17, 20-24, 29; Carolyn Webber & Aaron Wildavsky, A History of Taxation and Expenditure in the Western World 387 (1986). R

[179] Thorp, note 159, stat. app. at 346 tbl.VII.1. R

[180] Richard A. Musgrave, Fiscal Reform in Bolivia: Final Report of the Bolivian Mission on Tax Reform 267 tbl.12-3 (1981) (data from eleven countries). During this time period, trade taxes constituted over one-half of government revenues (Bolivia and Ecuador), and in other countries trade taxes were less than 10% of total revenues (Brazil and Venezuela). Difficulties exist in comparing trade tax revenues over time and across countries. It is unclear, for example, whether certain types of royalties or other types of taxes related to exports should be classified as export taxes, import taxes, or as nontax government revenues.

[181] Stotsky & WoldeMariam, note 129, at 19-21 tbl.7. R

[182] Although excise taxes were generally criticized as being regressive, recent studies suggest these taxes may be more progressive than originally thought. See Sijbren Cnossen, The Case for Selective Taxes on Goods and Services in Developing Countries, in Taxation in Developing Countries 344, 348-50 (Richard M. Bird & Oliver Oldman eds., 1990); Norman Gemmell & Oliver Morrissey, Tax Structure and the Incidence on the Poor in Developing Countries 16-21, 18 tbl.7 (Centre for Research in Econ. Development and Int'l Trade, Univ. of Nottingham, Research Paper No. 03/18, 2003), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=503101.

[183] See Table 16. Again, substantial variation exists in the relative use of excise taxes in Latin America. For the years 1995 through 1999, revenues from excise taxes accounted for over 24% of total tax revenues in the Dominican Republic and Nicaragua, but less than 10% in Brazil, Colombia, and Venezuela. Stotsky & WoldeMariam, note 129, at 12 tbl.4; Table 16. R

nues.[184] In contrast, revenues from excise taxes represent only 3-4% of the total tax revenues in the United States and Canada.[185]

TABLE 17
Historical Federal Tax Revenue by Type of Tax (Percent of Total Tax Revenue)[186]

	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	—	—	11	20	—	8
1990	8	3	15	10	7	9
1900	3	—	1	—	—	—
1930	4	3	13	4	11	0
1960	48	32	34	45	30	33
1970	—	—	33	35	—	83
1990	12	25	16	41	31	82
Income - Individual						
1960	15	13	18	25	12	1
1970	—	—	13	19	—	—
1990	4	2	5	—	14	0
Income – Corporate						
1960	31	19	17	20	18	32
1970	—	—	20	16	—	—
1990	8	7	10	—	16	82
Domestic Goods & Services						
1900	—	12	—	—	—	—
1930	—	21	—	—	—	35
1960	—	53	25	15	24	24
1970	—	—	51	27	—	9
1990	37	21	55	49	36	2

[184] See Table 16.

[185] Id.

[186] Victor Bulmer-Thomas, The Economic History of Latin America Since Independence 178 tbl.6.6 (1994); Robin Burgess & Nicholas Stern, Taxation and Development, 31 J. Econ. Lit. 762, 827-30 tbl.2 (1993); International Monetary Fund, Government Financial Statistics (2004); Rujanikant Desai, Fiscal Capacity of Developing Economies in Fiscal Policy for Economic Growth in Latin America: Papers and Proceedings of a Conference held in Santiago, Chile, December, 1962, 43, 50 tbl.2-2 (1965); Charles E. McLure, Jr., The Incidence of Taxation in Colombia, in Fiscal Reform for Colombia: Final Report and Staff Papers of the Colombian Commission on Tax Reform (Gillis, M. ed.) 239, 271-73, tbls.3-5 (1971); Latin American Centre, note 169; Richard A. Musgrave, Estimating the Distribution of the Tax Burden, in Problems of Tax Administration in Latin America: Papers and Proceedings of a Conference held in Buenos Aires, Argentina, October, 1961, 31, 60 tbl.2-6 (1965); Raynard M. Sommerfeld, Tax Reform and the Alliance for Progress 54-57 tbls.6-7 (1966); Francisco Gil-Díaz and Wayne Thirsk, Mexico's Protracted Tax Reform, in Tax Reform in Developing Countries 287, 289 tbl.7.1 (Wayne Thirsk ed., 1997); Thorp, note 159, at 346 tbls.VII.1-2. **[EZ: We can verify that numbers now match numbers in the spreadsheet and we have cite checked the sources but we have not double-checked numbers in original source. We are going to take your word.]** R R

