INEQUALITY AND THE EVOLUTION OF INSTITUTIONS OF TAXATION:

EVIDENCE FROM THE ECONOMIC HISTORY OF THE AMERICAS

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I. INTRODUCTION

The importance of institutions in the processes of economic growth and development is now well recognized.[1] Despite the consensus about their significance, our understanding of where institutions come from and how institutions which do not work well persist over time remains limited. How institutions matter depends, in part, on whether they are exogenous or endogenous and on the factors and processes that shape or determine them. Unfortunately, the study of how institutions evolve is not straightforward. Not only does institutional change take place gradually over long periods of time, but the likelihood of different causal mechanisms being involved further complicates analysis. Despite these formidable challenges, in recent years researchers have made significant contributions to our knowledge of how institutions as fundamental as universal adult suffrage, property rights in intellectual capital, and public schools evolved over time and place.[2]

Tax systems are among the oldest and most fundamental of institutions. Taxes are necessary to raise revenue for governments to fund their operations and finance investments in public goods and other sorts of public services conducive to general welfare and economic growth. How governments raise revenue can have profound effects on society. First, the technical efficiency of the tax system is important. Taxes alter the decisions of private agents, as taxpayers strive to reduce their tax liabilities.[3] Taxes also impose enforcement costs on governments and compliance costs on taxpayers. The structure of taxes, as well as of other forms of government regulation, may also influence the organization of economic activities, such as whether firms operate in the formal or 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

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[1] For a classic statement of this view, see North (1981).

[2] See, e.g., Engerman and Sokoloff (1997, 2002, and 2005). Also see Acemoglu and Robinson (2000); and Khan and Sokoloff (2001).

[3] Such adjustments can often lead economies to operate below their productive capacity, as taxpayers allocate their resources to those activities that yield the highest returns net of taxes, as opposed to those that would make the most productive use of resources.

taxes affects both the distribution of disposable income across the population as well as the constellation of political support for various public projects. Individuals are more willing to support government programs if they expect that the benefits they, or their peer groups, would realize from the higher level of expenditures will roughly match or exceed the corresponding increase in their tax liabilities.[4]

Third, although the lines of causation are not always clear, how societies choose to raise tax revenue is related to the relative degrees of authority of local, state, and national governments. Control over public expenditures generally follows the power to tax. As the political and administrative feasibility of levying certain taxes may be sensitive to economy-specific circumstances, those circumstances may also influence the structure of government, as well as the extent and direction of government activities. For example, to the extent that local governments are more dependent on taxes on property than other levels of government are, societies that lack the public authority or administrative capacity to effectively implement such taxes might be expected to have relatively small local governments and low levels of public investments and expenditure programs (i.e. schools or local roads) whose benefits accrue primarily to local residents.

Striking contrasts exist today between the tax systems of developed and developing countries.[5] Tax systems in developed countries derive most of their revenue from individual income taxes, corporate income taxes, and broad-based consumption taxes. Such tax systems are commonly regarded as more progressive in incidence than those of developing countries – whose tax revenues come largely from taxes on consumption, in the form of value-added or turnover taxes, excise taxes, and taxes on foreign trade. As a percentage of gross domestic product, aggregate tax revenues in developing countries are only about half the tax revenues of developed countries. Developing countries are also more likely to

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[4] Recent studies of quite distinct settings have yielded remarkably consistent findings of less government provision of public services in ethnically or otherwise heterogeneous polities. The mechanisms that account for this pattern remain unclear, but may have to do with more diverse populations being hampered by higher costs of reaching a consensus (resolving the collective action problem) or with there being greater economic and political inequality across social groups in such contexts. For examples of this literature, see Alesina, Baqir, and Easterly (1999); and Chaudhary (2006). 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 Hirschman (1970).

[5] Tanzi (1987); and Burgess and Stern (1993).

impose and collect taxes at the national level rather than extend substantial taxing authority to state and local governments.

Why tax systems vary is a difficult question. Scholars have noted that both the level of taxation and the relative use of different tax instruments tend to be systematically related across economies to factors such as per capita income, the share of wages as a percentage of national income, the share of national income generated by large establishments, the share of agriculture in total production, and the level of imports and exports.[6] Many observers have suggested that these patterns arise primarily from technical or resource issues in the design of tax structures. Proponents of this view highlight how, for example, it is less feasible to administer an individual income tax in countries with a large informal sector than it would be in countries where most individuals have stable full-time employment relationships with large firms.[7] They contend that the major reason for the striking differences between the tax systems of the developed and less-developed nations is that rich countries have more choices in deciding the level of taxation and the tax mix (the relative use of different tax instruments).[8] Although not inconsistent with this common wisdom, other scholars have emphasized how political factors can influence the design and administration of tax systems.[9] Groups with great influence are not infrequently able to tilt or shape the structures of taxation, if not of public finance more generally, in their favor.

We turn to history to gain a better perspective on how and why tax systems vary. Our focus is on the societies of the Americas over the 19th and 20th centuries. Our interest in the experiences in North and Latin America has two principal sources. First, despite the region having the most extreme inequality in the world, the tax structures of Latin America are generally recognized as among the most regressive, even by developing country standards.[10] Moreover, Latin American countries typically (though there are exceptions) have low levels of taxation and collect relatively modest tax revenues at the provincial or

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[6] See, e.g., Tait, Gratz, and Eichengreen (1979).

[7] Goode (1984); and Musgrave and Musgrave (1984): 790-796.

[8] Tanzi and Zee (2000).

[9] For a pioneering discussion of the influence of politics on the design of tax systems in Central America, see Best (1976). More generally, see Reese (1980).

[10] For estimates of income inequality in Latin America and extensive treatment of these issues, see De Ferranti, et. al. (2004). Also see the discussion of the regressivity of tax systems in Latin America, Bird (2003).

local level. Improving our knowledge of when and how these rather distinctive patterns in taxation and public finance emerged may help us to better understand both the long-term development of the region as well as the processes of institutional formation and change more generally.

Second, as has come to be appreciated by social scientists, the colonization and development of the Americas constitute a natural experiment of sorts that students of economic and social development can exploit. Beginning more than 500 years ago, a small number of European countries established colonies in diverse environments across the hemisphere. The different circumstances meant that largely exogenous differences existed across these societies, not only in national heritage, but also in the extent of inequality. Relatively high per capita incomes (by the standards of the time) prevailed throughout the Americas, at least through the late 18th century, and many of these colonies had gained their independence from their European overlords by the early 19th century. The record of what sorts of institutions these new, prosperous, and nominally democratic nations established, and how they evolved over time, provides scholars with a useful laboratory to study the sources of systematic patterns in the evolution of tax systems.

When tax scholars explore the relationship between inequality and taxation, they tend to focus on how tax systems may alter the after-tax distribution of income or wealth, either directly through government takings or transfers, or indirectly through their influence on the decisions of individuals (or households) about labor supply, savings, or investments.[11] Here we take a different approach, by examining whether exogenous differences in the extent of inequality might have influenced the design and implementation of tax systems. We highlight how even when the income levels across the societies of the Americas were relatively similar, the tax structures in the U.S. and Canada looked very different from those in Latin America. Moreover, we raise the question of whether these differences in taxes, and in related spending patterns, might have played a role in accounting for quite divergent paths of long-run development. Our thesis that inequality plays an important independent role in influencing the structure of taxation is also supported by comparisons across regions of the U.S.

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[11] For example, see Slemrod and Bakija (2001).

Previous studies have shown how initial and rather extreme differences in the extent of inequality seem to have contributed to systematic differences in the ways that strategic economic institutions evolved across the Americas. The earlier work explored how a number of mediating mechanisms ("paths of institutional development") through which high initial inequality may have led to poor economic outcomes through its impact on the evolution of fundamental policies influencing access to suffrage, schooling, and land, but did not look at tax policy (or at the level and type of government expenditures). The purpose of this paper is to examine whether the extreme differences in inequality that were present across the economics of the Americas soon after colonization also affected the ways tax institutions evolved. We argue that it did, and proceed as follows. Part II sets forth a brief history of the emergence of extreme differences in inequality across the Americas not long after the Europeans began to colonize the hemisphere. Part III then examines the tax systems in Latin America and North America in the 19th century. Part IV discusses how these tax structures evolved over the 20th century. In Part V we offer some tentative conclusions about what the legacy of extreme inequality in Latin America meant for the long-run pattern of on tax design and expenditure policy in that region.

Several salient patterns emerge. The U.S. and Canada (like Britain, France, Germany and even Spain) were much more inclined to tax wealth and income during their early stages of growth, and into the 20th century, than were their neighbors to the South.[12] Although the U.S. and Canadian federal governments were similar to those of their counterparts in Latin America in relying primarily on the taxation of foreign trade (overwhelmingly tariffs) and excise taxes, the greater success or inclination of state (provincial) and local governments in North America to tax wealth (primarily in the form of property or estate taxes) and income (primarily in the form of business taxes), as well as the much larger relative sizes of these sub-national governments in North America, accounted for a radical divergence in the overall structure of taxation. Tapping these progressive (at least as conventionally understood) sources of government revenue, state and local governments in the U.S. and Canada, even before independence, began directing substantial resources toward public schools, improvements in infrastructure involving transportation and health, and other social programs. In contrast, the societies of Latin America, which had come to

[12] For example, land and other assessed taxes generally accounted for between 15 and 40 of revenue to the British government over the period from 1690 to 1790. See Brewer (1990): 98.

be characterized soon after initial settlement by rather extreme inequality in wealth, human capital, and political influence, tended to adopt tax structures that were significantly less progressive in incidence and manifested greater reluctance or inability to impose local taxes to fund local public investments and services. These patterns have persisted well into the 20th century – indeed up to the present day.

II. DIFFERENCES IN INEQUALITY ACROSS THE AMERICAS

Our study builds on recent scholarship that has highlighted how radical differences in the extent of inequality across New World societies were present early on in the histories of the colonies established by the Europeans.[13] These differences, it is argued, were due primarily to factor endowments (or initial conditions more generally). Common to nearly all of the colonies was a high marginal product of labor, as evidenced by the historically unprecedented numbers of migrants who traversed the Atlantic from Europe and Africa despite high costs of transportation, as well as by the roughly similar levels of per capita income that prevailed until well into the 18th century (or more than two centuries after the colonies began to be established).

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

[13] Engerman and Sokoloff (1997 and 2002).

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.[14]

The second category of New World colonies comprises the Spanish colonies, such as Mexico and Peru, that were characterized both by a substantial native population surviving contact with the European colonizers and by the distribution among a privileged few of claims to often enormous blocs of land, mineral resources, and native labor. The resulting large-scale estates and mines, established early in the histories of these colonies, were to some degree based on pre-conquest social organizations in which Indian elites extracted tribute from the general population, and the arrangements endured even when the principal production activities were lacking in economies of scale. Although small-scale production was typical of grain agriculture during this era, the essentially non-tradable property rights to tribute (in the form of labor and other resources) from rather sedentary groups of natives gave large landholders the means and the motive to operate at a large scale. For different reasons, therefore, this category of colonies was rather like the first in generating very unequal distributions of wealth. The elites relied on the labor of Native Americans instead of slaves, but like the slave owners, they were racially distinct from the bulk of the population, and they enjoyed higher levels of human capital and legal standing.[15]

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

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[14] Even among the free population, such economies exhibited greater inequality than those on the North American mainland. For a detailed examination of the distribution of wealth among free household heads on a sugar island, see Dunn (1972).

[15] It is not clear whether the existence of scale economies, such as in slavery, supported the competitive success or persistence of the largest units of production in this second class of colonial economies. Rather, large-scale enterprises may have been sustained by the natives' inability or disinclination to evade their obligations to the estate-owning families. For an excellent and comprehensive overview of the *encomienda* and the evolution of large-scale estates, see Lockhart and Schwartz (1983).

pean migration to its colonies that it did. The early settlers in Spanish America had endorsed, and won, formidable requirements for obtaining permission to go to the New World—a policy that surely helped to preserve the political and economic advantages they enjoyed and kept the share of the population that was of European descent low.

The final category of New World colonies is typified by those on the northern part of the North American mainland, chiefly those that became the northern U.S., but also Canada. These economies were not endowed either with substantial native populations able to provide labor or with a climate and soils that gave them a comparative advantage in the production of crops characterized by major economies in using slave labor. Their growth and development were therefore based on populations of European descent who had similar 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, with labor provided by tenant farmers or indentured servants, invariably failed in such environments. Conditions were somewhat different in the southern colonies, where crops such as tobacco and rice exhibited limited scale economies. Even so, the size of the slave plantations and the share of the population composed of slaves were both quite modest by the standards of Brazil or the sugar islands.[16]

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

[16] See Galenson (1995); and Greene (1988).

inequality, the elites may have been better able to shape the evolution of rules, laws, and other institutions to advantage themselves -- contributing to persistence over time in the extent of inequality.

The history of the evolution of suffrage institutions provides a powerful demonstration of how there were indeed systematic patterns across societies in the degree to which elites established a legal framework that ensured them a disproportionate share of political power.[17] Summary information about differences in how the right to vote was restricted across New World societies in the late 19th and early 20th centuries is reported in Table 1. The estimates reveal that while it was common in all countries to reserve the right to vote to adult males until the 20th century, the United States and Canada were the clear leaders in doing away with restrictions based on wealth and literacy, and much higher fractions of the populations voted in these countries than anywhere else in the Americas. Although there was important variation in these requirements within Latin America, it is clear that there was much greater political equality in the U.S. and Canada during the 19th century than there was elsewhere in the hemisphere. Indeed, as there were other channels through which elites could influence political outcomes, the rules specifying who could vote likely understates the extent to which elites were able to wield disproportionate power in the formulation and implementation of government policies. Not only did the U.S. 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 and in the 1890s), but the evolution of the proportion of the population that voted was at least a half-century ahead of even the most progressive countries of South America (namely, Uruguay, Argentina, and Costa Rica, whose initial factor endowments and extent of inequality were most like those of the U.S. and Canada). It is remarkable that as late as 1900, none of the countries in Latin America had the secret ballot or more than a miniscule fraction of the population casting votes.

