



HISTORY, INSTITUTIONS, AND CITIES: A VIEW FROM THE AMERICAS*

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ABSTRACT. Every nation, formally or informally, defines and establishes the lines of political and fiscal authority among its national, regional, and local governments. Historically, centralized governments tend to restrict the power and autonomy of provincial and local governments. In this paper, we exploit the quasi-experimental distribution of political institutions in the Americas caused by variation in European colonial experience to examine the impact of institutions on urban and local development, specifically on the degree of urban primacy, the size distribution of cities, the number and density of local government units, and the fragmentation of metropolitan areas. We argue that centralization of political power at the national level, as experienced in many countries in Latin America, contributes to urban primacy and a size distribution of cities favoring large cities. Additionally, even in more politically decentralized countries such as Canada and the U.S., variance in political centralization at the provincial (state) level over local governments led to significant divergences in urban primacy, the distribution of city sizes, as well as the form, number, and density of local governments. While we cannot rule out the importance of other factors, our findings suggest that political centralization affects spatial economic development.

1. INTRODUCTION

Political institutions matter not only for economic development and growth (North, 1990, Engerman and Sokoloff, 1997, 2002; Acemoglu, Johnson, and Robinson, 2001), but also for urban and local development. Yet, identifying the impact of institutions on economic geography is challenging. Because institutions limit local government sovereignty in a variety of ways, there are strong *a priori* reasons to believe that institutions affect the form and size of local economies. But there are also reasons to think that institutions evolve with changing local economic conditions. In this paper, we explore the causal linkages between institutions and local–urban development in the Americas by exploiting quasi-experimental variation of the institutions caused by colonial history. Ours is a preliminary investigation of a complex subject that deserves further scrutiny.

In the Americas, variation in historical conditions at the time of European conquest—in factor endowments, the level of indigenous precolonial development, climate, and the disease environment facing European settlers—led to variance in colonial institutions. In some instances, highly centralizing institutions emerged in which fiscal and political authority was vested in central governments; in other cases, more

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decentralized institutions arose.¹ Although institutions throughout the Americas have evolved significantly over the last two centuries, the influence of colonial institutions persists as they continue to constrain and shape the form of current institutions. In this paper, we suggest that these differences in political institutions stemming from colonial times significantly influence the geographic variance in the number, form, and size of cities and local governments of nations and regions in the Americas.

An analysis of how political centralization affects these outcomes is of interest for two reasons. First, it is a striking fact that some geographic areas have more local governments than others. In 2000, Michigan and Ontario had similar populations (10 million in Michigan versus 11 million in Ontario) yet Michigan had three times the number of municipalities as Ontario (1,775 in Michigan versus 586 in Ontario) in spite of Ontario having over four times the land area of Michigan.² While varying economic and geographic conditions may help explain these differences, we suspect that variation in the degree of political centralization also matters, especially since political institutions play a key role in the creation of local governments and defining their boundaries. Second, urban primacy, the distribution of city sizes, as well as the number and variety of local government units are likely to affect regional as well as national economic development. On the one hand, political centralization that limits the number of local governments and the authority they possess may facilitate the realization of greater economies of scale in tax collection and public goods provision. On the other hand, it may reduce Tiebout competition and stifle policy innovation. While it is beyond the scope of this paper to investigate how variation in political centralization influences economic outcomes, there is a literature that links excessive urban primacy with reductions in economic performance.³

Several models that link political centralization with urban primacy motivate our analysis (Galiani and Kim, 2011; Ades and Glaeser, 1995). In Galiani and Kim (2011), when government is centralized, the central government chooses the level of taxes and

¹ Many scholars believe that Latin American colonial conditions favored the rise of federally centralized governments. Especially in places where factor endowments were conducive for the exploitation of extractive resources using native or African labor, European elites centralized political and economic power, giving rise to powerful centralized national governments and weak regional and local governments (Sokoloff and Zolt, 2006). Political centralization diverted resources toward capital cities (Galiani and Kim, 2011) at the expense of regional and local governments, leading to urban primacy and unbalanced development of cities and local governments. In North America, on the other hand, initial conditions of equality generated by small-scale farming (except in the American southern colonies) led to the rise of democratic institutions and politically decentralized governments where provincial and local governments were granted significant autonomy. The result was a more balanced pattern of urban development and less urban primacy. Yet, even in North America, political institutions diverged over time. In the U.S., the early tradition of states rights and localism continue to grant significant local autonomy even as the federal government became more centralized over time; in Canada, however, federalism came to favor the fiscal and political power of provincial governments at the expense local governments (Kim and Law, 2010). Finally, there is also considerable variation among U.S. states with respect to the level of local autonomy granted to cities and localities.