Substantial differences also exist between North America and Latin America on the relative use of general consumption taxes, such as retail sales taxes and value-added taxes. The United States and Canada rely on general domestic consumption taxes for about 11% of total tax revenues (for central government tax revenues, consumption taxes are about 4% in the United States and 18% in Canada).[187] As set forth in Table 17, most Latin American countries increased their reliance on domestic consumption taxes over the 20th century, and especially in the last 30 years. General domestic consumption taxes currently make up about 49% of total tax revenues in Latin America.[188]

As many have noted, the introduction of the VAT has changed the tax landscape throughout the world (with the notable exception of the United States).[189] Latin American countries were among the leaders in replacing an inefficient collection of turnover taxes with VATs.[190] 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.[191] Over the last decade, the VAT also allowed governments to reduce reliance on trade taxes and still generate substantial revenue.[192]

[187] See Table 16.

[188] The results set forth above are similar to the findings of Stotsky & WoldeMariam, note 129, at 12 tbl.4. Stotsky and WoldeMariam show that domestic taxes 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 unweighted regional average for tax years 1995-1999 is 48.4% of total tax revenues. Id. **R**

[189] E.g. Liam Ebrill, Michael Keen, Jean-Paul Bodin & Victoria Summers, The Modern VAT, at xi, 197 (2001).

[190] 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), Mexico (1980), Guatemala (1983), and the Dominican Republic (1983). Bird, note 129, at 8. **R**

[191] 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 generally have 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 they would alleviate the tax burden on the poor.

[192] Michael Keen & Jenny E. Ligthart, Coordinating Tariff Reduction and Domestic Tax Reform (Int'l Monetary Fund, Working Paper No. 99/93, 1999), available at http://www.imf.org/external/pubs/ft/wp/1999/wp9993.pdf.

b. Taxes on Income

The major difference today between the tax systems of North and Latin America is the greater reliance by the United States and Canada on income taxes. For Latin American countries, income tax revenues from individuals and firms are about 22% of total tax revenues (down from a peak in the 1960's).[193] By comparison, income tax revenues are about 58% of total tax revenues for the United States and Canada.[194] Although the relative portion of tax revenues (as a percentage of total tax revenues) raised from the corporate income tax does not appear to vary greatly, either between regions or among countries in the region, the relative proportions of corporate and individual income tax receipts as a total of income tax revenues, however, do vary greatly. Corporate tax revenues exceed individual tax revenues in Latin American countries by substantial amounts.[195] In Table 18, we examine the federal tax structure for North American and Latin American countries for the period 1975 through 2003. While corporate tax revenues remained relatively stable in Latin America, individual tax revenues declined substantially over this time period.[196] For the period 1998 through 2003, corporate tax revenues averaged about 16% and individual income tax revenues are only about 4%.[197] In

[193] See Table 16. With the exceptions of Colombia (41%) and Mexico (38%), income tax revenues as a percentage of total tax revenue are relatively small: Argentina (18%), Brazil (24%), Costa Rica (16%), Peru (22%) and Uruguay (12%). Id.

[194] Id.

[195] Id.

[196] See Table 18.

[197] Id. Much variation exists among countries when comparing corporate and individual taxes as a percentage of income, domestic goods and services, and international trade tax revenues in the region during 1998-2003: Uruguay (corporate tax revenues 13% and individual tax revenues 5%), Costa Rica (corporate tax revenues 19% and individual income tax revenues 1%), Peru (corporate tax revenues 15% and individual income tax revenues 11%), and Venezuela (corporate tax revenues 32% and individual tax revenues 2%).

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, the tax can be viewed as transfer payments within the government, with no distributional impact. If corporate tax revenues are received from local monopolists, 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. Anwar Shah & John Whalley, The Redistributive Impact of Taxation in Developing Countries, in Tax Policy in Developing Countries 166-87 (Javad Khalilzadeh-Shirazi & Anwar Shah eds., World Bank 1991).