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[17] Our discussion of the evolution of suffrage institutions draws from Engerman and Sokoloff (2005). It is perhaps worth emphasizing that most of the countries featured here were independent of their colonial masters and nominal democracies by the middle of the 19th century.

[Table 1 about here]

Although many factors may have contributed to the comparatively very low levels of voting participation in Latin America, the wealth and literacy (which were increasingly introduced over the course of the 19th century and maintained in much of South America well into the 20th century) requirements were obviously (given the literacy rates reported below) serious constraints. The contrast between the U.S. and Canada, on the one hand, and the Latin American countries, on the other, was not so evident at the outset, and not due to differences in ideology related to national heritage. Despite the sentiments popularly attributed to the Founding Fathers, voting in the U.S. was largely a privilege reserved for white men with significant amounts of property until early in the 19th century. Even as late as 1815, only four states had adopted universal white male suffrage. The first-movers in the movement to broadening access to suffrage were the states on the frontier, those entering the Union after the original thirteen, who virtually all chose in their very first state constitutions to extend voting rights to white men (with explicit racial restrictions generally introduced in the same constitutions that did away with economic requirements). Older states were then spurred, through intense political debates and struggles, to revise their laws.

The leadership of the relatively more egalitarian frontier states in extending the franchise not coincidentally paralleled liberal policies toward public schools, access to land, and other issues of interest to potential migrants.[18] Labor scarcity exerted a direct influence on the initial level of inequality across New World colonies, because of its impact on the returns to labor, but it also had indirect effects. It is to us significant that the leaders in extending suffrage (and establishing other institutions providing broad access to opportunity), such as the new states to the United States, Argentina, and Uruguay, did so during periods in which they were striving to attract migrants and when such policies were thought to be attractive to those contemplating relocation. When elites—such as land or other asset holders—desire common men to locate in the polity, they thus may freely choose, finding it in their own private interests, to extend access to privileges and opportunities; indeed, a polity (or one set of elites) may find itself competing with another to attract the labor or whatever else is desired.

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 fundamental implications for the persistence of inequality and long-run paths of institutional and economic development more generally. Schooling institutions are an excellent example. Although most New World societies were so prosperous by the early 19th century that they clearly had the material resources to support the establishment of a widespread network of primary schools, only a few made such investments on a scale sufficient to serve the general population before the 20th century. The exceptional societies, in terms of leadership in investing in institutions of primary education, were the United States and Canada. Virtually from the time of settlement, these North Americans began to develop institutions that would provide local children with a basic education, including the ability to read and write. It was common for schools to be organized and funded at the village or town level, especially in New England. The U.S. is generally credited with having the most literate population in the world by the early 19th century, but the common school movement, which got under way in the 1820s (following closely after the movement to extend the franchise), put the country on an accelerated path of investment in educational institutions that served a broad range of the population. Between 1825 and 1850, nearly every northern state that had not already done so enacted a law strongly encouraging or requiring localities to establish free schools open to all children and supported by general taxes.[19] Although the movement made slower progress in the South, schooling had spread sufficiently by the mid-19th century that over 40 percent of the school-age population was enrolled, and nearly 90 percent of white adults were literate (see Table 2). Canada soon followed the United States in establishing tax-supported schools with universal access, and its literacy rates were nearly as high by the second half of the 19th century.[20]

The rest of the hemisphere trailed far behind the U.S. and Canada in primary schooling and in (the closely related) attainment of literacy. Despite great wealth, the British colonies elsewhere in the hemisphere (such as Guyana and Jamaica) lagged badly in

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[18] See the more detailed discussion in Engerman and Sokoloff (2005).

[19] See the discussion in Cubberley (1920); as well as in Engerman, Mariscal, and Sokoloff (2002)..

[20] See the discussion in Phillips (1957).

providing basic schooling to broad segments of the population.[21] Similarly, even the most progressive Latin American countries, such as Argentina and Uruguay, were more than seventy-five years behind. Despite the country having one of the highest per capita incomes in the world, the literacy rate of native-born Argentines was less than that of non-whites in the U.S. at 1900. 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. While this association might be interpreted as providing for the socialization of foreign immigrants, it is also consistent with the idea that elites were inclined to extend access to opportunities as part of an effort to attract increasingly scarce labor from Europe for which they were directly or indirectly competing. The latter perspective is supported by the observation that major investments in public schooling did not generally occur in any Latin American country until the national governments provided the funds. In stark contrast to the pattern in North America, local and state governments in Latin America proved reluctant to take on this responsibility on their own. Nowhere in this latter region were high levels of literacy achieved until well into the 20th century.

[Table 2 about here]

What accounts for these patterns? Although differences in resources, or per capita income, must certainly play a role in their explanation, it seems likely that the greater inequality that prevailed in Latin America and in the British colonies in the West Indies likely exacerbated the collective-action problems associated with the establishment and funding of universal public schools, because the distribution of the benefits to establishing a broad system of public schools would have been quite different from the incidence of taxes that would have been necessary to finance them. 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.

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[21] Indeed, no significant steps at all were taken in this direction until the 1870s, when the British Colonial Office, perhaps spurred by several important expansions of public provision of elementary education in Great Britain itself (such as the 1870 Education Act) began promoting schooling in the colonies.

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. Virtually all the societies in the Americas had ample supplies of public lands well into the 19th century and beyond. Since the respective governments were regarded as the owners or custodians of this resource, they could directly affect the distribution of wealth, as well as the pace of settlement for effective production, by implementing policies to control the availability of land, set prices, establish minimum or maximum acreages, provide credit for such purposes, and design tax systems. The decisions about how to best employ these public resource were everywhere widely recognized as having an important bearing on how a society would develop, and the subject of protracted political debates and struggles.

As we would expect of a country with relative equality and labor scarcity, land policies in the U.S. never posed major obstacles to acquiring land.[22] The Homestead Act of 1862, which essentially made land free in plots suitable for family farms to all those who settled and worked the land for a specified period, was perhaps the culmination of this institutional orientation. Canada pursued similar policies: the Dominion Lands Act of 1872 closely resembled the Homestead Act in both spirit and substance. Argentina, however, opted for a very different approach. Despite the support of some leaders (such as President Sarmiento) for land policies modeled on the U.S. and Canadian practices, Argentina chose instead to dispose of public lands by making grants of large blocs of land, at first to individuals and later to private development companies. Given that private agents with control of vast land holdings, especially in this setting, would be expected to set higher prices for land than public authorities focused on broad access, it is perhaps not surprising that the Argentine programs were much less successful at getting land to smallholders than those in the U.S. and Canada were.[23]

[22] For a comprehensive overview of U.S. land policy, see Gates (1968). For discussions of Canadian land policy, see Solberg (1987); and Adelman (1994).

[23] For details discussions of the evolution of policies in Argentina, and comparisons with what happened in Canada, see Solberg (1987) and Adelman (1994). The latter makes a number of interesting arguments for why the outcome in Argentina was rather different from that of Canada (as well as in the U.S.). First, the elites of Buenos Aires, whose interests favored keeping scarce labor in the province if not the capital city, were much more effective at weakening or blocking programs than were their urban counterparts in North America. Even those policies nominally intended to broaden access tended to involve large grants to land developers (with the logic that allocative efficiency could best be achieved through exchanges between private agents) or transfers to occupants who were already using the land (including those who were grazing livestock). They thus generally

Argentina, Canada, and the U.S. all had an extraordinary abundance of public lands to transfer to private hands, but the issues and circumstances facing policymakers in societies such as Mexico, with large indigenous populations, were very different. Good land was relatively scarce. Here the lands in question had long been worked by communities of Native Americans, 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 of the 20th century, that had the effect of conferring ownership of much of this land in large tracts on non-Native American landholders.[24] The 1856 *Ley Lerdo* and the 1857 Constitution had set down methods of privatizing these "public lands" in a manner that could originally have been intended to help Native American farmers enter a national land market and commercial economy. Under the regime of Porfirio Díaz, however, these laws became the basis for a series of new statutes and policies that effected a massive transfer of such lands (over 10.7 percent of the national territory) between 1878 and 1908 to large holders such as survey and land development companies, either in the form of outright grants for services rendered by the companies or for prices set by decree.

In Table 3, we present estimates for these four countries of the fractions of household heads, or a near equivalent, that owned land in agricultural areas in the late 19th and early 20th centuries. The figures indicate enormous differences across the countries in the prevalence of land ownership among adult males in rural areas. On the eve of the Mexican Revolution, the figures from the 1910 census suggest that only 2.4 percent of household heads in rural Mexico owned land. The number is astoundingly low. The dramatic land policy measures in Mexico at the end of the 19th century may have succeeded in privatizing most of the public lands, but they left the vast majority of the rural population without any land ownership at all. The evidence obviously conforms well with the idea that in societies that began with extreme inequality, such as Mexico, institutions evolved so as to greatly advantage the elites.

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conveyed public lands to private owners in much larger and concentrated holdings than did the policies in the United States and Canada. Second, the processes by which large landholdings might have broken up in the absence of scale economies may have operated very slowly in Argentina: once the land was in private hands, the potential value of land in grazing may have set too high a floor on land prices for immigrants and other ordinary would-be farmers to manage, especially given the underdevelopment of mortgage and financial institutions more generally. Moreover, livestock production on increased dramatically during the late 19th century, and scale economies in the raising of livestock may have helped maintain the large estates.

[24] For further discussion of Mexico, see McBride (1923); Tannenbaum (1929); and Holden (1994).

In contrast, the proportion of adult males that owned land in rural areas was quite high in the U.S., at just below 75 percent in 1900. Although the prevalence of land ownership was markedly lower in the South, where blacks were disproportionately concentrated, the overall picture is one of rather broad access to this fundamental type of economic resource. Canada had an even better record, with nearly 90 percent of household heads owning the agricultural lands they occupied in 1901. The estimates of landholding in these two countries support the notion that land policies made a difference, especially when compared to those for frontier areas in Argentina.[25] Nevertheless, all of these countries were far more effective than Mexico in making land ownership available to the general population. This evidence on how land policies evolved provides yet another support to our view that the initial extent of inequality influenced the way in which strategic institutions evolved across the societies of the Americas.

[Table 3 about here]

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

The colonial tax structures established by the Europeans in the Americas were generally alike in obtaining much of their revenue from trade or closely related activities. Great Britain levied relatively light tax burdens on the residents of its colonies. Revenues came from regulation of trade and from the taxes it imposed on the importation into Britain of New World-produced commodities such as sugar and tobacco. Given that the demand for these goods was likely highly inelastic, British consumers likely bore most of the burden of these duties. When Britain attempted to increase tax revenues to offset more of the costs of defending its colonies on the North American mainland through excise taxes, import duties, and higher fees, the change in policy was fiercely and famously resisted.[26]

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

[25] We are not able, at this time, to provide estimates of land ownership rates in all provinces of Argentina, but would expect higher rates in the frontier regions we report than in the country at large.

[26] See Brewer (1990). For excellent discussions of how Britain and Spain collected revenue from its colonies, and of how local authorities in their colonies raised revenue, see Gipson (1936); Perkins (1980 and 1994); and Elliott (2006).

wealth their colonies possessed. The Spanish Crown levied a vast range of taxes, with revenue derived from impositions on a variety of activities, commodities, commercial and administrative transactions, and from tribute exacted from Native Americans varying across colonies and districts with the composition of the economy and of the population. In general, however, most of the revenues seem to have come from taxes on the sales of various commodities (the *alcabala*), custom duties, mining (especially silver and gold production), and from various state monopolies in tobacco, salt, and other commodities.[27]

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

Although the various taxes levied by the British Crown on the residents of their colonies were relatively light, the local and provincial governments set up by the colonists themselves seem to have raised more revenues from their populations (at least those segments that were not Native Americans) than did their counterparts in Latin America. This pattern both reflected and contributed to a more decentralized structure of British America. These taxes allowed local or colonial governments greater autonomy in how they operated. The New England colonies exhibited a preference for property or faculty (based on estimated earnings or earnings potential) taxes at both the colonial and local government levels rather early in their histories, and indeed in 1634 the General Court of Massachusetts held that "in all rates and publique charges", every man should be taxed "according to his estate". The expenses of the provincial governments were quite modest,

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[27] For example, in Mexico during the late 1780s, about a quarter of the colonial government's revenue came from the alcabala, nearly 45 percent from state monopolies, and roughly 20 percent from taxes on gold, silver, and other mining activities. See Tenenbaum (1986). The relative importance of taxes on mining seems to have declined, and the relative importance of the tobacco and other monopolies increased, over time. See Burkholder and Johnson (1998).

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

generally consisting of the bare necessities of civil government, but local authorities used their revenues to support investments in quasi-public or public goods and services such as public schools and roads. In contrast, the southern colonies, perhaps influenced by the interests of large landowners (as well as the inelastic demand for some of their prominent exports such as tobacco), tended to rely more on taxing imports and exports. The Middle Atlantic colonies' tax institutions fell somewhere in between, but already by the time of the revolution both the Middle Atlantic colonies and the New England colonies made extensive use of property taxes.[29]

The reliance on taxes on trade as the principal source of tax revenue continued (at least at the national government level) throughout the hemisphere after the wave of independence movements of the late 18th and early 19th centuries. In the United States, a 1789 law establishing the tariff was one of the first laws enacted by the federal government. Although the federal government had other sources of revenues, such as excise taxes, proceeds from sales of public lands, a duty on receipts for legacies, and even taxes (generally of brief duration and during wartime) on dwelling houses, land, and slaves, tariffs provided by far the dominant share (typically well above 80 percent) of national government revenue up through the Civil War. These revenues amounted to roughly 1 to 2 percent of GNP (except for spurts during wartime), and were almost exclusively consumed in covering the costs of defense, paying off the debt, and of general government expenses. Only a small fraction, about 5 percent of federal government expenditures, went to support capital investments such as public buildings, roads and canals, and improvements to rivers and harbors. As was recognized, and has often been noted, the U.S. government was extremely conscientious about maintaining its reputation in financial markets, and was loath to finance much of its expenditures through borrowing or issuance of paper money. In Canada, tariffs were the major source of revenue for the national government after the confederation in 1867, generally accounting for between 60 and 70 percent of dominion revenue (and over 80 percent of dominion tax revenue) into the 20th century.[30]

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[29] See Perkins (1980), and for an exceptionally fine treatment of how the tax structures of the colony, commonwealth, and state of Massachusetts evolved from colonial times through the early 20th century (and the quotation from the order of the General Court, p. 2), see Bullock (1907).