² A comparison of the metropolitan areas of Toronto, ON, and Detroit, MI, is also interesting. In 2000, the two metropolitan areas had similar total populations (4.6 million in Toronto versus 4.4 million in Detroit), but Toronto consisted of only 24 municipalities, whereas Detroit contained 113. We also explore the role of political centralization in influencing the fragmentation of metropolitan areas.

³ Estimates provided by Henderson (2003) and Au and Henderson (2006) suggest that the costs of excessive urban primacy are moderate. However, to the extent that urban primacy caused by political centralization may hinder national economic growth, these estimates may underestimate the economic impact of politically generated primacy. More generally, it is widely believed that excessive primacy in Latin America has contributed to inequality, lower levels of investment in human capital, and poorer economic performance.

local public goods for both the capital and hinterland cities; when decentralized, all localities are free to set their own levels of taxes and local public goods. In this model, political centralization may cause urban primacy when the central government has stronger preferential welfare weight for the central city.⁴ In Ades and Glaeser (1995), urban primacy is causally related to dictatorships and political instability, prominent features of many Latin American governments. They also argue that the benefits of proximity to political actors are likely to increase when influence comes from the threat of violence, when distance makes illegal political action harder to conceal, and when distance lowers access to information and communication between political agents and government.⁵ Our analysis of historical institutional variation in the Americas suggests an additional mechanism through which political centralization contributes to primacy, namely, through differences in the revenue raising capacities of various levels of government.

This paper is also related to a large urban economics literature that examines the size distribution of cities and urban primacy (Rosen and Resnick, 1980; Wheaton and Shishido, 1981; Ades and Glaeser, 1995; Henderson, 2002; Moomaw and Alwosabi, 2004; Soo, 2005, among others), as well as an older historical literature that establishes the early rise of urban primacy in Latin America (Morse, 1971; Portes, 1976; Lyman, 1992; among others). These papers generally find that urban primacy is not monocausal but that economic, demographic, and geographic factors contribute to primacy: real GDP per capita and total population seem to increase primacy, whereas total land area, share of trade in GDP, and transportation density decrease primacy. However, the most important contributors to primacy are political factors such as the concentration of government expenditures, unitary political systems, political corruption, and dictatorships. In addition, capital city dummies are strongly correlated with primacy.⁶

This paper makes three important contributions relative to the existing literature. First, it studies in much greater detail the variation in the degree of centralization, and in political institutions more broadly, with particular attention to the historical origins of that variation. Second, it complements the cross-country analysis of the Americas with subnational analysis of Canada and the United States. Third, it extends the data analysis from urban primacy and the distribution of city sizes to the structure, number, and density of local government units, as well as the fragmentation of metropolitan areas. While the causal relationship between city sizes and the number of local governments is less well understood, theory suggests that they are likely to be linked. Institutions that hinder the destruction of cities (Eeckhout, 2004) or limit or foster the creation of new cities (Rossi-Hansberg and Wright, 2007) will not only affect the size distribution of cities, but will also play a major role in the level of local government fragmentation.

Our research design does not allow us to completely rule out the importance of other factors. Data limitations arising from the level of aggregation employed (nations and regions) preclude us from making definitive causal claims since we cannot control for

⁴ In Latin America, the central government is likely to favor resource distribution toward capital cities as most political and economic elites reside in capital cities. For Argentina, Walter (1993) notes that economic and political elites, including the agricultural landowners of the Pampas, live in Buenos Aires. In Chile, the landed and capitalist elites intermarried and formed tight political bonds in the capital city of Santiago (Zeitlin and Ratcliff, 1988; Walter, 2005).