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 Corporation Income Tax, 70 J. Pol. Econ. 215, 215-19 (1962). In small, open economies, however, the incidence of the corporate tax is likely much different. Harberger constark contrast, individual income tax revenues are about four to five times corporate tax revenues for the United States and Canada.[198]

TABLE 18
Federal Tax Structure by Region, 1975-2003 (Percent of Total Tax Revenue)[199]

	Income Tax			Domestic Goods and Services			
	Total	*Individual*	*Corporate*	*Total*	*General Consumption*	*Excises*	*International Trade*
U.S. and Canada							
1975-1980	78%	57%	20%	15%	8%	7%	7%
1986-1992	80%	65%	15%	16%	9%	6%	4%
1998-2003	83%	67%	16%	15%	9%	5%	2%
Latin America							
1975-1980	31%	12%	18%	41%	20%	18%	27%
1986-1992	28%	10%	18%	49%	23%	21%	23%
1998-2003	28%	7%	18%	60%	40%	16%	12%

Several factors may explain the low yield of individual income taxes in Latin American countries. First, many tax systems have large personal exemptions that effectively reduce the proportion of individual income taxpayers in the population, and provide a substantial "tax-free" amount to those few taxpayers left in the individual income tax

tends 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, Reflections on Distributional Considerations and the Public Finances 24 (2003). 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% of the population. Id. at 24-27.

[198] See Table 16. Currently, U.S. individual tax revenues are 48% of total tax revenues and corporate tax revenues are less than 10%. Id. In Canada, individual income tax revenues are 43% and corporate tax revenues are 12%. Id. In the United States, before World War II, revenues from the corporate income tax generally exceeded individual income tax, often by substantial amounts. Brownlee, note 66, at 97. 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 U.S. tax regime. Id. at 96-97, 107. R

[199] International Monetary Fund, Tax Policy Handbook 290 tbl.2, 294 tbl.6, 306 tbl.26, 312 tbl.30 (Parthasarathi Shome ed., 1995); International Monetary Fund, Government Finance Statistics (Feb., 2006 Database and Browser). Figures represent unweighted averages. Latin America data include Chile, Colombia, Costa Rica, Dominican Republic, El Salvador, Mexico, Nicaragua, Peru, Uruguay, and Venezuela. Certain country data for 1998-2003 were incomplete and only the years in the parentheses are included: Colombia (1998-2000) and Mexico (1998-2000). Social Security and other taxes were removed to better reflect percentages over the period 1998-2000. Additionally, individual and corporate income tax data were not available for certain Latin American countries, which accounted for a discrepancy between total and the sum of individual and corporate income tax revenues. Lastly, additional taxes are included in total domestic goods and services taxes, which accounted for the discrepancy between total domestic goods and services and the sum of general consumption and excise tax revenues.

system.[200] These high tax thresholds explain why the population subject to income tax is typically much greater in the United States and Canada than in Latin America, and why the proportion of individual income subject to the income tax relative to GDP is over 60% in the United States and Canada, but generally less than 10% across Latin America.[201]

Another factor is that although the Latin American countries started reducing their top marginal rates under the individual income tax systems later than the United States, Canada, and the European countries did, several Latin American countries have been more aggressive in reducing the top marginal income tax rates.[202] 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.[203] Third, Latin American tax systems are not very effective at taxing income from the agricultural or the informal sectors. 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 twenty years, employment in the informal sector has grown substantially as compared to employment in the formal sector.[204]

Finally, Latin American countries do not effectively tax income from capital, partially through statutory design and partially through ineffective enforcement efforts.[205] Moreover, a substantial percentage

200 For example, the unweighted regional average exemption amount increased from .6 per capita GDP in the mid-1980's to 2.3 per capita GDP in 2001. Several countries have exemptions that are substantially above the regional average: Nicaragua (7.7), Guatemala (5.0), and Colombia (4.1). Stotsky & WoldeMariam, note 129, at 29 tbl.11. **R**

201 Jitendra R. Modi, Somchai Richupan & Chris Wu, Statistical Tables 361 app. I tbl.A6, in International Monetary Fund, Supply-Side Tax Policy: Its Relevance to Developing Countries (Ved P. Gandhi ed., 1987); Richard M. Bird & Eric M. Zolt, Redistribution via Taxation: The Limited Role of the Personal Income Tax in Developing Countries, 52 UCLA L. Rev. 1627, 1658 (2005).