[30] Together with excise taxes (levied primarily on liquors and tobacco), the revenue from tariffs generally accounted for between 75 and 85 percent of dominion revenue. In 1870, the tariffs on sugar and molasses, spirits and wine, tea, cottons, and woolens were the largest contributors, jointly accounting for 65.8 percent of

The overall patterns of national government taxation, if not of the extent of reliance on debt, in Latin America were remarkably similar to that in the U.S. and Canada over the 19th century. Although wars and other shocks occasionally generated transitory impositions of, or increases in, *direct contributions* (direct levies, applied to land or a proxy for income), customs duties and excise taxes (on commodities such as liquors) normally accounted for the bulk of revenues. Indeed, there were only two notable differences in how Latin American central governments financed themselves. First, unlike in the U.S. and Canada, state monopolies (a holdover from the colonial period) and levies on the production of certain staples and minerals intended for export (such as coffee, sugar, guano, gold, silver, nitrates, and copper) were at times significant generators of revenue.[31] The other salient divergence was the greater inclination of Latin American countries to incur debt or issue paper money to finance operating deficits.[32] Notwithstanding these differences, Latin American central governments were like the North American central governments in raising most of their revenue from tariffs and from taxes levied on commodities generally thought to be income inelastic. In Mexico, for example, port taxes, income from the tobacco monopoly, and excise taxes yielded 75 to 85 percent of national government revenue over the latter half of the 19th century. Taxes on property and on businesses existed, but these typically accounted for less than 10 percent of revenue. In Brazil, between 1823 and 1888, more than 50 percent of total national revenue consistently came from tariffs on imports, with excise taxes and assessments on exports contributing roughly 14 and 25 percent of total revenue, respectively. In Chile, taxes assessed at ports and revenue raised by state monopolies consistently accounted for just under 80 percent of national government revenue throughout the second half of the 19th century and well into the 20th century. Colombia provides yet another example. Already by the 1830s, soon after

all tariff revenue. See Perry (1955): Table III. Customs revenue had been the major source of provincial revenue before the Confederation, but the terms of the unification agreement stripped the provinces of the right to levy such taxes.

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

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

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

Wars and other threats to the social order (such as the War of 1812, the U.S. Civil War, the war between Mexico and the U.S., and various internal uprisings) did sometimes stimulate the imposition of direct taxes that extended the reach of national governments in progressive directions (i.e. the income tax in the U.S. during the Civil War, and the property tax in Mexico during its war with the U.S.), but the general pattern throughout the hemisphere was reliance by national governments on taxes that targeted commodities or trade rather than income or wealth.[33] As is evident in Table 4, and discussed in more detail below in section IV, it was only in the 20th century that national governments in the U.S., Canada, and Latin American countries introduced permanent peacetime taxes on income and wealth (including estates and gifts).[34]

[Table 4 about here]

Stark contrasts existed across the societies of the Americas, however, in the size and revenue sources of state/provincial and local governments. Local governments were far more prominent in the United States and Canada than in Latin America (see Table 5), and this feature is of fundamental importance because of the radically different tax instruments used by state and local governments as compared to the national governments. 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

33 A close examination of the variation over time in the amounts of tax revenue raised, and the manner by which national governments in Latin America financed their operations, suggests that there was often a reluctance to increase taxes during periods of war. Rather, the approach seemed to be either inflating the money supply or borrowing from foreign lenders or domestic banks. This pattern stands in stark contrast to the behavior of the U.S. government during wartime, but it is interesting to note the resemblance to how the Confederacy financed its operations during the U.S. Civil War (or War Between the States). In her intriguing article that explores the voting patterns among members of the Confederate Congress, Rose Razaghian finds that it was those that came from the states and districts with large slave plantations (and likely the greatest inequality) that were (until the very late stages of the War) most opposed to taxing income – and thus most inclined toward financing the Confederacy through inflationary monetary policy, loans, and excise taxes. See Razaghian (2005).

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

tendency of these governments to raise the vast majority of revenue through property taxes.

[Table 5 about here]

Local governments certainly grew very rapidly in the United States during the early decades of the 19th century as the *common school movement* progressed, and there were substantial investments in building roads and other infrastructure demanded by an early industrializing economy. Indeed, they were the largest component of the overall government sector throughout the 19th century (with a share of total government revenue of 57.1 percent in 1855, for example), with only a few brief exceptions intervals during and after major wars. Their heavy reliance on the property tax (see Table 6) 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.

[Table 6 about here]

For example, between 1861 and 1905, property taxes accounted for between 76 and 87 percent of all the tax revenue collected by the state and local governments in Massachusetts.[35] The contours of public finance, as regards both the prominence of local governments and the importance of property taxes to them appear to have been much the same in Canada. Our earliest estimate is that property taxes accounted for over 82 percent of local government revenue in 1913 (see Table 7), but less comprehensive information suggests that the share of tax revenue accounted for by levies on property may have been even greater during the 19th century, especially in Ontario.[36]

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[35] These figures (computed from data reported in Bullock (1907): 135) are all the more striking, because the state of Massachusetts depended much more on taxing corporations than did most other states. Moreover, the implication of the figures in Bullock (1907): 127 and 135, is that property taxes accounted for more than 90 percent of the tax revenue raised by local governments in that state between 1880 and 1900, if not before as well. We do not yet have evidence for many states on the shares of revenue to local governments coming from different taxes earlier in the 19th century, but scattered information is consistent with the implication of the estimate for 1902 in Table 6, that local governments obtained well over 90 percent of revenue from property taxes. See Wallis (2001) for further discussion of how the relative importance of the property tax as a source of state revenue varied over the nineteenth century.

[36] See Perry (1955), especially chpts. 2, 5, and 12. Perry finds that property taxes played an important role in the development of municipal or local governments. These taxes were extensively used in upper Canada during the early 19th century. Indeed, Perry suggests that virtually wherever in Canada significant municipal

[Table 7 about here]

State governments in the U.S. and provincial governments in Canada generally represented relatively small parts of their respective aggregate government sectors during the lae 19th and early 20th centuries -- at least as measured by share of tax revenues. In neither country did state/provincial governments account for more than 20 percent of aggregate government tax revenues before the 1920s. They differed, however, in how they obtained revenues to finance their expenditures. Even after the confederation of Canadian provinces in 1867, provincial governments in Canada raised most of their revenues from either subsidies or transfers from the Dominion (whose revenues came primarily from tariffs or excise duties) or from assessments levied on mining, cutting timber, and other exploitation of natural resources. It was only after the scale of provincial programs increased, inspired by rapid population and economic growth on the eve of the 20th century, that provincial governments enacted new levies, such as taxes on corporations, property, and succession duties, to increase their revenues. These measures did not raise substantial amounts, however, and as late as the first decade of the 20th century, generally yielded less than a quarter of provincial revenue.

The state governments in the U.S. made much more use of direct taxes than their counterparts in Canada, and indeed overall relied heavily on property taxes both early and late in the 19th century.[37] The property tax was likely the largest single source of state government revenue in the U.S. at the beginning of the 19th century, but the onset of industrialization opened up or improved alternative means of states raising funds. By the 1820s and 1830s, state governments began to reduce or even eliminate property taxes, as more and more revenues rolled in from other sources, including fees assessed for issuing corporate charters, taxes on corporate capital (especially banks and insurance companies), and returns on investments they had made to stoke development in various banks, transportation companies, and other infrastructure. When the economic contractions of the late 1830s and early 1840s sharply curtailed these sources of revenue, however, many

government developed, the property tax was the dominant source of revenue. Property taxes were less important in Quebec than Ontario, because French Canada was able to obtain substantial revenue from customs fees and statutory road levies. Property taxes were also low in the Maritime Provinces (especially Nova Scotia), because of the limited development of local government in that region. Perry attributes the limited development of local government there to the heterogeneity of the population.

[37] Another direct tax sometimes levied by state governments in the U.S. was the poll tax, but the significance of poll taxes as a revenue source diminished greatly over the 19th century.

state governments found themselves on (or over) the brink of bankruptcy. These fiscal challenges compelled them to revive their property taxes and/or design other relatively stable revenue sources, which were particularly crucial if they hoped to issue debt for the financing of additional investments in infrastructure. Although states were creative in devising a wide variety of alternative methods of raising revenue, property taxes were restored to being the most important tax revenue source for state governments by the end of the 19th century (roughly 70 percent of tax revenue in 1890).

[Table 8 about here]

Given the very large size of the local governments in the U.S. and Canada, and their heavy reliance on property and wealth taxes into the 20th century, it should perhaps not be surprising that these same taxes loom large when one considers the total tax revenue collected by governments at all levels. For the U.S., in both 1902 and 1913 (see Table 9), property, gift, and estate taxes account for between 60 and 70 percent of the revenue to the overall government sector. Although our estimates for Canada do not extend that far back (see Table 10), it is clear that there too – largely due to the prominence of local or municipal governments -- taxes on property and wealth were very important sources of revenue for the government sector overall (nearly 40 percent as late as 1933). Even if the respective levels of government in Latin America relied on the same tax instruments as did their counterparts to the north, the fact that local governments were so much smaller implies that property and wealth holders would contribute a relatively modest proportion of government revenue overall. Local/municipal authorities accounted for only about 10 percent of total government tax revenue in Brazil, Colombia, and Mexico throughout the 19th century (and in Chile, between 10 and 20 percent during the second decade of the 20th century, despite the absence of state/provincial governments). The contrast with the U.S. and Canada is dramatic. In the U.S., local governments generated 57.1 percent of total government tax revenue in 1855, and the figure remained near 50 percent for the rest of the century. Even as late as the 1930s, the share of local government revenue was near 40 percent in both the U.S. and Canada.

[Tables 9 and 10 about here]

From the exceedingly modest investments in public schooling characteristic of Latin America into the 20th century (and reflected in the low literacy rates that prevailed throughout the region until national governments became more aggressive in promoting public schooling) the qualitative pattern evident in the figures for Brazil, Colombia, and Mexico seems to be representative.[38] Local/municipal governments in Latin American countries never grew very large, especially in rural areas and where Native Americans composed larger proportions of the population. The basis for our claim that during the 19th century the overall tax structures in the U.S. and Canada were much more progressive (in the sense of placing more of the burden on wealthy elites) 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 U.S and Canada. Early in the 20th century, local governments in Chile and Colombia (see Tables 11 and 12) raised less than half of their revenue from property and income taxes (less than 25% in Cundinamarca, Colombia), while these taxes were dominant in the accounts of Canada (78%) and the U.S. (over 90%). When one considers these local governments in Latin America, as compared to even U.S. state governments (which, as reported in Table 7, were raising more than 80% of their revenue from property, death, and gift taxes as late as 1913), the disinclination of Latin American governments to tax property holders and the well to do stands out in especially stark terms.

[Tables 11 and 12 about here]

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

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[38] See Engerman, Mariscal, and Sokoloff (2002) for more discussion of the evolution of schooling institutions in the Americas.

perceived as quite unlike their own. This notion receives some support from the observation that during the 19th century local governments in the U.S. were relatively larger (as judged both by the local government share of regional income as well as relative to the income share of state income) in regions with less inequality such as the Midwest, or even the Northeast (see Table 13).

[Table 13 about here]

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 relied more on taxes that placed a lighter tax burden on the elite. As reflected in Tables 14 and 15, which present the sources of revenue (in percentage terms) for all of the state or provincial governments in Argentina and Colombia, and a sampling of them for Brazil and Mexico at various points during the second half of the 19th century, taxes on land or property (the so-called *direct contributions*) accounted for markedly lower proportions of state government revenue in Latin America than such taxes did in the U.S.. 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 rarely accounted for more than 10 to 15 percent (and generally less) of state/provincial revenue, as compared to 70 percent in the U.S. in 1890. Instead, state/provincial governments in Latin America relied on excise taxes (such as on liquors, tobacco, flour, slaughtered livestock, and foreign merchandise), tolls on roads and other modes of transportation, fines and various fees for government services, levies on products intended largely for export (such as coffee in Brazil), and a variety of other sources. Although patterns of incidence are not always transparent, the methods of raising revenue to fund the operations of state and provincial governments in Latin America would generally be expected to impose a proportionally rather light burden on the wealthy classes.

[Tables 14 and 15 about here]

In Brazil, for example, the allocation of taxing authority between the provinces and the national government changed several times over the 19th century. Under the 1840 constitution, the main provincial taxes were taxes on sugar and coffee production, but revenues were also obtained from taxes/fees on legacies and inheritance, on transference of properties, the sale of *novhos e velhos direitos* (official posts and titles), taxes on the slave trade, and especially fees for traveling along provincial roads and rivers. 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 percent of the total revenues of the province, while the taxation on slavery trade and the tax on legacies accounted for 6 percent and 8 percent, respectively. In the province of Minas Geraes, in 1876 the main sources of provincial revenue were taxes on coffee (20 percent of the total revenues of the province), itinerary fees (16 percent), and taxes on transfer, registration and trade of slaves (15 percent).