⁵ Henderson (2002) argues that the primacy of Seoul, South Korea, has been associated with the need to locate in the capital city to lobby and obtain export and import licenses and loans from the Korean government bureaucracy.

⁶ Galiani and Kim (2011) and Kim and Law (2010) estimate the effect of national and subnational capital city status on population and argue that political centralization plays a key role in explaining the diverging capital city effects between North American and Latin America, as well as between Canada and the U.S.

many disaggregated factors at the regional or local level that influence the number and distribution of cities. Nevertheless, the correlations we uncover are striking and provide evidence of an empirical link between political centralization and spatial development in the Americas. First, political centralization at the national or regional levels seems to be accompanied by urban primacy, or a skewed distribution of city sizes toward the largest cities. Second, based on a more detailed analysis of U.S. and Canada, political centralization is associated with a greater use of general-purpose (cities, counties, towns, etc.) as compared to special-purpose (school districts, water, sewage districts, etc.) governments. In addition, political centralization seems to limit the number, density, and the variety of local governments, within regions (i.e., provinces and states), as well as within metropolitan areas.

The remainder of this paper is organized as follows. In Section 2, we provide a detailed historical account of the divergence in political centralization in the Americas and link its evolution to differences in colonial circumstances. In Section 3, we present evidence on broad correlations between political centralization and urban primacy. In Section 4, we show that political centralization also plays a significant role in determining the number, size, and scope of local governments in Canada and the U.S. In Section 5, we explore how political decentralization within U.S. states, measured by home rule status, is correlated with the number of local governments and the fragmentation of metropolitan areas. Section 6 concludes.

2. HISTORICAL ORIGINS OF THE INSTITUTIONAL RULES GOVERNING LOCAL GOVERNMENTS IN THE AMERICAS

Institutions, whether formally defined by constitutions, informally by norms and precedents, or by the sheer force of military rule, define the lines of authority among national, state, and local governments. In the Americas, due to differences in colonial histories, the distribution of powers granted to the different levels of government varied significantly. In Latin America, political power was centralized within national governments, usually at the expense of regional (provincial or state) and local governments. Notwithstanding recent moves toward greater local decentralization in Latin America, taxing authority continues to remain highly centralized at the national level (Diaz-Cayeros, 2006). In the U.S., colonial conditions led to the creation of a federalist form of government that granted significant political autonomy to states and their local governments. In Canada, despite the attempts by the founders of Canadian confederation to form a more centralized federal union, federalism came to favor decentralized provincial rights, but these rights were not extended to local governments.

Local Governments in Latin America

In Spanish America, just as in the Iberian Peninsula, political power was highly centralized with the King, his council, and the Viceroy. Unlike in North America, no charters were granted to establish colonists' rights of self-government. Local assemblies possessed limited powers. Because the main objective of the Spanish crown was to mine silver using native labor, there was little incentive for the Spanish to establish institutions that provided colonists and natives with local autonomy (Engerman and Sokoloff, 1997). Thus, local governments in Latin America were under the direct control of the King and his advisors.

Even after independence, civil wars, and the establishment of constitutional governments in many countries, most Latin American nations remain highly centralized at the national level. Countries such as Costa Rica, Dominican Republic, Ecuador, El Salvador,

TABLE 1: Political Centralization in Latin America Circa 1995

Country	Constitutional Structure	Selection of Executive		Democratic Transition	Formal Override Authority
		Provincial	Local		
Centralized					
Costa Rica	Unitary	Appointed	Elected (1970)	1948	Yes
Dominican R.	Unitary	Appointed	Elected	1966	Yes
Ecuador	Unitary	Elected/App.	Elected	1978	Yes
El Salvador	Unitary	Appointed	Elected	1982–1984	Yes
Guatemala	Unitary	Appointed	Elected (1985)	1985	Yes
Panama	Unitary	Appointed	Elected (1994)	1990–1994	Yes
Paraguay	Unitary	Appointed	Elected (1991)	1991	Yes
Moderately Centralized					
Bolivia	Unitary	Appointed	Elected (1987)	1985	No
Chile	Unitary	Appointed	Elected (1992)	1990	No
Honduras	Unitary	Appointed	Elected (1990)	1986–1990	No
Nicaragua	Unitary	Appointed	Elected (1992)	1990	No
Peru	Unitary	None	Elected (1987)	1980	No
Uruguay	Unitary	Elected (1984)	None	1984	–
Decentralized					
Argentina	Federal	Elected (1983)	Elected (1983)	1983	No
Brazil	Federal	Elected (1982)	Elected (1982)	1985	No
Colombia	Unitary	Elected (1992)	Elected (1988)		No
Mexico	Federal	Elected	Elected		No
Venezuela	Federal	Elected (1989)	Elected (1989)		No