202 The highest marginal rates in the United States (35%) and Canada (29% federal and marginal provincial rates up to 18.02%) exceed the top marginal rates in Bolivia (13%), Brazil (27.5%), Costa Rica (25%), Ecuador (25%), and Venezuela (24%). Higher top marginal rates are found in Argentina (35%), Chile (40%), and Colombia (35%). Finally, some top marginal tax rates fall in between the rates of the United States and Canada, including Mexico (30%), Panama (30%), and Peru (30%). Stotsky & WoldeMariam, note 129, at 27 tbl.10; see BNA Tax Management Portfolio 997—Business Operations in Chile (A-76). **R**

203 See Shome, note 129, at 6 (noting "the inability of the authorities to remove existing personal allowances, deductions, and incentives"). **R**

204 In 1980, about 40% of nonagricultural workers were employed in the informal sector and about 60% in the formal sector. In 1995, about 56% of workers were employed in the informal sector and about 44% in the formal sector. Thorp, note 159, at 221 tbl.7.4. **R**

205 For example, Uruguay and Paraguay do not impose any tax on investment income. Argentina, Mexico, El Salvador, and Venezuela provide tax exemptions for interest earned on certain types of bonds (generally bonds issued by the government and bonds registered

of portfolio investments from Latin American individuals and corporations are held in U.S. and European investments, where they likely escape both source– and resident-based taxation.[206] 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.[207]

Given that the individual income tax is the primary tax instrument for redistribution purposes, it is not surprising that tax systems in Latin America have only a modest impact in reducing after-tax inequality. The combination of the high tax threshold under the individual income tax system and the difficulty of taxing workers in the informal sector or petty entrepreneurs results in the number 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.[208]

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on securities exchanges). Finally, Argentina, Mexico, El Salvador, and Panama do not tax capital gains with respect to securities listed on the national securities exchanges. International Bureau of Fiscal Documentation, Taxation in Latin America (2005).

[206] In Costa Rica, Guatemala, and Nicaragua, individuals are not taxed on income earned outside their country. Although Argentina, Brazil, Chile, Colombia, Ecuador, Honduras, Mexico, Peru, and Venezuela all tax residents on their worldwide income, likely a substantial portion of foreign source income escapes domestic taxation because of the taxing authority's inability to determine the amount and location of this income. International Bureau of Fiscal Documentation, Taxation in Latin America (2005).

The U.S. government is a co-conspirator in this arrangement. Since 1984, the U.S. government generally has not imposed U.S. income tax on interest income from portfolio investments held by nonresident investors. IRC § 871(h).

[207] 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 and 68.1% in Venezuela. David de Ferranti, Guillermo E. Perry, Francisco H.G. Ferreira & Michael Walton, Inequality in Latin America and the Caribbean: Breaking with History? 435 tbl.A.37 (2003), available at http://wbln0018.worldbank.org/LAC/LAC.nsf/0/4112F1114F594B4B85256DB3005DB262?opendocument.

[208] 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 are 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. 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

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.[209] In those countries with a substantial middle class, policymakers have more alternatives in raising substantial revenues from the individual tax than available to policymakers in countries with a small middle class. In a society with extreme inequality, it is difficult to successfully tax the rich, even in the unlikely event that their political power is insufficient to block such tax changes. 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.[210] And taxing the income of the poor may be difficult both administratively and politically.

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shifted to workers in the agricultural and informal sector. See Shah & Whalley, note 197, at 179. R

209 This discussion relies heavily on Bird & Zolt, note 201, at 1660-62. R

210 Best, note 8. In the mid-1970's, Michael Best attempted to highlight the role played 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. Id. Using tax data from the 1960's, Best challenges the model that expanding tax revenues rests on the gradual growth of tax bases and the improvement of tax administration. Id. Instead, he estimates the economic tax potential of consumption, income, and property taxes under the then existing economic environment. Id. at 50-59. He finds that the Central American countries could effectively expand tax revenues if the countries were so committed. Id. at 59-64. 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. Id. at 64-71. He then examines the relative tax preferences of the groups, assuming the groups act in their own self interests. Id. Best concludes that tax levels (as well the relative use of different tax instruments, discussed below) reflect political choices made in those countries. Id. R

An article by Eduardo Engel, Alexander Galetovic, and Claudio Raddatz nicely illustrates the difficulty of using the individual income tax system to raise substantial amounts of revenue from the rich in a society with substantial inequality. Eduardo M.R.A. Engel, Alexander Galetovic & Claudio E. Raddatz, Taxes and Income Distribution in Chile: Some Unpleasant Redistributive Arithmetic, 59 J. Dev. Econ. 155 (1999). The authors examine the pretax and after-tax distribution of income in Chile and find that the tax system as a whole is slightly regressive (the Gini coefficient pretax is .4883 and the Gini coeffi-