Direct taxes did not become important until late in the 19th century, but even then the reliance in Brazil on property and other taxes progressive in character was quite modest compared to the United States. The Constitution of 1891 established a republic, and the provinces then became designated states with expanded rights to collect taxes on exports (rights previously reserved for the national government), as well as taxes on property, on transference of property, and on industries and profits. This change transformed the tributary structure of the most prosperous states, such as Minas Geraes, whose economies were largely directed at foreign trade. In Minas Geraes, levies on exports had raised only 5 percent of the total revenues of the province in 1889, but with the expanded power to tax, this share jumped to 64 percent in 1892. Similarly, in 1910 the tax on exports raised 40 percent of the total revenues of Sao Paulo, whereas in 1871 it had yielded no revenue for the province.

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

If it is indeed true that less reliance on taxation of property or wealth is indicative of elites bearing a lighter tax burden, then the evidence does sustain the idea that the tax institutions that characterized Latin America during the long 19th century were especially favorable to their interests. Not only were the local authorities (which everywhere were more likely to tax wealth than those at other levels of government) extremely stunted as regards the scale of their activities (and demands for revenue), but both local and state/provincial governments in Latin America made much less use of property, wealth, or other taxes than did their counterparts in the North. Of course, the burdens of taxation should not be assessed solely by the mix of tax instruments applied to raise revenue, but also by the amount of revenue raised. It might be argued, for example, that the U.S. and Canada were generally more disposed toward government involvement, and thus had a greater need to levy taxes.

One response to this sort of explanation of the comparatively small size of local governments in Latin America, is to point out that any bias against governments in Latin was obviously not neutral across levels of government. The evidence is clear that the local governments in Latin America were stunted relative to national governments, a pattern we find particularly interesting because local governments in virtually all contexts seem to rely more on taxing wealth and property than other levels of government. We explore the issue further in Table 16, where estimates of the amount of national government taxes collected per capita in 1870, as well as the shares of these taxes to national income are presented, for a range of countries across the world. Perhaps not surprisingly, given its higher per capita income, the U.S. national government collected substantial taxes on a per capita basis. The only country that collected more was Peru, which realized extensive revenue over a period of several decades from exports of guano – a natural resource that was all too soon depleted.[39] Judged as a share of national income, however, the amount of revenue going to the national government was not at all high in the U.S.. On the contrary, Argentina and Brazil (and undoubtedly Peru) raised far more revenue for their respective central government, relative to national income, than did the U.S., and Mexico collected nearly as much.

[Table 16 about here]

Admittedly, if one considers the much larger share of total government revenue that goes to local and state governments in the U.S. than in Latin America, it is evident that the revenue going to the government sector in the aggregate is far higher as a share of national income in the U.S. than in any other country in the hemisphere with the exception of Brazil (and Peru, during the bonanza from guano), where the ratio of total taxes to income (in the 7 to 8 percent range) seems roughly similar. Nevertheless, the substantive point remains. It is not the case that the Latin American countries were in general lightly taxed, but rather that that property and wealth taxes, and the levels of government that were more reliant on these sources of revenue, during the 19th and early 20th centuries especially, were of minor significance, by the standards of their neighbors in North America, in the structure and financing of government.

The striking contrast we have highlighted is consistent with our conjecture that the legacy of extreme inequality in Latin America encouraged a distinctly different path of evolution of tax institutions and/or government structures among the societies of the Americas over the 19th century. One alternative hypothesis of this pattern, however, is that the reluctance or inability to tax property and wealth in Latin America was due to conditions characteristic of less developed economies that made it difficult to administer such levies. There may indeed be some merit to this type of explanation, but we would emphasize how the colonies in the northern part of North America, such as those in New England and the Middle Atlantic, made effective use of these sorts of instruments for raising tax revenue in support of local and state governments as early as the 17th century. It seems unlikely that these latter polities could be considered more developed than many of the 19th century Latin America nations. Other possible rationales are that the Latin American

[39] For a brief account of the rise and fall of this remarkably lucrative industry, see Mathew (1976).

societies may have had less demand for the sorts of public good and services that were provided by local governments, or that they simply chose to satisfy that demand through national government programs. These interesting theories deserve further study, but it is worth noting that Latin American societies were characterized by low rates of investment in public schools (and the low literacy rates that accompanied them) well into the 20th century (if not the present day), even after accounting for their levels of per capita income.[40] Moreover, even if a radically different demand for public services, such as schools, does explain the patterns in the size of local governments and in government revenue sources, might this be considered yet another mechanism by which extreme inequality impacts on the institutions of taxation?

IV. TAX SYSTEMS IN THE 20TH CENTURY

Throughout the Americas, the size of the government sector grew substantially over the 20th century and major changes in the tax structures were introduced to fund the increase in government expenditures. But in some respects, much has remained the same. As compared to the United States and Canada, Latin American governments continue to be highly centralized, and to generally rely on consumption taxes instead of taxes on wealth, income (especially those of individuals), or other levies that place a serious burden on elites. Indeed, most observers judge the progressivity of Latin American tax (and expenditure) programs to be remarkably modest, especially in light of the extreme inequality prevailing in that region of the world.[41]

a. Developments in the United States and Canada

At the beginning of the 20th century, the U.S. federal, state and local governments together accounted for only about 7 percent of GDP. Even by 1930, they had grown to no more than 10 percent. During the Depression and World War II, however, the size of the government sector exploded, to roughly 25-30 percent of the economy, with the federal

[40] See Engerman, Mariscal, and Sokoloff (2002); as well as De Ferranti (2004).

[41] This discussion relies on several excellent cross-country studies of tax systems in Latin America as well as Government Finance Statistics from the International Monetary Fund. See Bird (1992 and 2003); Shome (1999); Tanzi (2000); Stotsky and WoldeMariam (2002); and International Monetary Fund (2001 and 2004).

government coming to assume the dominant role it plays today.[42] In Canada, similar developments took place.[43] Most of the major tax changes at the U.S. and Canadian federal levels were related to the need to finance the higher level of expenditures associated with the conduct of World Wars I and II, but in both counties the expanded revenues were tapped in the aftermath of those conflicts to support the peacetime growth of the national governments.[44] Facilitated by the passage of the constitutional amendment in 1913 that cleared away legal obstacles to a federal individual income tax (which followed the passage of a corporate income tax in 1909), the relative tax and spending shares between the federal and state and local governments began to shift. The fiscal landscape changed further with the adoption of social security taxes in 1937.

Over the course of the 20th century, the individual income tax in the U.S. replaced the property tax as the primary tax on individuals.[45] The federal government first adopted an income tax during the 1860s, following the British approach for raising funds to finance the Crimean War. After the Civil War, the income tax was subject to political attacks, and was eliminated, restored, and then struck down on constitutional grounds. Following the passage of the Sixteenth Amendment in 1913, however, the Underwood-Simmons Tariff Act reestablished the income tax in a less progressive and less ambitious form than the Civil War version or the 1894 legislation.[46] The scope of the individual income tax was changed greatly by the revenue demands associated with the world wars. 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 tax revenues increased from $2.2 billion in 1939 to $35.1 billion in 1945. This increase in federal tax revenue from the income tax changed the balance in the relative size of the federal government. Only during World War II did federal tax revenues begin to exceed state and local tax revenues.

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[42] See Steuerle (2004); and Slemrod and Bakija (1996). See also Weisman (2002).

[43] Treff and Perry (2004), at http://www.ctf.ca/FN2003/finances2003.asp.

[44] Brownlee (1996).

[45] It is interesting that when Congress required additional revenue during the War of 1812, the solution was a supplemental property tax collected through a direct assessment of the states. By the time of Civil War, funding the revenue needs for war financing through property taxation had less political appeal. See Brownlee (1996) and Weisman (2002) for more discussion.

[46] For more discussion of the history of the income tax, see Brownlee (1996) and Weisman (2002).

As discussed above, national or central governments were, except for periods of wartime, quite small throughout the Americas during the 19th century. This was certainly true of the U.S. federal government, whose peacetime activities were largely confined to defense, foreign affairs and oversight of foreign trade, and general administration, with only extremely modest contributions going to infrastructure. State and local government assumed nearly all of the responsibility for the provision of schooling and publicly-provided transportation such as roads. Much of this division of activities evolved naturally, as local governments took on the tasks that communities wanted to get done and were willing to pay for. State governments succeeded the provincial governments of colonial times, and were keen to undertake programs that would stimulate economic activity or otherwise improve welfare within their polities, whether supporting transportation projects beyond the scope of towns, such as railroads, or contributing supplemental funds to encourage the expansion of public education. It might well be argued that the state and local governments were dominant in the provision of these sorts of public services, because these levels of government were more responsive to micro-level concerns, or that the population was more willing to pay taxes for projects that were clearly visible and likely to benefit those bearing the cost. Part of the relatively small size of the federal government during this era, however, may have been attributable to constitutional restrictions imposed on the federal government's taxing authority. The framers severely limited the power of the federal government to impose and collect direct taxes and they required any duties, imposts or excises to be uniform throughout the U.S.[47] 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

[47] Article 1, Section 8 provided Congress with the general authority to lay and collect taxes, duties, imposts, and excises, subject to the limitation that such taxes be uniform throughout the United States. Article 1, Section 9 limited the ability of the federal government to impose direct taxes by requiring "No capitation or other direct tax shall be laid, unless in proportion to the census." See generally, Brownlee (1996): 11-20.

known as a barrier to adopting a federal income tax,[48] the limitation was primarily adopted by the founding fathers to prevent federal government property taxes.[49]

As is evident from Table 17, as the federal government has grown since the 1940s, the relative shares of tax revenue for the federal, state and local governments have changed dramatically. Even though their tax revenues increased from roughly 6.1 percent of GDP early in the twentieth century to a post-WWII high of 9.7 percent of GDP in 1972, the relative size of local governments plunged over the first half of the century (from over 50 to below 15 percent), and has drifted down a bit more since (particularly as constitutional and statutory limitations on the use of property taxes began to bite).[50]

[Table 17 about here]

The composition of tax revenues for state and local governments in the U.S. has changed as well. Although property taxes continue to be the major source of tax revenues for local governments, state governments rely far less on them than before. Some of the impetus for this latter shift was the growing dissatisfaction with the property tax that began to surface during the late 19th century.[51] Spurred both by these concerns, and perhaps by

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

[49] Representatives from slave states were concerned that a federal property tax would treat slaves as property, farm states representatives were concerned that the tax might be based on the size rather than the value of landholdings, and representatives of urban commercial areas were concerned that the property tax would be based on assessed value. Brownlee (1996): 14-15.

[50] See Steuerle (2004), p. 37., for changes in the size of local governments relative to the economy. A series of changes in state constitutions and statutes during the late 1970s and 1980s restricted the use of property taxes. In 1978, California voters passed Proposition 13 which imposed a maximum property tax rate of 1 percent. As of 2002, 44 states had some type of restriction on the ability of local government to impose property taxes. These limitations take different forms: 33 states impose property tax rate limitations, 27 states impose limitations on property tax revenue limits, and 6 states impose limits on increases in assessed property values. Brunori (2003): 61-62.

[51] The property tax worked well (or was politically palatable) when the bulk of personal wealth consisted of real property, there was confidence in the ability of the electorate to monitor the expenditures of local (or state) governments, and there was a sense that tax revenue funded public goods and services that enhanced property values. As the variety of assets available to individuals increased, however, criticisms that property taxes were both inequitable and inefficient because either design or enforcement issues led to different forms of wealth being taxed at different rates. State governments responded by nominally increasing the legal scope of their property taxes to cover all types of property, such as cash, bonds, stocks, and mortgages, but in reality the burden fell primarily on owners of real estate. Among the prominent critics of the property tax were Richard T.

the re-introduction of the federal income tax as well, most states abolished general state-level property taxes during the first half of the 20th century and replaced them with state-level income taxes, excise taxes (including levies on automobiles and gasoline to help pay for roads), and sales taxes.[52] Taxes on real property were left to local governments. Property taxes contributed over half the revenues of state governments at the beginning of the century, but by the 1940s they accounted for less than 6 percent. Today, property taxes account for 28.6 percent of total state and local revenue, general sales taxes for 24.7 percent, selective sales taxes for 10.8 percent, individual income taxes for 24.3 percent, and corporate income taxes account for 4.1 percent (other taxes account for 7.6%). [53]

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

[Figure 1 about here]

In Canada, the government sector began to grow rapidly following independence in 1867. Not only did British North America Act provided for a centralized federal government with general taxing authority, but provincial governments came under more pressure to raise revenues to support the increasing demand for public services that accompanied the population and economic booms of the late 19th and early 20th centuries. Tariffs and revenues obtained from public lands and resources taxes were at first the major sources of

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Ely and Edwin R. Seligman. See Ely (1888) and Seligman (1969 [orig. edition published in 1895]). Seligman contended that the property tax was defective in five ways: (i) lack of uniformity or inequality in assessment; (ii) lack of universality in its failure to tax effectively personal property; (iii) incentives to dishonesty in reporting and classifying property; (iv) potential for regressivity; and (v) potential for double taxation. Id at 19-32. He suggested that in the early 1900s the property tax in New York fell 95% on real property and only 5% on personal property despite the relative increase in the proportion of wealth held in intangible personal property.

[52] See the discussion in Einhorn (2006).