Source: Willis et al. (1999) and Nickson (1995).

Guatemala, Panama, and Paraguay are highly centralized, as they possess a unitary form of government; Bolivia, Chile, Honduras, Nicaragua, Peru, and Uruguay are moderately centralized, whereas Argentina, Brazil, Colombia, Mexico, and Venezuela are decentralized, possessing federalist forms of government (see Table 1).

Nevertheless, throughout Latin America, central governments wielded considerable authority over local governments until very recently, even in countries with a federalist form of government. Table 2, based on Myers (2002), presents information, showing how national governments centralized political power over capital cities and other municipalities in Latin America during the period between 1944–1962 and 1978–1982. In the mid-twentieth century, the most centralized countries were Mexico, Colombia, and Peru. In these countries, the national government appointed mayors for the capital city and other cities; in the next group of countries, Brazil and Argentina, the central government appointed capital city mayors but used a mixture of elections and appointment for mayors of other cities; in Venezuela, the national government appointed its capital city mayor but elected other city mayors; and, in the least centralized countries (Cuba, Guatemala, and Chile), mayors of all cities (capital or otherwise) were elected. By the second half of the twentieth century, however, most Latin American countries moved toward political decentralization, allowing the election of mayors for capital and other cities. The major exceptions were Havana and Buenos Aires whose mayors continued to be appointed. The national governments of Cuba and Venezuela also appointed the mayors of other cities.

Yet, despite these recent moves toward greater political decentralization in Latin America, there remains considerable evidence that Latin American countries are still highly centralized. Despite the fact that Mexico has a federal form of government, Nickson

TABLE 2: Political Centralization of Capital Cities and Other Municipalities, 1944–1962 and 1978–1990

Centralized	1944–1967						Power Sharing with Municipal Council		
	Selection of Capital Mayor		Selection of Other City Mayors						
	Elected	Appointed	Elected	Appointed	Mixed				
Mexico		X		X				No	
Peru		X		X				Yes	
Colombia		X		X				Yes	
Argentina		X			X			Partial	
Brazil (Rio de J.)		X			X			Yes	
Brazil (Brazilia)		X			X			Yes	
Venezuela		X	X					Partial	
Less Centralized									
Guatemala	X		X					Yes	
Cuba	X		X					Some	
Chile	X				X			Yes	
Brazil (Sao Paulo)	X				X			Yes	
Centralized	1978–1990s						Municipal Council Powers		
	Selection of Capital Mayor		Selection of Other City Mayors						
	Elected	Appointed	Elected	Appointed	Mixed	Increase			
Cuba		X		X			X		
Argentina		X	X					X	
Less Centralized									
Mexico	X		X				X		
Peru	X		X					X	
Guatemala	X		X				X		
Brazil (Rio de J.)	X		X				X		
Brazil (Brazilia)	X		X				X		
Brazil (Sao Paulo)	X		X				X		
Colombia	X		X				X		
Venezuela	X		X				X		
Chile	X		X				X		

Source: Myers (2002).

(1995) argues that Mexico is still an extremely centralized state, even by the standards of Latin America. In Mexico and other Latin American nations, political power was originally centralized in the national capital, which, in turn, received the lion's share of the national government's revenues. Similar histories can be told for Argentina, Colombia, Chile, and elsewhere in Latin America (Nickson, 1995). Political centralization in capital cities was aided by a policy of general neglect of other municipalities.