There is a rich economic literature examining the consequences of high progressive individual tax rates in developed countries.[211] Increasing progressivity in tax rates results in changes in the supply of labor by individuals and changes in the level and nature of capital investments. This optimal tax literature provides interesting insights in designing a rate structure that captures the tradeoff between increased equality from higher individual income tax rates and economic distortions on labor supply. The important determinants are the sensitivity of labor supply to the after-tax wage rate and the distribution of endowments in a society. Simple application of optimal tax theory would predict that growing inequality should increase progressivity in the tax system. This results because the equity gain from redistribution relative to efficiency losses generally should be greater the greater the dispersion of income distribution.[212]

Less is known about the consequences of high nominal progressive income tax rates in developing countries, but we offer the following observations.[213] 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% in Chile to about 59% in Ecuador.[214] Taxes, both individual income taxes and social security taxes, may cause employers and employees to negotiate informal arrangements to reduce tax liability.

Second, high income tax rates (both individual and corporate rates) may influence the decision to operate in the formal or informal economy. The decision to operate in the formal or informal economy depends on several factors. The greater the government and private

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cient after-tax is .4961). Id. at 172. They then attempt to determine how inequality would change if individual tax rates were increased and if tax evasion was substantially reduced. Id. at 173-75. Under certain plausible assumptions they find that the reduction in the Gini coefficient would be only .4837. Id. at 173. They 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. Id. at 187. 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.

[211] See, e.g., Jerry A. Hausman, Taxes and Labor Supply, in 1 Handbook of Public Economics 213, 213-63 (Alan J. Auerbach & Martin Feldstein eds., 1985); George F. Break, Income Taxes and Incentives to Work: An Empirical Study, 47 Am. Econ. Rev. 529 (1957); Agnar Sandmo, The Effects of Taxation on Savings and Risk Taking, 1 Handbook of Public Economics, supra, at 265-311.

[212] Slemrod & Bakija, note 1, at 192-95. R

[213] This discussion relies heavily on Bird & Zolt, note 201, at 1662-64. R

[214] Friedrich Schneider & Dominik H. Enste, The Shadow Economy: An International Survey 49 (2002).

sector benefits from operating in the formal economy, the more likely firms would chose to register, pay taxes, and conduct operations in the formal economy. So, if access to the banking system, capital markets, government courts, or government contracts is important, then firms will register. If not, then firms may choose to avoid registering to avoid tax obligations and other government regulations.[215]

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,[216] also increased the attractiveness for Latin Americans investing in U.S. government and corporate securities.[217]

3. *Comparisons Between Latin American Countries and Other Countries by Income Ranges*

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

215 Schneider and Enste estimate about 40% of the GNP in Latin America is due to activity in the informal economy. Id. at 37.

216 IRC §§ 871(h), 881(c).

217 Countries that have greater inequality also may 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, U.S. Income Inequality and Tax Evasion: A Synthesis, 31 Tax Notes Int'l 347, 347-49 (July 28, 2003); Dennis Cox, Raising Revenue in the Underground Economy, 37 Nat'l Tax J. 283, 283-88 (1984). Economists and behavioral scientists offer competing explanations for this phenomena.

TABLE 19
Relative Use of Different Tax Instruments by the Federal Government by Income Level[218]
(percent)

	1990-1995 GDP Estimates				
Per Capita Income	*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

First, consider taxes on consumption. As discussed above, Latin American countries rely on general domestic taxes on goods and services for over 50% of their total tax revenue.[219] This is quite high, especially when compared to other countries with similar per capita income. For the poorest group of developing countries (per capita GDP of between $150-$500), tax revenues from general domestic taxes on goods and services average about 43% of total tax revenue. For middle-income developing countries (per capita GDP of between $500-$5000), the percentage is slightly higher at about 45% of total revenues. For richer developing countries (per capita income of between $5,000-$20,000) and developed countries (per capita income over $20,000), the percentage of total tax revenue from general domestic taxes on goods and services are about 34% and 32%, respectively.[220] Most Latin American countries would be considered richer developing countries—while some (Peru, Paraguay, Guatemala, Ec-

[218] International Monetary Fund, the World Economic Outlook (WEO) Database April 2000, http://www.imf.org/external/pubs/ft/weo/2000/01/data/index.htm (last visited May 29, 2006).