[53] U.S. Bureau of the Census (2001).

funds for the national and provincial governments, but this began to change after Canada introduced its first federal income tax, in 1917, to fund the costs of Canada's participation in World War I. Overall, the record of the evolution of tax institutions in Canada over the 20th century resembled that in the U.S., perhaps most notably in the prominence of the income tax (both to the federal and provincial governments).[54] The Canadian pattern was also much like that of the U.S. in the relative importance of the local governments declining markedly over time (from nearly 40 percent of the government sector as late as the 1920s to less than 10 percent today) and the property tax remaining the dominant source of revenue for local governments (with property tax receipts accounting for roughly 70 percent of revenue at 1950).[55]

b. Developments in Latin America

Latin American countries experienced major economic and political changes over the late-19th and 20th centuries. Of greatest significance was a sharp and broad (extending across much of Latin America) acceleration in economic growth that began during the 1870s and 1880s, spurred in large part from exogenous factors such as the expansion of international trade around the world and higher prices for commodities in which the region had a comparative advantage. Although this boom was fueled by improvements in the technology and organization of international transport and trade, as well as increases in demand for raw materials and foodstuffs from rapidly-industrializing Europe, another major stimulus to expanded production of tradable goods came from the real depreciation of the silver-backed currencies (common throughout Latin America) that occurred during the late-19th and early 20th centuries, as the price of silver declined relative to gold. Where this latter development occurred, the surge in commodity output extended beyond agricultural produce (coffee, sugar, animal products, etc.) and natural resources (such as oil, copper, and other minerals) to manufacturing production (which helped to nurture the development of a powerful constituency for higher tariffs) as well. Although their were

[54] Brownlee (1996).

[55] Substantial variation exists among the provinces as to the percentage of total local government revenue from property and related taxes. In New Brunswick, Ontario and Saskatchewan, property tax revenues are about half of total revenues while in Newfoundland and Labrador, Prince Edward Island, and the Northwest Territories property taxes are only about 20% of total local government revenues. See Treff and Perry (2003).

interruptions in the ascent of their economies, and the records and rates of progress varied somewhat across countries, Latin America as a whole has grown at nearly the same rate as the United States since 1870, after a period of relative stagnation for roughly the previous century.[56]

The initial phase of relatively sustained economic growth in Latin America was powered largely by the production of goods for foreign markets. The growth in trade that this pursuit of international comparative advantage led to increased revenues from tariffs (some of which had been raised to protect local industry) and export taxes (or other means of procuring revenues from the exploitation of natural resources) that supported an expansion of central governments.[57] In the more progressive and prosperous countries, such as Argentina, Chile, Costa Rica, and Uruguay, this era of trade-based growth yielded a sharp increase national government support for public services such as schools (which local governments had conspicuously failed to do a good job at providing). In other generally less democratic regimes such as Mexico and Peru, where military officers were not infrequently prominent in political affairs, the increases in revenue were often diverted to enhancing domestic security or the armed forces.[58] Central governments in Latin America did grow during the economic expansion of the of the late-19th and early 20th centuries, but in general – with exceptions such as Argentina and Brazil -- their sizes remained quite modest by the standards of the U.S. or Canada (especially considering the relatively large local and state/provincial governments in those countries), as gauged relative to GDP, until the second half of the 20th century. Unlike the experience of their neighbors to the north, it was not until the 1950s that most central governments in Latin America began to realize substantial growth relative to their respective economies (see

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[56] For an overview of industrial development in Latin America over the late 19th and 20th centuries, see Haber (2006). For general histories of economic, political, and social changes in Latin America during the era see Halperin Donghi (1993); Thorpe (1998); and Bulmer-Thomas (2003).

[57]For example, Brazil, Chile, Ecuador, Mexico, Panama, and Venezuela generally had substantial non-tax revenues to support government operations, mostly obtained from mining, oil production, or (in the case of Panama), income from the Canal.

[58] Such contrasts call attention to the slow pace of democratization in Latin America, and its implications for tax structures and government policies overall. As highlighted in Table 1 above, even the more progressive countries did not achieve rates of participation in elections comparable to those in the U.S. and Canada until the second half of the 20th century.

Table 18). At first, the additional tax revenues were obtained by the introduction and raising of income taxes on individuals and corporations. The major increases in tax revenues that came during the 1960s, 1970s, and 1980s, however, were generated largely by greater collections from turnover taxes and the VAT. In a few countries (most notably Venezuela), expansions of the public sector were financed by taxes on the production of petroleum or other natural resources.[59]

[Table 18 about here]

Given the widespread recognition that the relative size of the government sector typically increases with per capita income, it is perhaps not surprising that tax burdens in Latin American countries were lower over the 20th century than in the U.S. and Canada. What is more striking is that tax burdens are typically lighter in Latin American countries than in other comparable developing countries.[60] For example, using estimates from the 1997 IMF Government Finance Statistics, we can compare the aggregate tax burdens for Latin American countries to those of other economies with similar levels of per capita income. Low-income developing countries (GDP per capita less than $1,000) are reported as having a tax revenue/GDP ratio of 12.1 percent, medium-income developing countries (GDP per capita between $1,000 and $5,000) a ratio of 17.1 percent, and high-income developing countries (GDP per capita greater than $5,000 and less than $20,000) a tax revenue/GDP ratio of 25.6 percent.[61] With the exceptions of Uruguay, Nicaragua, and Panama (which derives revenue from the Canal), the aggregate tax burdens in Latin

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[59]For example, in Venezuela during the late 1950s, taxes on petroleum accounted for two-thirds of total tax revenue. See Sommerfield (1966) : 57.

[60]Economic theory provides relatively little guidance as to optimal levels of taxation, but at least until some level of taxation, there is a positive correlation between per capita GDP and tax levels. Burgess and Stern 1993. For the poorer developing countries, Burgess and Stern find a stronger correlation between increasing GDP and levels of taxation than in either richer developing countries or in developed countries. They note that the richer developing countries often have substantial non-tax revenue sources, either from revenue from state owned resources or from natural resources. For example, in Latin America, Brazil, Chile, Ecuador, Mexico, Panama, and Venezuela have substantial non-tax revenues to support government operations. See Inter-American Development Bank (1997): table C-10.

[61] These statistics are roughly comparable to estimates available from other studies. For example, Tanzi and Zee (2000) estimated that the tax revenue to GDP ratio for all developing countries was 18.2% and for OECD countries the ratio was 37.9% for the period 1995-1997. See Tanzi and Zee 2000. Using a larger sample of countries, Fox and Gurley (2005), found that low-income countries (per capita GDP of less than $1,000) raised tax revenue amounting to 15.8 percent of GDP, medium-income countries (per capita GDP of between US $1,000-17,000) raised about 20.0 percent, and high-income countries (per capita GDP greater than US $17,000) raised 27.2 percent. These estimates do not include social insurance payments.

American countries are lower than the average for their respective income classes of developing countries.

Looking at aggregate tax burdens tells only part of the story. In order to better appreciate how the structure of taxes evolved in Latin America over the 20th century and the factors that contributed to those changes, it is necessary to examine the relative use of different tax instruments. What stands out from this record is that despite the substantial increase in the tax revenues raised over the 20th century, the pattern of Latin American tax institutions generally avoiding taxes that are commonly understood as progressive has persisted. As we have discussed above, during the first decades of the 20th century, Latin American countries continued to rely heavily on customs revenue, with tariffs set both to raise central government revenue as well as to protect influential economic interests (including local industry and workers generally) from foreign competition.[62] In 1930, for example, taxes on international trade (primarily tariffs but some taxes on exports) accounted for: 44 percent of central government revenue in Brazil; 48 percent in Argentina; 54 percent in Chile; 55 percent in Colombia; 41 percent in Mexico; and 51 percent in Venezuela. The importance of these taxes on international trade decreased dramatically over the second half of the century, however, and nowhere today do they account for more than 15 percent. For a short interval, during the 1950s, 1960s, and 1970s, income taxes (which fell much more heavily on corporations than on individuals) replaced tariffs as the major source of revenue, but in recent decades there has been a return to the longstanding practice of relying on commodity taxes. Perhaps encouraged by international movements toward greater openness, taxes on domestic goods and services (particularly the VAT) have assumed the dominant role in raising revenue.[63]

Table 19 provides a representative snapshot of the current sources of tax revenue to the central governments in Latin American and in the U.S. and Canada. Most salient is the much greater importance of indirect taxation in Latin America (and the corresponding

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[62] Haber (2006) and Bulmer-Thomas (2003).

[63] Our characterizations of the change over time in the relative use of tax instruments are based on the data and estimates presented in Bulmer-Thomas (2003), Table 6.6; International Monetary Fund (various years); Richard Musgrave and Malcolm Gillis (1971): 271-73, Tables 3-5; Sommerfeld (1966): 56, table 5; Thirsk (1997): 289, Table 7.1; and Thorp (1998):346, Tables VII.1-2.

much greater importance of income taxation in the two northern countries). Even aside from the obvious centrality of the VAT,[64] it is striking that nearly everywhere in Latin America more revenue (and often far more) is raised from both trade taxes as well as excise taxes than from individual income taxes.[65]

[Table 19 about here]

It is to be expected that low-income countries employ different types of taxes than do high-income countries, but Latin American societies even stand out somewhat relative to other economies at similar levels of development. Table 20 presents a summary of the relative use of different tax instruments by countries at different per capita income levels. First, consider general taxes on domestic goods and services as well as excise taxes. As discussed above, Latin American countries rely on these taxes for about 57 percent of their total tax revenue.[66] Moreover, they generally rely more on these revenue sources than their counterparts in the respective ranges of per capita income. For example, while most Latin American countries would be considered richer developing countries (per capita income of between $5,000-20,000), the average for that class is 46 percent.[67] Perhaps the most distinguishing feature of this perspective on Latin American tax systems, however, is again in their neglect of income taxes, especially individual income taxes. On average, Latin

[64] As is well known, the introduction and diffusion of the VAT over the second half of the 20th century changed the tax landscape throughout the world (with the notable exception of the United States). See Liam P. Ebrill et al. (2001) for a review of this development. Latin American countries were among the leaders in replacing an inefficient collection of turnover taxes with VATs. 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 (and reduce tariffs) without substantial reliance on income taxes. See Keen and Ligthart (1999). Brazil was the first Latin American country to adopt the VAT (1967), followed by Ecuador (1970), Uruguay (1970), Bolivia (1973), Argentina (1975), Colombia (1975), Honduras (1976), Peru (1976), Panama (1977), Guatemala (1983), Mexico (1980), and the Dominican Republic (1983).

[65] Stotsky and WoldeMariam (2002): table 7. Today, revenues from excise taxes account for over 20 percent of total tax revenues in Bolivia, the Dominican Republic, and Nicaragua but less than 5 percent in Colombia and Mexico. For most other countries in Latin America, revenues from excise taxes account for about 10-15 percent of total tax revenues. In contrast, revenues from excise taxes represent only 3-4 percent of the total tax revenues in the U.S. and Canada. In the early 1980s, only in Chile, Colombia, and Mexico did individual income tax revenues exceed excise tax revenues.

[66] The statistics in Table 19 are in line with the estimates of Tanzi and Zee (2000). They confirm that most countries rely on general consumption taxes, such as the VAT, excise taxes, and trade taxes to fund a substantial portion of government operations. Tanzi and Zee (2000). In OECD countries, general consumption tax revenues for 1995-1997 account for 11.4% of GDP. By comparison, in developing countries, general consumption tax revenues for the same time period account for 10.5% of GDP.

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

American countries raise about 25 percent of total tax revenues from income taxes, with about 19 percent from corporate tax revenues and about 6 percent from individual income tax revenues. In contrast, the richer developing countries on average raise about 36 percent of tax revenues from income taxes (13 percent from corporate and 22 percent from individual income tax revenues).[68] Given that the individual income tax is often viewed today as the most progressive major tax instrument, its minor role in Latin America might seem a continuation of a long tradition of gentle treatment of the elite by the tax institutions of that region.

[Table 20 about here]

As we emphasized above, perhaps the most distinctive and fundamentally important feature of Latin American government and tax structures during the 19th century was the high degree of centralization. Local governments in Latin America were quite small by the standards of North American countries. In recent decades there has been increased awareness in Latin America of the possible implications of stunted local governments, especially for the provision of public services. This has led to a wave of policies across the region that are aimed at transferring more resources from the central government to local (if not provincial as well) governments. Table 21 presents estimates for five Latin American countries of the distributions of tax revenues and expenditures across levels of government, before and after the "first generation" of decentralization that began in the early 1980s.[69] Substantial variation in the size of local and provincial governments is

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

[69] See Wiesner (2003): 10, describing the first generation of decentralization as characterized by: (i) implementation of constitutional reforms that provided for automatic and largely unconditional transfers from central government to sub-national governments; (ii) introduction of targeted fiscal transfers through formulas to specific sectors and to low-income groups; (iii) an alleged process of devolving resources together with responsibilities; (iv) delegation of some limited taxing and spending authority; and (v) a general lack of any

evident, with Argentina, Brazil and Colombia having the largest sub-national governments (especially Brazil which has relatively large provincial governments) , Venezuela, Mexico and Bolivia somewhere in the middle, and all other countries having even smaller sub-national governments.[70] Largely because of the enormous increase in the size of the federal governments in the U.S. and Canada, as well as the large transfers from the central to the provincial governments in Brazil and Argentina, the contrast between the rich countries in the North and their neighbors in Latin America is not nearly so stark in this dimension as it was in the past. Nevertheless, sub-national governments remain quite modest throughout Latin America, and the 19th century pattern endures, especially when gauged by tax revenues.

[Table 21 about here]

V. CONCLUSION

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

independent evaluation of results. The "second generation" of decentralization policies began in the late 1990s and provided for tighter macroeconomic budget constraints, stronger intergovernmental regulatory frameworks, and more intensive use of incentives at the sectoral level. Wiesner 2003: 12.

[70] Wills, Garman and Haggard (1995) review the movements toward decentralization in Argentina, Brazil, Colombia, Mexico, and Venezuela, examining the influence that central government has over local finances. They examine the relative discretion the federal government has in determining the amount of transferred funds, the ability of central governments to impose conditions on the use of funds, and the ability of local governments to borrow funds. They find that the degree of decentralization reflects the relative political power of presidents, legislators, and sub-national governments. and that the structure of political parties in the respective countries influences the level of autonomy of lower levels of government.

sources such as taxes on trade, taxes imposed on foreign corporations, and general consumption and excise taxes.