Sokoloff and Zolt (2006) and Willis, Garman, and Haggard (1999) note that local governments in Latin America possessed little political autonomy and few fiscal resources. While local governments in the U.S. and Canada relied heavily on property taxes to fund local public goods such as roads, infrastructure, and education, municipalities in Latin America were prevented from raising revenues by their national and state governments. Many Latin American countries also relied heavily on regressive taxes on consumption such as excise taxes and taxes on foreign trade—taxes that are collected by central governments—rather than on personal or corporate income taxes. In 1930, taxes on international trade accounted for 44 percent of central government revenues in Brazil,

48 percent in Argentina, 54 percent in Chile, 55 percent in Colombia, 41 percent in Mexico, and 51 percent in Venezuela (Sokoloff and Zolt, 2006). Tax collection in Latin America remains highly centralized in the national government and state and local governments rely primarily on transfers from the central government (Diaz-Cayeros, 2006).

Development of Local Governments in the U.S.

When British settlers arrived in North America, they attempted to establish local institutions that were similar to those of their mother country. Contemporaneously in England, local governments consisted of first-tier counties that had political jurisdiction over smaller second-tier townships or manors. The King and Parliament had, by the late seventeenth century, centralized authority over most these local governments through the appointment of county sheriffs and justices, but their control was not highly systematic as local officers were chosen from the local rural gentry. The larger cities, on the other hand, possessed royal corporate charters that granted them some measure of autonomy such as commercial privileges and the right to elect local officials.

Due to initial differences in the degree of income inequality and social status, the American colonies varied in their adaptation of English local institutions.⁷ In Virginia and other southern colonies where inequality was high, the elites closely adopted English local government institutions and established counties as the local unit of government. Similar to England, the governor of the colony appointed county officers in these southern colonies. In more egalitarian New England, however, local institutions diverged from those of the mother country from the outset. Favoring compact settlements, the town became the primary unit of local government in New England, although counties were also organized for judicial purposes. Most importantly, however, town officers in New England were elected. In the Middle Colonies, local institutions combined New England towns and southern counties but with democratic features as both town and county officials were elected.

From the War of Independence to the Civil War period, the U.S. county town model of local government evolved toward its modern form and gradually became more uniform across the country. While local institutions continued to vary across the states, the hybrid system developed in the Middle Colonies eventually spread to large parts of the U.S. and, with the rise of Jacksonian democracy, local officials even in the South were chosen by elections. As cities increased in number, the status of municipalities in relation to their respective states also came into question. While few cities possessed government charters as in England, Frug (1999) argues that most courts treated cities as public corporations. However, as cities and other forms of local government became integrated into state and national economies, the state legislatures and courts began to define more clearly the lines of political authority between states and their localities.

Under U.S. federalism, the federal–state relationship is federal, but the state–local relationship is unitary (Elazar, 1972). Since the federal constitution is silent on matters of local governments, local governments became “creatures” of states because states possessed residual rights not specified in the Constitution. Thus, according to Justice Taney, the “[c]ounties are nothing more than certain portions of the territory into which the state is divided for the more convenient exercise of powers of government” of the state. With the adoption of Dillon’s rule, cities also became “creatures” of states, but legislatures and courts made a distinction between municipalities and counties as municipalities, unlike

⁷ See Kim (2009) for a detailed discussion of the divergence in legal and political institutions between Massachusetts and Virginia.

counties, were created mainly for the interest of the locality and its people.⁸ While municipalities generally possess governmental, corporate, and proprietary powers, counties usually lack corporate and proprietary powers.⁹

Yet, despite the fact that U.S. local governments became “creatures” of state governments, for a variety of reasons, local governments continued to possess considerable political and fiscal autonomy. First, many Americans, especially those in New England, informally viewed each state as a federation of localities. This gave popular credence to the notion that local governments should have their own sphere of authority. Second, many states began to recognize counties as municipal corporations through constitutional or statutory provisions. Third, state constitutional reforms placed limitations on state legislatures, prohibiting them from creating or destroying counties or cities or changing their boundaries, and outlawing special legislation for cities. Fourth, many state legislatures granted home rule to cities and, in some cases, to counties.¹⁰ Finally, the geographic diffusion of political power within states made it costly for members of state legislatures to coordinate in the exercise of their authority. While strong party discipline could at times induce state legislatures to intrude on local matters, most state legislation was routine and was initiated by localities (Burns, 1994; Burns and Gamm, 1997).