[219] Table 18. The statistics in Table 18 are roughly comparable to the summary findings presented by Tanzi and Zee, note 4. Tanzi and Zee confirm that most countries rely on general consumption taxes, such as the VAT, excise taxes, and trade taxes to fund a substantial portion of government operations. Id. In OECD countries, general consumption tax revenues for 1995-1997 account for 11.4% of GDP. Id. at 304. By comparison, in developing countries, general consumption tax revenues for the same time period account for 10.5% of GDP. Id. R

[220] See Table 19.

uador, and Bolivia) would likely be at the higher end of the middle-income developing country range.

As countries become wealthier, they tend to rely less on excise taxes and taxes on international trade.[221] Here again, Latin American countries rely more on excise and trade taxes than would be predicted given their relative per capita income. In Latin America, excise tax revenues comprise about 17% of total revenues, as compared to 17% for the poorest group of developing countries, 13% of middle-income developing countries, 12% for richer developing countries, and 9% for developed countries.[222] Trade taxes comprise about 16% of total tax revenues for Latin American countries, as compared to 21% of total tax revenues for the poorest group of developing countries, 10% for the middle-income developing countries, 9% for the richer developing countries and 1% for the developed countries.[223]

The major difference between Latin American countries and countries of similar income levels is in the use of income taxes, especially individual income taxes. On average, Latin American countries raise about 25% of total tax revenues from income taxes, with about 19% from corporate tax revenues and about 6% from individual income tax revenues.[224] In contrast, the richer developing countries overall raise about 35% of tax revenues from income taxes (13% from corporate and 22% from individual income tax revenues); developed countries raise about 33% of total tax revenue from income taxes (8% from corporate and 25% from individual income tax revenues).[225] Again, as most of the Latin American countries are "richer developing" countries, the share of government services funded by the individual income tax is only about a quarter of what one would expect based on relative income levels.

4. *Differences Between Latin American Countries and Other Regions*

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

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221 See Table 19.

222 Tables 18 & 19.

223 Table 19.

224 Table 18. The difference between the total income tax revenues and the amounts raised from corporate income tax revenues and individual income tax revenues is attributable to data from Brazil and Panama that contains substantial amounts of "unallocated income tax revenues."

225 Table 19.

TABLE 20
Relative Use of Tax Instruments by Region (Percent of Total Tax Revenue)[226]

	Income Tax				*Domestic Goods and Services*			
	Total	*Individual*	*Corporate*	*Social Security*	*Total*	*General Consumption*	*Excises*	*International Trade*
Developing countries	25	10	15	17	42	24	12	16
Africa	28	14	14	5	36	22	11	31
Latin America	21	5	16	20	47	29	14	11
Asian	37	16	21	5	45	18	15	14
Europe & Middle East	18	8	10	32	39	26	10	11
Developed countries	37	27	10	30	32	20	10	1

The principal tax revenue sources as a percentage of total tax revenues for African countries are: income taxes (28%—14% from corporate and 14% from individual income tax revenues), general consumption taxes (22%), excise taxes (11%), and taxes on international trade (31%).[227] In contrast, the developing countries in Latin America raise revenue from: income taxes (21%—16% from corporate and 5% from individual income tax revenues), general consumption taxes (29%), excise taxes (14%), and taxes on international trade (12%). Again, what is striking is the relative use of individual income taxes. Whereas African countries raise 14% of total tax revenues from individual income taxes, Latin American countries raise only about 5%.[228]

[226] International Monetary Fund, Government Finance Statistics (2004 Database and Browser); Japan Ministry of Finance, Current Japanese Fiscal Conditions and Issues to be Considered (2003), available at http://www.mof.go.jp/english/budget/pamphlet/cjfc.htm; Mexico Ministry of Finance and Public Credit.

To maintain consistency of measurement and to allow cross-country comparisons between tax structures, Table 20 reflects consolidated central government revenue for most countries. 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 1996 and 2002. Regional, developed, and developing aggregates are arithmetic averages of individual countries. Some countries are omitted from calculations for income tax ratios because of large, unidentified amounts in residual (that is, nonindividual, noncorporate) categories. Because of differences in tax regimes and definitions, for many countries taxes collected on domestic goods and services exceeds the sum of general sales receipts (for example, VAT) and excise taxes. Ratios of the tax subcategories may not sum to 100% because of rounding.

[227] Table 20.

[228] Table 20.