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

This path of institutional development was radically different from those followed by the relatively homogenous Canada and the United States. Although there may be other explanations for these patterns, the evidence seems consistent with our hypothesis that differences in the extent of inequality across these societies contributed to the different political decisions they made regarding the nature and size of different levels of government and the relative use of different tax instruments, (if not the types and scale of government expenditure programs as well). As we have shown, there were no major differences during the 19th century in how national governments chose to raise their revenue. The United States, Canada, and Latin American countries all relied overwhelmingly on customs duties, other levies on foreign trade, and excise taxes. However, the U.S. and Canada were quite unlike their Latin American counterparts in financing local governments whose programs (generally public schools, roads, water and sanitation projects, other public health measures, etc.) were so extensive that they rivaled or exceeded their respective central government in resources consumed and services rendered. The funding for these substantial local governments came overwhelmingly from taxes on property, wealth and income. State and local governments were successful in raising revenue through such instruments primarily because the large share of 19th century wealth held in land, but it is telling that Latin American societies did not experience the same growth of local governments. Given that the record in Canada and the U.S., where local governments funded primarily by property taxes trace back to the 17th and 18th centuries, it appears very difficult to argue that the Latin American policies were dictated by technical or resource constraints on their ability to administer such taxes.

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

BIBLIOGRAPHY

Acemoglu, Daron and James A. Robinson. 2000. "Why Did Western Europe Extend the Franchise? *Quarterly Journal of Economics* 115 (Nov.): 1167-1199.

Adelman, Jeremy. 1994. *Frontier Development: Land. Labor, and Capital on Wheatlands of Argentina and Canada*. 1890-1914. Oxford: Oxford University Press.

Alesina, Alberto, Reza Baqir, and William Easterly. 1999. " Public Goods and Ethnic Divisions." *Quarterly Journal of Economics* 114 (November): 1243-1284.

Best, Michael H. 1976. "Political Power and Tax Revenues in Central America." *Journal of Development Economics* 3 (1976): 49-82.

Bird, Richard M. 1992. "Tax Reform in Latin America: A Review of Some Recent Experiences," *Latin American Research Review* 27.

________. 2003. "Taxation in Latin America: Reflections on Sustainability and the Balance between Equity and Efficiency." Toronto: unpublished working paper.

Brewer, John, 1990. *The Sinews of Power: War, Money, and the English State, 1688-1783*. Cambridge, Mass.: Harvard University Press.

Brownlee, W. Elliot. 1996. *Federal Taxation in America: A Short History*. Washington, D.C.: Woodrow Wilson Center Press.

Brunori, David. 2003. *Local Tax Policy: A Federalist Perspective*. Washington D.C.: Urban Institute Press.

Bullock, Charles J. 1907. "Historical Sketch of the Finances and Financial Policy of Massachusetts." *Publications of the American Economic Association* 3rd Series 8 (May 1907): 1-144.

Bulmer-Thomas, Victor. 2003. *The Economic History of Latin America Since Independence*. (New York: Cambridge University Press.

Burgess, Robin and Nicholas Stern, "Taxation and Development." *Journal of Economic Literature* 31 (June 1993): 762-830.

Burkholder, Mark A. and Lyman L. Johnson. 1994. *Colonial Latin America*. New York: Oxford University Press.

Chaudhary, Latika. 2006. "Social Divisions and Public Goods Provision: Evidence from Colonial India." UCLA: unpublished working paper.

Cubberley, Ellwood P. 1920. The *History of Education*. Boston: Houghton Mifflin.

De Ferranti, David et. al. 2004. *Inequality in Latin America and the Caribbean: Breaking With History*. New York: World Bank and Oxford University Press.

Dunn, Richard S. 1972. *Sugar and Slaves: The Rise of the Planter Class in the English West Indies. 1624-1713*. Chapel Hill: University of North Carolina Press.

Ebrill, Liam P. et. al. 2001. *The Modern VAT*. Washington D.C.: International Monetary Fund.

Einhorn, Robin. 2006. *American Taxation, American Slavery*. Chicago: University of Chicago Press.

Elliott, J.H. 2006. *Empires of the Atlantic World: Britain and Spain in America: 1492-1830*. New Haven: Yale University Press.

Ely, Richard T. 1888. *Taxation of American States and Cities*. New York: Thomas Y. Crowell & Co.

Engerman, Stanley L., Elisa V. Mariscal, and Kenneth L. Sokoloff. 2002. The Evolution of Schooling Institutions in the Americas, 1800-1945." UCLA: unpublished working paper.

Engerman, Stanley L. and Kenneth L. Sokoloff. 1997. "Factor Endowments, Institutions, and Differential Paths of Growth Among New World Economies: A View from Economic Historians of the United States." In Stephen Haber, ed., *How Latin America Fell Behind*. Stanford: Stanford University Press.

__________. 2002. "Factor Endowments, Inequality, and Paths of Development Among New World Economies," *Economia* 3 (Fall 2002): 41-102.

__________. 2005. "The Evolution of Suffrage Institutions in the Americas," *Journal of Economic History*, 65 (December): 891-921.

Fox, William F. and Tami Gurley. 2005. "An Exploration of Tax Patterns Around the World," *Tax Notes International* 37.

Galenson, David W. 1995. "The Settlement and Growth of the Colonies: Population, Labor, and Economic Development." In Stanley L. Engerman and Robert E. Gallman, eds., *The Cambridge Economic History of the United States,* vol I, *The Colonial Period*. Cambridge: Cambridge University Press.

Gates, Paul W. 1968. *History of Public Land Law Development*. Washington, D.C.: Government Printing Office.

Gipson, Lawrence. 1936. *The British Empire Before the American Revolution*. Caldwell, Id.: The Caxton Printers.

Goode, Richard. 1984. *Government Finance in Developing Countries.* Washington, D.C: Brookings Institution.

Greene, Jack P. 1988. *Pursuits of Happiness*. Chapel Hill: University of North Carolina Press.

Haber, Stephen H. 2006. "Development Strategy or Endogenous Process: The Industrialization of Latin America." Stanford University; unpublished working paper.

Halperin Donghi, Tulio. 1993. The *Contemporary History of Latin America*, John Charles Chasteen ed. and trans. Durham: Duke University Press.

Hirschman, Albert O. 1970. *Exit, Voice, and Loyalty.* Cambridge, Mass.: Harvard University Press.

Holden, Robert. 1994. *Mexico and the Survey of Public Lands. The Management of Modernization, 1876-1911*. Dekalb: Northern Illinois University Press.

Inter-American Development Bank. 1997. *Latin America After a Decade of Reforms: Economic and Social Progress*. Baltimore: Johns Hopkins University Press.

International Monetary Fund. Various years. *Government Finance Statistics Yearbook* Washington, D.C.: International Monetary Fund.

Keen, Michael and Jenny E. Ligthart. 1999. "Coordinating Tariff Reduction and Domestic Tax Reform." Washington, D.C.: International Monetary Fund Working Paper No. 99-93.

Khan, B. Zorina and Kenneth L. Sokoloff. 2001. " "Intellectual Property Institutions in the United States: Early Development," *Journal of Economic Perspectives* 15 (Summer): 233-246.

Lockhart, James and Stuart B. Schwartz. 1983. *Early Latin America: A History of Colonial Spanish America and Brazil*. Cambridge: Cambridge University Press.

Mathew, W. M. 1976. "A Primitive Export Sector: Guano Production in Mid-Nineteenth-Century Peru." *Journal of Latin American Studies* 8 (May): 35-57.

Mc Bride, George McCutchen. 1923. *The Land Systems of Mexico*. New York: American Geographical Society.

Musgrave, Richard A. and Malcolm Gillis. 1971. *Fiscal Reform for Colombia: Final Report and Staff Papers of the Colombian Commission on Tax Reform.*

Musgrave, Richard A. and Peggy B. Musgrave. 1984. *Public Finance in Theory and Practice*. New York: McGraw-Hill; 4th edition.

North, Douglass C. 1981. *Structure and Change in Economic History*. New York: Norton.

Perkins, Edwin J. 1980. *The Economy of Colonial America*. New York: Columbia University Press.

________. 1994. American Public Finance and Financial Services, 1700-1815. Columbus.

Perry, J. Harvey. 1955. *Taxes, Tariffs, & Subsidies: A History of Canadian Fiscal Development*. 2 vols. Toronto: University of Toronto Press.

Phillips, Charles E. 1957. *The Development of Education in Canada.* Toronto: W.J. Gage.

Reese, Thomas J. 1980. *The Politics of Taxation*. Westport, CT: Greenwood Press.

Razaghian, Rose. 2005. "Financing the Civil War: The Confederacy's Financial Strategy." New Haven: Yale ICF Working Paper No. 04-45.

Seligman, Edwin R. 1969 [orig edition 1895]. *Essays in Taxation.* New York: A.M. Kelley.

Shome, Parthasarthi, 1999. "Taxation in Latin America: Structural Trends and Impact of Administration." Washington, D.C.: International Monetary Fund Working Paper No. 99-19.

Slemrod, Joel and Jon M. Bakija. 2001. "Growing Inequality and Decreased Tax Progressivity." In *Inequality and Tax Policy*, Kevin A. Hassett and R. Glenn Hubbard, eds. Washington, D.C.: American Enterprise Institute Press.

_________. 1996. *Taxing Ourselves.* Cambridge, MA: MIT Press.

Solberg, Carl E. 1987. *The Prairies and the Pampas: Agrarian Policy in Canada and Argentina 1880-1913*. Stanford; Stanford University Press.

Sommerfield, Raynard M. 1966. *Tax Reform and the Alliance for Progress*. Austin & London: University of Texas Press.

Steuerle, C. Eugene. 2004. *Contemporary US Tax Policy*. Washington, D.C.: Urban Institute Press.

Stotsky, Janet and Asegedech WoldeMariam. 2002. "Central American Tax Reform: Trends and Possibilities." Washington, D.C.: International Monetary Fund Working Paper No. 02-227.

Tait, Alan A, Wilfrid L. M. Gratz, and Barry J. Eichengreen. 1979. "International Comparisons of Taxation for Selected Developing Countries, 1972-1976." *Staff-Papers International Monetary Fund* 26 (March).

Tannebaum, Frank. 1929. *The Mexican Agrarian Revolution*. New York: Macmillan.

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

________. 2000. "Taxation in Latin America in the Last Decade," Center for Research on Economic Development and Policy Reform Working Paper No. 00-76

Tanzi, Vito and Howell Zee 2000. "Tax Policy for Emerging Markets: Developing Countries." Washington, D.C.: International Monetary Fund Working Paper No. 00-35.

Tenenbaum, Barbara. 1986. *The Politics of Penury: Debt and Taxes in Mexico, 1821-1856*. Albuquerque: University of New Mexico Press.

Thirsk, Wayne, ed. 1997. *Tax Reform in Developing Countries*._ Washington D.C.: World Bank.

Thorpe, Rosemary. 1998. *Progress, Poverty and Exclusion: An Economic History of Latin America in the 20th Century*. Baltimore: Johns Hopkins University Press.

Treff, Karin and David B. Perry. 2004. *Finances of the Nation 2003*. Toronto: Canadian Tax Foundation.

United States Bureau of the Census, 2001. *State and Local Revenue*. Washington, D.C.: Government Printing Office.

Wallis, John Joseph Wallis. 2001. "A History of the Property Tax in America." In *Property Taxation and Local Government Finance: Essays in Honor of C. Lowell Harriss*. Wallace E. Oates ed. Cambridge, MA: Lincoln Institute of Land Policy.

Weisman, Steven R. 2002. *The Great Tax Wars*. New York: Simon & Schuster.

Wiesner, Eduardo. 2003. *Fiscal Federalism in Latin America: From Entitlements to Markets*. Washington, D.C.: Inter-American Development Bank.

Wills, Eliza, Christopher da C.B. Garman, and Stephan Haggard. 1995. "The Politics of Decentralization in Latin America." *Latin American Research Review* 34.

Table 1

LAWS CONCERNING THE FRANCHISE AND VOTING PARTICIPATION

IN SELECTED COUNTRIES, 1840 TO 1940

Period and Country	Year	Lack of Secrecy in Balloting	Wealth Requirement	Literacy Requirement	Percent of the Population Voting
1840–80					—
Chile	1869	No	Yes	Yes	1.6
Costa Rica	1890	Yes	Yes	Yes	—
Ecuador	1856	Yes	Yes	Yes	0.1
Mexico	1840	Yes	Yes	Yes	—
Peru	1875	Yes	Yes	Yes	—
Uruguay	1880	Yes	Yes	Yes	—
Venezuela	1880	Yes	Yes	Yes	—
Canada	1878	No	Yes	No	12.9
United States	1850	No	No	No	12.9
1881–1920					
Argentina	1916	No	No	No	9.0
Brazil	1914	Yes	Yes	Yes	2.4
Chile	1920	No	No	Yes	4.4
Colombia	1918[a]	No	No	No	6.9
Costa Rica	1919	Yes	No	No	10.6
Ecuador	1894	No	No	Yes	3.3
Mexico	1920	No	No	No	8.6
Peru	1920	Yes	Yes	Yes	—
Uruguay	1920	No	No	No	13.8
Venezuela	1920	Yes	Yes	Yes	—
Canada	1917	No	No	No	20.5
United States	1920	No	No	Yes[b]	25.1
1921-1940					
Argentina	1937	No	No	No	15.0
Brazil	1930	Yes	Yes	Yes	5.7
Colombia	1936	No	No	No	5.9
Chile	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

Sources: Engerman and Sokoloff 2002 and 2005.

a. The information on restrictions refers to national laws. The 1863 Constitution empowered provincial state governments to regulate electoral affairs. Afterwards, elections became restricted (in terms of the franchise for adult males) and indirect in some states. It was not until 1948 that a national law established universal adult male suffrage throughout the country. This pattern was followed in other Latin American countries, as it was in the United States and Canada to a lesser extent.

b. Two states, Connecticut and Massachusetts, introduced literacy requirements during the 1850s. Sixteen states—seven southern and nine northern -- introduced literacy requirements between 1889 and 1926.