The Development of Local Governments in Canada

From the beginning of European settlement until the late eighteenth century, local government scarcely existed in French and British Canada. While there were a handful of cities with charters (e.g., Quebec City and Halifax), settlement was scattered and most settlers had no influence over local affairs. Authority over local matters was vested in colonial governors and their appointed councils. After the 1780s, however, the influx of

⁸ The 1866 court decision by Iowa Supreme Court State in *City of Clinton v. Cedar Rapids* decided by Judge John F. Dillon, as well as subsequent U.S. Supreme Court rulings in 1903 and 1923, firmly established the principle of Dillon’s rule, which states that “Municipal Corporations owe their origin to, and derive their powers and rights wholly from the legislature. As it [the state legislature] creates, so it may destroy. If it may destroy, it may abridge and control.” The path to Dillon’s rule was paved by a series of court decisions. First, in the 1819, U.S. Supreme Court case of *Trustees of Dartmouth College v. Woodward*, the court made a distinction between private and public corporations. Since cities and other local governments were public rather than private, it was argued that these government units were founded for public purposes. A municipal charter was not a contract between a city and a state but an ordinary act of legislation (McBain 1916). James Ken’s influential *Commentaries on American Law* of 1836 further argued that public corporations such as counties, cities, towns, and villages were invested with subordinate powers for purposes of local public services and were subject to the control of the state legislature (Krane, Rigos, and Hill, 2001).

⁹ Governmental powers refer to ordinance making authority and use of police powers and taxation; corporate powers include the ability to enter into contracts, to buy and sell property and to sue or be sued; proprietary powers permit local governments to engage in commercial activities such as owning and operating a utility (Krane, Rigos, and Hill, 2001).

¹⁰ In the 1840s and 1850s, local delegates to state legislatures enacted numerous pieces of “local privilege” or “special privilege” legislation to manipulate municipal activity in competition with local city councils. In addition, states also passed the so-called “ripper laws” which transferred control of certain services from the municipal government to state-appointed officials such as the New York Metropolitan Police District. To counter state interference, cities demanded home rule. Home rule legislation varies significantly by state but are of two general types: the first type enumerates in detail the matters of local concern for home rule, whereas the second type is broader and reverses Dillon’s rule by giving local governments the residual powers not prohibited by state constitutions. See McBain (1916), McGoldrick (1933), Hill (1978), and Krane, Rigos, and Hill (2001) for an in-depth state-by-state analysis of the home-rule movement.

American migrants from New York and New England increased the demand for local government autonomy. However, neither the governors of British Canada nor the Canadian elites who held appointed offices had an incentive to extend autonomy to local governments. Counties were created but with no municipal functions. The 1793 Parish and Town Officers Act established the election of local officers, but assessment and rates of taxation were set by acts of the colonial legislatures rather than by local officers. In cities, however, the increased demand for local public goods eventually led to incorporation and greater local autonomy (Crawford, 1954).

In Upper Canada, the first formal system of local government was established in 1841 with the District Councils Act. Under this act, the inhabitants of each district constituted a body corporate and its powers were exercised by a warden appointed by the Governor and a council elected by inhabitants. The Governor also appointed the district clerk, treasurer, and surveyors although they were accountable to the council. In 1849, the Municipal Act, also known as the Baldwin Act, established the system of municipal government as it largely exists in Ontario today. Unlike in the U.S., the county, which replaced the district, became the upper tier of municipal government but with no true municipal functions. Instead, rural townships, villages, towns, and cities all became independent units of municipal government.

In Canadian federalism, residual rights not specified in the federal constitution belong to the federal rather than provincial governments. Nevertheless, under the terms of the 1867 British North America Act (Canada's original constitutional document), local governments became "creatures" of provincial governments. Similar to the U.S., the provincial–local government relationship is unitary. But, unlike in the U.S., local governments in Canada occupy a weak legal position. First, provincial governments, unlike U.S. states, are not bounded by written constitutions.¹¹ There are no constitutionally entrenched documents that limit the power of provincial governments over their respective localities. Accordingly, in Canada, there is no home rule for local governments. Second, in contrast with the U.S., the parliamentary form of government and the accompanying notion of "parliamentary sovereignty" have historically facilitated the centralization of provincial power over local governments. Third, the development of significant provincial government revenues from a variety of sources allowed centralization of provincial authority over its local governments (Kim and Law, 2010).