5. *Different Levels of Government*

A very different government structure existed and continues to exist in Latin America than in North America. In colonial times the Spanish and Portuguese adopted highly centralized systems of imperial administration for their Latin American colonies.[229] Even in pre-Columbian times, the Aztecs and the Incas ruled large portions of Latin America under centralized control.[230] After independence from the Spanish and the Portuguese, strong centralized governments may have been required to keep conflicts among local factions from fragmenting the new nations.[231] Just as constitutional restrictions strongly influenced the development of state and local governments in the United States, the initial constitutional provisions and subsequent constitutional amendments influenced the allocation of political and fiscal authority in Latin American countries.[232] Thus countries with federal structures, such as Brazil and Argentina (but not Mexico and Venezuela) have larger provincial and local governments than unitary countries, such as Bolivia, Ecuador, and Chile.

Even in the federal countries with substantial provincial or state governments, however, local governments in Latin America have always been much smaller than in North America. Table 21 sets forth the relative sizes of different levels of governments for five Latin American countries. These figures reflect the "first generation" of decentralization that began in the early 1980's in Latin America.[233] Sub-

[229] See generally Donghi, note 159, at 1-41. 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. Id. at 40. R

[230] Bakewell, note 159, at 25-37. The Aztecs controlled a large part of Mexico through what is now Guatemala. Id. at 25. The Incas ruled from present northern Ecuador to central Chile. Id. at 32. R

[231] See Moritz Kraemer, Intergovernmental Transfers and Political Representation: Empirical Evidence from Argentina, Brazil and Mexico 2 (Inter-American Development Bank, Working Paper No. 345, 1997), available at www.iadb.org/res/publications/pubfiles/pubWP-345.pdf.

[232] For example, in Brazil, the 1889 constitution provided both for states to be governed by popularly elected officials and for states to have independent taxing authority. Eduardo Wiesner, Fiscal Federalism in Latin America: From Entitlements to Markets 55 (2003). The 1988 constitution provided for additional autonomy for state and municipal governments and assigned exclusive authority to impose VATs to the state governments and exclusive authority to impose taxes on urban property and taxes on personal and professional services to the municipal government. Id. at 56-57.

[233] See id. at 10 (describing the first generation of decentralization as characterized by: (1) implementation of constitutional reforms that provided for automatic and largely unconditional transfers from central government to subnational governments, (2) introduction of targeted fiscal transfers through formulas to specific sectors and to low income groups, (3) an alleged process of devolving resources together with responsibilities, (4) delegation of some limited taxing and spending authority, and (5) a general lack of any independent evaluation of results. The "second generation" of decentralization policies began in the late 1990's and provided for "tighter macroeconomic budget constraints, a

stantial variation in the size of local and regional governments exists among countries in Latin America, with Argentina, Brazil, and Colombia having the largest subnational governments, Venezuela, Mexico and Bolivia somewhere in the middle, and all other countries having relatively small local and regional governments.[234]

Table 21
Revenue and Taxes by Level of Government in Latin America[235]

Country	*Share of Total Government Tax Revenue Collected by Level of Government (%)*		*Share of Total Government Expenditure by Level of Government (%)*	
	Before Decentralization	*With Decentralization*	*Before Decentralization*	*With Decentralization*
Argentina[a]				
Central	79.3	80.0	63.5	51.9
Provincial	13.7	15.4	31.0	39.5
Local	7.0	4.6	5.4	8.6
Brazil[b]				
Central	59.8	47.1	50.2	33.4
State	36.9	49.4	36.2	50.7
Local	3.8	3.6	13.6	15.9
Colombia[c]				
Central	82.2	81.6	72.8	67.0
Departmental	12.2	11.1	16.7	15.7
Local	5.6	7.3	10.5	17.3
Venezuela[d]				
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

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 1980; under decentralization as of 1989.

At least on the expenditure side, subnational governments in Latin America have grown substantially over the last ten to fifteen years. Table 22 compares subnational expenditures in the United States and

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strong intergovernmental regulatory framework, and more intensive use of incentives at the sectoral level." Id. at 12.

[234] See Eliza Wills, Christopher da C.B. Garman & Stephan Haggard, The Politics of Decentralization in Latin America, 34 Latin Am. Res. Rev. 1 (1999) (reviewing decentralization in Argentina, Brazil, Colombia, Mexico, and Venezuela and examining the influence that central government has over local finances). The authors 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 subnational governments, and that the structure of political parties in the respective countries influences the level of autonomy of lower levels of government. Id. at 9, 16-18.