Table 2

LITERACY RATES IN SELECTED COUNTRIES OF THE AMERICAS, 1860-1920

Country	Year	Age	Rate (per-cent)
Argentina	1869	6 and above	23.8
	1900	10 and above	52.0
Bolivia	1900	10 and above	17.0
Brazil	1872	7 and above	15.8
	1900	7 and above	25.6
	1920	10 and above	30
Chile	1865	7 and above	18
	1900	10 and above	43
Colombia	1918	15 and above	32
Costa Rica	1892	7 and above	23.6
	1925	10 and above	64
Guatemala	1893	7 and above	11.3
	1925	10 and above	15
Mexico	1900	10 and above	22.2
Paraguay	1886	10 and above	19.3
	1900	10 and above	30
Peru	1925	7 and above	38
Uruguay	1900	10 and above	54
	1925	10 and above	70
Venezuela	1925	All	34
Canada	1861	All	82.5
United States	1870	10 and above	80
			(88.5, 21.1)
	1910	10 and above	92.3
			(95.0, 69.5)

Source and Note: Engerman and Sokoloff 2002. In the U.S. case, the figures for whites and nonwhites, respectively, are reported within parentheses.

Table 3

LANDHOLDING IN RURAL REGIONS OF MEXICO, THE UNITED STATES, CANADA, AND ARGENTINA, C. 1900

Country, Year, and Region	Proportion of Household Heads Who Own Land[a]
MEXICO, 1910	
North Pacific	5.6
North	3.4
Central	2.0
Gulf	2.1
South Pacific	1.5
Total rural Mexico	2.4
UNITED STATES, 1900	
North Atlantic	79.2
South Atlantic	55.8
North Central	72.1
South Central	51.4
Western	83.4
Total United States	74.5
CANADA, 1901	
British Columbia	87.1
Alberta	95.8
Saskatchewan	96.2
Manitoba	88.9
Ontario	80.2
Quebec	90.1
Maritime[b]	95.0
Total Canada	87.1
ARGENTINA, 1895	
Chaco	27.8
Formosa	18.5
Missiones	26.7
La Pampa	9.7
Neuquén	12.3
Río Negro	15.4

Chubut	35.2
Santa Cruz	20.2

Source: Engerman and Sokoloff 2002.

a. Landownership is defined as follows: in Mexico, household heads who own land; in the U.S., farms that are owner operated; in Canada, total occupiers of farm lands who are owners; and in Argentina, the ratio of landowners to the number of males between the ages of 18 and 50.

b. The Maritime region includes Nova Scotia, New Brunswick, and Prince Edward Island.

Table 4

THE SHARES OF NATIONAL GOVERNMENT REVENUE ACCOUNTED FOR BY TARIFFS AND EXCISE TAXES, AND BY TAXES ON INCOME AND WEALTH

	Customs (%)	**Income and Wealth Taxes (%)**
Argentina		
1872	94.0	--
1895	71.2	3.2
1920	58.4	2.9
1940	24.7	17.9
Brazil[a]		
1870	71.4	--
1888	69.1	--
1900	65.5	--
1920	56.8	--
1940	50.3	10.2
Chile		
1895	73.8	0.6
1920	70.2	6.0
1940	41.1	23.7
Colombia		
1872	69.5	--
1928	56.0	5.3
1940	36.7	30.4
Costa Rica[c]		
1871	91.4	--
1885	81.3	--
1910	86.8	--
1918	64.4	18.3
1930	78.1	7.2
El Salvador[a]		
1897	84.0	--
1910	75.0	--
Guatemala[a]		

1872	76.0	--
Mexico[b]		
1870	92.3	3.6
1890	79.7	4.7
1910	86.0	11.1
1929	[29.8]	10.6
1940	[29.5]	17.0
Peru[d]		
1871	95.6	--
1899	59.1	3.6
1920	51.9	6.0
1940	26.5	18.4
Uruguay		
1895	66.7	--
1910	60.0	--
1929	32.2	18.6
1940	40.0	14.0
Canada		
1870	63.2	--
1905	57.5	--
1920	37.3	10.5
1940	15.0	28.4
United States[e]		
1820	83.3	--
1860	94.6	--
1870	47.5	9.3
1900	41.1	--
1927	17.0	64.8
1940	5.8	43.0

Notes and Sources: The general source for the estimates in the Table is Brian R. Mitchell, International Historical Statistics: the Americas, 1750-1988 (1993). However, the highly aggregated figures reported in Mitchell (1993) were interpreted with, and complemented by, the greater detail obtained for a number of individual countries: For Argentina, Vicente Vasquez, Estadisticas Historicas Argentinas (comparadas), Premier Parte 1875-1914 (1971); Estadisticas Historicas Argentinas (comparadas), Segunda Parte 1914-1939 (1976). For Brazil, Liberato de Castro Carreira, Historia Financiera e Ornamentaria do Imperio do Brazil desde a sua fundação (1889); Fundação Instituto Brasileiro de Geografia e Estatistica-IBGE, Estadísticas Históricas do Brasil (1990). For Chile, Evaristo Molina, Bosquejo de la Hacienda Publica de Chile desde la Independencia hasta la fecha (1898).

For Colombia, Instituto Colombiano de Cultura, Nueva Historia de Colombia, Vol. 2 (1989); James William Park, Rafael Núñez and the Politics of Colombian Regionalism 1863-1886 (1985); Luis Fernando López, Historia de la Hacienda y el Tesoro de Colombia, 1821-1900 (1992). For Costa Rica, Tomas Guell, Compendiode Historia Económica y Hacendaria de Costa Rica (1975); Ministro de Economía y Hacienda, Anuario de la Dirección General de Estadística (1953); Ana Román, Las Finanzas Públicas de Costa Rica: Metodología y Fuentes (1870-1948) (1995). For Mexico, Marichal, Carlos, Manuel Miño Grijalva & Paolo Riguzzi, El primer siglode la Hacienda Pública del Estado de México, 1824- 1923 (1994). For Peru, Ministerio de Hacienda y Comercio, Extracto Estadistico del Peru 1927 (1928) and Extracto Estadistico del Peru 1940 (1940); Javier Tantalean Arbulu, Politica Economico-Financiera y la Formacion del Estado Siglo XIX (1979).

[a] The revenue included under customs includes sales and excise taxes as well as customs.

[b] The estimates of customs revenue for 1870 through 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 72.7percent in 1870 to 50.8 in 1890 to 44.4 percent 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.

Table 5

DISTRIBUTION OF TAX REVENUES ACROSS LEVELS OF GOVERNMENT DURING THE

19TH CENTURY: BRAZIL, CHILE COLOMBIA, MEXICO, CANADA, AND THE U.S.

	National Government **(%)**	Provincial Governments **(%)**	Municipalities or Other Local **(%)**
Brazil			
1826	30.8	69.2	0.0
1856	79.5	17.1	3.3
1860	78.2	18.2	3.5
1885/86	76.3	18.5	5.2
Chile			
1913	92.5	--	7.5
1915	90.8	--	9.2
1920	87.9	--	12.1
Colombia			
1839	88.4	2.9	8.7
1842	91.8	1.6	6.7
1850	85.4	8.7	5.8
1870	46.6	30.8	22.6
1894	60.0	32.0	8.0
1898	66.7	28.6	4.8
Mexico			
1882	69.1	19.5	11.5
1890	74.7	16.3	9.0
1900	67.3	19.8	12.9
1908	70.6	17.1	12.3
Canada			
1933	42.5	17.9	39.6
United States			
1855	25.5	17.4	57.1
1875	39.6	16.4	44.0
1895	36.0	14.0	50.0
1913	29.1	13.2	57.6
1927	35.5	18.0	46.5

Sources and Notes: For Brazil, Carreira 1889. The substantial change in the distribution of tax revenues between 1826 and 1856 reflects the growth in the relative power of the national government, relative to the provinces, after independence. There were explicit divisions of authority across the levels of government as regards what could be taxed, but those divisions changed somewhat over time. In 1834, the national government was given the authority to raise revenue through collecting taxes on imports, exports, slaves, and the production of gold, sugar, cotton, and various other products, as well as through port fees, stamp requirements, and the sale of official posts and titles. The division of authority changed over time, with perhaps the principal impact being the shift of taxes on slaves to provinces, with the right to tax immobile property going to the national government. For Colombia, Felipe Perez, Geografia General; F.J. Vergara y Velasco, Nueva Geografia; Memorias de Hacienda, 1870-75; Luis Ospina Vasquez, Industria y proteccion en Colombia; and Luis Fernando López, Historia de la Hacienda y el Tesoro de Colombia, 1821-1900 (Banco de la República 1992). As seen in the table, in the 1830s and 1840s, the national government collected a major part of the fiscal revenues. The situation changed drastically after the reform of 1850, which intended to decentralize the fiscal revenues and spending. The states would be in charge of the elaboration of their own budgets. In the case of revenues, the national government would keep mainly the revenues from customs, salt monopoly, stamped paper, income from the mint, and the postal and telegraph service, while the states would collect the revenues from taxes on the gross value of the production of gold and certain agricultural commodities. These taxes were phased out during mid-century, however, and the states created new taxes then, such as a direct tax, in order to raise more revenues. Not only taxation was decentralized: spending was also reallocated. The states were put in charge of the spending on public instruction, police, prisons, justice administration, roads and public works. Between 1863 and 1886 the decentralization process became more significant. The Constitution of 1863 established the federal system in the Estados Unidos de Colombia (United States of Colombia), which was confirmed by nine sovereign states: Antioquia, Bolívar, Boyacá, Cauca, Cundinamarca, Magdalena, Panamá, Santander and Tolima. The decentralization of revenues had a significant impact: while in 1850 the revenues collected by states represented 8.7% of total revenues, in 1870 they represented 30%. In the case of the municipalities, their revenues also increased in importance from 6% to 23% between 1850 and 1870. It is important to notice that Antioquia and Cundinamarca, the two states that realized the most growth over the period in both income and state tax revenue, had been characterized by relative labor scarcity and likely had greater equality. For Canada, see J. Harvey Perry, Taxes, Tariffs, & Subsidies: A History of Canadian Fiscal Development 2 vols. (Toronto: University of Toronto Press, 1955): Appendix C, Table 1. For the United States, the figures for 1855, 1875, and 1895, were computed as a weighted average of regional estimates of per capita revenue raised for different levels of government. The federal figures include revenue raised through land sales. See Lance E. Davis and John Legler, "The Government in the American Economy, 1815-1902," Journal of Economic History 26 (Sept. 1966): 514-552. The estimates for 1913, 1927, and 1950, see U.S. Bureau of the Census, Historical Statistics of the United States: Colonial Times to 1970 (Washington, D.C.: Government Printing Office 1975).

Table 6

SOURCES OF TAX REVENUE FOR THE U.S. LOCAL GOVERNMENTS, 1890-1950

	1890	1902	1913	1927	1940	1950
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 Taxes	7.5	11.4	8.6	2.1	3.9	4.7
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0

Notes and Sources: For the 1890 estimates, see Morris A. Copeland, Trends in Government Financing (Princeton: Princeton University Press 1961). Copeland also provides extensive discussion, as well as estimates that conform with those presented in Sidney Ratner, Taxation and Democracy in America (New York: Wiley 4th edition 1980), Table 1. We employ Ratner for the estimates after 1890, as this source covers the years up to 1950. The estimates represent the share of local government tax revenues accounted for by the respective taxes. Transfers of resources to local governments accounted for less than 10 percent of total resources available for local government expenditures through 1913 (and most of those transfers were grants for schools or roads), rose to a bit less than 15 percent by 1932, but jumped to more than 25 percent by the early 1940s.

Table 7

SOURCES OF REVENUE FOR MUNICIPAL GOVERNMENTS, CANADA, 1913-1950

	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
Non-Tax Revenues	11.8	13.9	14.3
Subsidies from Other Govts.	--	--	2.6
TOTAL	100.0	100.0	100.0

Notes and Sources: Statistics Canada, Historical Statistics of Canada, Series H 52-74 (F.H. Leacy ed., 1983).

Table 8

SOURCES OF TAX REVENUE FOR THE U.S. STATE GOVERNMENTS, 1890-1950

	1890 (%)	1902 (%)	1913 (%)	1927 (%)	1940 (%)	1950 (%)
Individual Income Taxes	--	--	--	4.0	4.7	7.4
Corporate Income Taxes	--	--	--	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

Notes and Sources: See the note to Table 6. The estimates represent the share of state government tax revenues accounted for by the respective taxes. Non-tax revenues appear to have been substantial, however, accounting perhaps for as much as 40 percent of revenue in 1913.

(*) The sales and gross receipts taxes for 1890 are included in the Other category.

Table 9

SOURCES OF TAX REVENUE IN THE U.S., FOR ALL LEVELS TOGETHER, 1902-1950

	1902 (%)	1913 (%)	1927 (%)	1940 (%)	1950 (%)
Individual Income Tax	--	--	9.8	8.1	29.3
Corporate Income Tax	--	1.5	13.9	8.7	19.6
Sales and 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

Notes and Sources: Ratner (1980), Table 1. The estimates represent the share of total government tax revenue (national, state, and local considered together) accounted for by the respective taxes.

Table 10

SOURCES OF REVENUE TO CONSOLIDATED GOVERNMENTS, CANADA, 1933-1950

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

Notes and Sources: Statistics Canada, Historical Statistics of Canada, Series H 52-74 (F.H. Leacy ed., 1983).