[235] For Argentina and Colombia, see Ricardo López Murphy, Oscar Libonatti & Marlo Salinardi, Overview and Comparison of Fiscal Decentralization Experiences, in Fiscal Decentralization in Latin America 22, 25 (Ricardo López Murphy ed., 1995). For Brazil, see Anwar Shah, The New Fiscal Federalism in Brazil 16-17 (World Bank Discussion Paper No. 124, 1991), available at http://www-wds.worldbank.org. For Venezuela, see 1 World Bank, Report No. 11160-VE, Venezuela: Decentralization and Fiscal Issues 5 (1992).

Canada with those in several Latin American countries for the years 1990 and 2000. Over this time period, expenditures by subnational governments in Latin America as a percentage of total spending have more than doubled.[236] And likely related to the growth of local governments, social expenditures as a percentage of GDP have increased from 10% to 13% in Latin America.[237]

Table 22
Local Government and Social Expenditures, 1990 and 2000[238]

	Subnational Expenditures/Total Expenditures (%)		*Social Public Expenditures/Total Expenditures (%)*		*Social Public Expenditures/ GDP (%)*	
	1990	*2000*	*1990*	*2000*	*1990*	*2000*
Canada	56	59	66	66	39	30
United States	44	50	59	66	24	24
Argentina	41	40	62	64	18	21
Bolivia	12	23	49	57	12	16
Brazil	31	40	49	60	18	21
Chile	6	7	61	67	13	16
Colombia		27	29	36	8	15
Costa Rica	3	3	39	43	16	17
Dominican Republic	3		38	40	4	7
El Salvador			21	27	3	4
Guatemala	6		30	46	3	6
Honduras			37	34	8	7
Mexico	15	32	41	59	7	9
Nicaragua	3		35	37	11	13
Panama	2		40	39	19	19
Paraguay	1		40	46	3	7
Peru	7	18	31	38	3	7
Uruguay			62	73	17	23
Venezuela			34	37	9	9
Latin America	11	24	41	47	10	13

C. Summary

Latin American countries continue to rely more on tax structures that are likely much less progressive than those of North American

236 Table 22.

237 Table 22.

238 David de Ferranti, Inequality in Latin America 258 fig. 9.6 (2004); International Monetary Fund, Global Finance Statistics (2004); U.S. Census Bureau, Statistical Abstract of the United States 417 tbl.631 (2003), available at http://www.census.gov/prod/2003pubs/02statab/income.pdf; EconStats, Global Econ Data: Canada GDP, current prices weo, available at http://www.econstats.com/weo/CV030V020.htm. Regional estimates are arithmetic averages. Latin American Social Public Expenditures/GDP figures utilize GNP rather than GDP.

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 United States and Canada than in Latin America countries. Second, general consumption tax revenues as a total of tax revenue (and as a percentage of GDP) is substantially higher, and income tax revenues (especially personal) substantially lower, in Latin American countries than in the United States 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 one-half those in other developing countries, and individual income tax revenues are only about a quarter to a third.

V. Conclusion

In this Article we have begun to explore how the extreme inequality that came to characterize nearly all Latin American countries during their colonial periods may influence 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 historically have 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, and clearly this assessment has some basis. 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 United States 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 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, the relative use of different tax instruments, and the types and scale of government expenditure programs. 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 the Latin American countries all relied overwhelmingly on customs duties, other levies on foreign trade, and excise taxes. The United States and Canada, however, 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, and the like) were so extensive that they rivaled or exceeded their respective central governments 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 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 United States, 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. Instead, our alternative hypothesis that in such a context of extreme inequality the political and economic elites were less enthusiastic about, and able to resist, paying higher taxes on income, wealth, or property to finance an expansion of public investments and services (many of which they could procure privately for themselves and their families), seems more compelling and consistent with the overall record.

Latin American countries continue to have the highest rates of 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 United States, Canada, and other regions of the world. We are uncertain about whether the persistence in the character of tax institutions and government structures can be attributed to the same factors we suggest were important in the 19th century. Perhaps the same factors do not control given the substantial economic and political changes in Latin America over the 20th century. The progress in broadening the distribution of political influence (democratization) over the 20th century suggests the influence of elites on the design of institutions should be diminished. 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. Looking at the tax structures in Latin America, we are deeply impressed with the historic pattern of relatively light tax burdens borne by the elites in this part of the world long marked by high levels of inequality. In our view, the evidence suggests that its long history of extreme inequality is central to understanding the distinctive set of tax institutions that have characterized Latin America.