Table 11

Chile: Revenues of the Municipal Governments

	Taxes on income (%)	Taxes/Fees on Professions and Industries (%)	Taxes on Alcoholic Beverages (%)	Taxes on Slaughtering (%)	Taxes on Mines (%)	Taxes on Carriages (%)	Other (%)
1913	39.0	7.1	6.0	4.0	2.1	3.0	38.8
1915	50.0	6.7	4.1	3.3	2.5	2.5	30.9
1920	38.7	15.7	2.7	2.1	2.3	2.4	36.1

Source: Oficina Central de Estadistica Sinopsis Estadistica de la Republica de Chile (1921).

Table 12

COLOMBIA: SOURCES OF REVENUE OF THE MUNICIPAL GOVERNMENTS

IN THE DEPARTMENT OF CUNDINAMARCA, 1918

	Total for All Municipalities in Cundinamarca **(%)**	City of Bogota Alone **(%)**
Property Tax	22.5	14.2
Almotacen and plaza (tax on market)	11.7	15.0
Taxes on Slaughtering	5.7	4.0
Bullfighting and Other Legal Games	1.7	1.0
Rental Income	1.2	0.1
Fines	2.7	1.6
Other Sources	54.5	64.1
TOTAL	100.0	100.0

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

Table 13

LOCAL AND STATE TAXES, AS SHARES OF INCOME, BY REGION IN THE U.S:, 1860 AND 1880

	% State Taxes	% Local Taxes	P.C. Income (1860$)
1860			
Northeast	0.91	3.65	181
N. Central	1.25	6.22	89
S. Atlantic	2.21	3.07	81
E. So. Central	1.12	1.79	89
W. So. Central	0.68	2.20	184
National Avg.	1.22	2.58	128
1880			
Northeast	0.93	4.08	244
N. Central	0.84	4.40	170
S. Atlantic	2.04	3.33	84
E. So. Central	1.23	1.97	95
W. So. Central	0.97	4.31	112
National Avg.	0.90	3.97	173

Notes and Sources: Both the regional and national average shares of state and local revenues in regional were calculated from the estimates of government receipts in Davis and Legler (1966), and the per capita income estimates in Robert W. Fogel, Without Consent or Contract (New York: Norton 1988). We do not include estimates for the national government as a share of income, because the receipt is based on point of collection, and thus implies higher taxes in regions with ports or substantial land sales. However, our estimates of the national figures for the total tax revenue relative to income are 6.67% and 8.96% in 1860 and 1880 respectively. Some of the later-settled regions are excluded here because of incomplete information.

Table 14

SOURCES OF REVENUE TO STATE/PROVINCIAL GOVERNMENTS

IN ARGENTINA AND COLOMBIA, c. 1870

ARGENTINA Revenues of the Provincial Governments	**1872** (%)
Direct contribution (Taxes)	13.2
Constitution-Mandated Share of Tariff Revenue	15.2
Other Subvention from National Treasury	9.7
Sales of land	30.5
Alcabala (sales tax)	0.2
Rent of land	0.2
Inheritances	0.1
Stamped Paper, Tolls, Tax on Fruit, and Other Miscellaneous	30.9

COLOMBIA *Revenues of the State Governments*	**1870** (%)
Direct Taxes on Industry and Capital	11.7
Tax on Real Estate	7.1
Tax on Slaughtered Livestock	18.3
Tax on Liquors	15.1
Tax on Foreign Merchandise	12.9
Excise Taxes on Cacao, Tobacco, and Anise	7.0
Stamps	5.7
Miscellaneous/Other	22.1

Notes and Sources: For Argentina, The source for this table is: Republica Argentina, Registro Estadistico de la Republica Argentina, Vol. VII, 1872, 1873 (Buenos Aires: Sociedad Anonima de Tipografia, Litografia, Encuadernacion y Fundicion de Tipos a Vapor, 1875).

Table 15

SOURCES OF REVENUE TO SELECTED STATE/PROVINCIAL GOVERNMENTS

IN BRAZIL AND MEXICO, c. 1870 to 1910

BRAZIL	**1871-72**		**1910**
Sao Paulo	**(%)**		**(%)**
Taxes on Exports	--		40.7
Transit Fees/Taxes	79.1		3.6
Tax/Fees on Inheritances and Property Transfers	7.9		15.9
Taxes on Property	1.2		2.0
Taxes on Capital of Producers	--		5.7
Taxes on Slaves and Slave Trade	5.8		--
Taxes on Water and Sewers	--		8.4
Judiciary, State Stamps, Lotteries, Fines, Fees, and Other Miscellaneous	6.0		24.7
	1876	**1892**	**1905**
Minas Geraes	**(%)**	**(%)**	**(%)**
Taxes on Exports	5.7	64.4	59.0
Taxes on Coffee, Gold, Salt, and Diamonds	22.3	0.8	1.5
Transit Fees/Taxes	16.4	0.9	1.0
Tax/Fees on Inheritances and Property Transfers	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
Judiciary, State Stamps, and Other Fees	1.0	8.2	4.9
Official Posts and Titles	7.4	--	2.8
Lotteries, Water, Sewers, and Other Miscellaneous	19.1	4.0	5.7

MEXICO	**1870**
Yucatan	**(%)**
Income From Public Lands and Sea Salt Fields	27.5
Taxes on Liquors	14.6
Sales Taxes on Livestock and Flour	20.6
Taxes on Imports	3.5
Transfer Fees and Fines	19.1

Other Miscellaneous Fees and Taxes	14.6

Sources and Notes: For Brazil, in 1876 and 1892, the sources are Torres (1961), and for 1905, the source is Barbosa (1966). The relatively high figure for the miscellaneous/other category in Minas Geraes in 1876 is due to 9.9% of the revenue coming from "direitos de 6% sobre outros generos". The high transit tax revenue in Sao Paolo in 1871 is due primarily to the Taxas das Barreiras, which was a state road tax, whereby stations on state roads collected tolls for carts, wagons, coaches, and animals on the hoof. For Mexico, the source is Levy 2005.

Table 16

NATIONAL GOVERNMENT TAX REVENUE PER CAPITA, C. 1870

	Taxes per capita (1870 US$)	Index of Tax Revenue Relative to National Income (100=US)
AMERICAS		
Argentina	9.4	155
Bolivia	1.2	
Brazil	6.7	195
Chile	6.7	
Colombia	1.1	
Costa Rica	9.0	
Ecuador	1.3	
El Salvador	2.2	
Guatemala	1.7	
Honduras	0.9	
Mexico	3.1	94
Nicaragua	2.9	
Peru	14.0	
Venezuela	5.1	
UNITED STATES	11.4	100
EUROPE		
Belgium	7.1	58
Denmark	9.3	104
England	13.0	86
France	12.3	143
Germany	5.6	63
Greece	4.8	
Holland	14.0	114
Portugal	4.5	
Sweden and Norway	3.7	51
Switzerland	2.0	20

Notes and Sources: The information on taxes per capita is from Luis Fernando Lopez Garavito, Historia de la Hacienda y el Tesoro en Colombia, 1821-1900 (Bogota: Banco de la Republica, 1992), pp. 202-203. The values of the index of tax revenue relative to national income were computed as the respective ratios 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 (Paris: OECD, 1995). The index values are expressed relative to the U.S. value, which was normalized to a standard of 100.

Table 17

SHARES OF TAX REVENUE FOR THE AGGREGATE GOVERNMENT SECTOR IN THE U.S.:

1902 THROUGH 2000

	Federal Tax Revenues (Excluding Social Security)	State Tax Revenues	Local Tax Revenues	Social Security Revenues
	(%)	(%)	(%)	(%)
1902	37.4	11.4	51.3	--
1912	29,2	13,3	57.6	--
1922	45.6	12.8	41.5	--
1932	22.7	23.7	53.6	--
1940	33.9	23.0	31.2	11.9
1950	63.4	14.3	14.4	7.9
1960	60.3	14.1	14.1	11.5
1970	52.5	17.2	14.0	16.3
1980	47.9	18.7	11.8	21.6
1990	41.8	19.8	13.3	25.1
2000	45.6	19.2	11.9	23.3

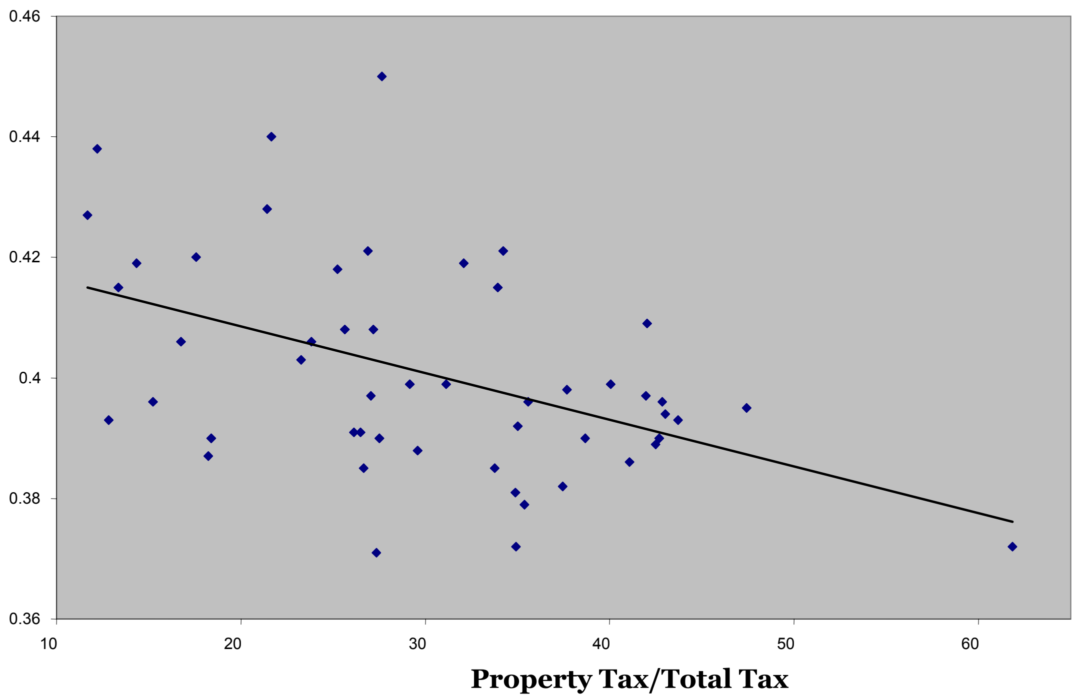
Sources: U.S. Bureau of the Census, Historical Statistics of the United States: Colonial Times to 1970 (Washington, D.C.: Government Printing Office 1975); U.S. Census Bureau, Statistical Abstracts of the United States: 1983, 1992, 2003 (Washington, D.C.: U.S. Government Printing Office 1983, 1992, 2003); and C. Eugene Steurle, Contemporary U.S. Tax Policy (2004), p. 260.

Figure 1

INCOME INEQUALITY AND THE IMPORTANCE OF PROPERTY TAX REVENUE:

A PLOT OF THE GINI COEFFICIENTS BY THE SHARE OF PROPERTY TAXES IN TOTAL STATE

AND LOCAL GOVERNMENT REVENUE, ACROSS ALL STATES, 1980



Source: For the state and local government revenue information, see U.S. Bureau of the Census, Statistical Abstracts 1983 Washington, D.C.: U.S. Government Printing Office 1983), Table 477 (on page 284); and for the state-level gini coefficients for income inequality, see Table 704 (p. 426).

Table 18

CENTRAL GOVERNMENT TAX REVENUE AS A SHARE OF GDP

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

Sources: Latin American Centre, University of Oxford, Oxford Latin American Economic History Database (data last accessed January 16, 2006), available at http://oxlad.qeh.ox.ac.uk/; Brazil Ministry of Finance; UNPAN, Indicator-Central Government Tax Revenue as A Percentage of GDP, 1990-1997, available at http://unpan1.un.org/intradoc/groups/public/documents/UN/UN-000028.pdf.

Table 19

SOURCES OF TAX REVENUE FOR CURRENT CENTRAL GOVERNMENTS IN THE AMERICAS

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

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

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

Table 20

RELATIVE USE OF DIFFERENT TAX INSTRUMENTS BY CENTRAL GOVERNMENTS,

BY PER CAPITA INCOME LEVEL: WORLD AVERAGES

	1990-1995 GDP Estimates				
	150-500	500-5,000	5,000-20,000	>20,000	All
	(%)	(%)	(%)	(%)	(%)
Tax Revenue as Percent of Total Government Revenue	84	87	87	87	87
TOTAL 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 Taxes on Goods & Services	43	45	34	32	39
Excises	17	13	12	9	12
Taxes on Intern Trade & Trans	21	10	9	1	9
Import Duties	20	9	9	1	9
Social Security	11	23	20	30	24

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

Table 21

SHARES OF TOTAL GOVERNMENT TAX REVENUES AND OF EXPENDITURES BY LEVEL OF GOVERNMENT IN SELECTED LATIN AMERICAN COUNTRIES: BEFORE AND AFTER PROGRAMS TO DECENTRALIZE

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

Sources: For Argentina and Colombia, Ricardo López Murphy, Fiscal Decentralization in Latin America 22, 25, 33 (Washington, D.C.: Inter-American Development Bank, 1995). For Brazil, Anwar Shah, The New Fiscal Federalism in Brazil 15 (World Bank). For Venezuela, 1 World Bank, Venezuela: Decentralization and Fiscal Issues 5 (World Bank). For Mexico, Victoria E. Rodríguez, "The Politics of Decentralization: Divergent Outcomes of Policy Implementation," Ph.D. diss., University of California, Berkeley, 1987, p. 271; and INEGI, Finanzas públicas estatales y municipales (Aguascalientes, Mexico: INEGI, 1994).

a. Figures before decentralization as of 1983, under decentralization as of 1992.

b. Figures before decentralization as of 1974, under decentralization as of 1988.

c. Figures before decentralization as of 1980, under decentralization as of 1991.

d. Figures before decentralization as of 1982, under decentralization as of 1992.

e. Figures before decentralization as of 1980, under decentralization as of 1989.