Finally, the Canadian federal government does not deal directly with local governments. Whereas in the U.S., federal government funds are often distributed directly to local governments for disbursement, the Canadian federal government deals directly only with provincial governments, which, in turn, disburse funds to local governments (usually for very specific purposes). Thus, in Canada, intergovernmental transfers reinforce the fiscal authority of provinces over their local governments (Goldberg and Mercer, 1986).

3. INSTITUTIONS AND URBAN PRIMACY IN THE AMERICAS

In this section, we examine the relationship between political centralization and urban primacy in the Americas. While there is no single widely accepted definition of urban primacy, there are two general measures. The first, motivated by Jefferson (1939), examines the population of the largest city or the n -largest cities as a percentage of either the urban population or the total population. The second examines the size distribution

¹¹ Since the 1980s, the province of British Columbia has had a written constitution; however, the *Constitution of British Columbia Act* is merely an ordinary statute of the provincial legislature that can be amended by a simple majority of the legislature.

of cities using the Pareto distribution of which Zipf's law is a special case (Brakman et al., 1999).¹²

Tables 3 and 4 present estimates of urban primacy based on the share of the urban population accounted for by the largest city and the Pareto coefficient, respectively. The data are based on municipalities with population greater than 25,000.¹³ In Table 3, we find that the largest city in the U.S., New York City, accounted for 17.4 percent of the urban population greater than 25,000 in 1900 but that figure declined to 6.8 percent by 2000. Toronto, Canada, comprising 18 percent of the Canadian urban population, was much more primate in 2000. In Latin America, the largest cities in Bolivia, Chile, Colombia, Ecuador, Honduras, Nicaragua, Panama, Peru, and Uruguay contained a much higher share of their urban population than their counterparts in Anglophone North America. Importantly, in contrast with the U.S. and Canada, the largest cities in each Latin American country, except for Brazil, were national capitals.

Estimates of the Pareto coefficient for the U.S. rise from 1.10 to 1.20 between 1900 and 2000, suggesting a shift in the skewness of the size distribution of cities toward smaller sized cities. For Canada and some Latin American countries, the coefficient is closer to 1, suggesting a more balanced distribution of city sizes. The Latin American countries, however, exhibited much greater primacy when we defined cities using a lower population threshold of 2,500. Using this smaller threshold, the Pareto coefficients for Argentina, Bolivia, Chile, Ecuador, Panama, Peru, Uruguay, and Venezuela were less than 0.9, suggesting a distribution skewed toward the largest cities in those countries.¹⁴

Overall, the data shown in Tables 3 and 4 generally support the view that there is greater urban primacy in Latin America than North America and this difference is correlated with the level of political centralization.¹⁵ While there is considerable variance in the estimates of the Pareto coefficient across countries, taken as a whole, the two measures indicate that the U.S. is less primate than Canada, which, in turn, is less

¹² The size distribution of cities is usually modelled as a Pareto distribution: $R = AS^{-\alpha}$, where R is the rank or the number of cities with population S or more, A is a constant, S is the population of city, and α is the Pareto exponent. Zipf's law holds if the Pareto coefficient is equal to 1. If the Pareto coefficient is less than 1, then the city size distribution is skewed toward larger cities and exhibits more urban primacy than if the coefficient is greater than 1. Throughout the paper, we estimate the Pareto coefficient using $\log(\text{rank} - \frac{1}{2})$ as the dependent variable since it has been shown to have superior small sample properties (Gabaix and Ibragimov, 2011). We refer the reader to Brakman et al. (1999), Hinloopen and Marrewijk (2012), and Kim (2000) for analyses of the size distribution of cities from an economic perspective such as industrial development and trade.

¹³ We have also estimated both primacy measures using cities whose populations were greater than 2,500, but do not report them to economize on space. While the absolute values differ significantly from those reported in Tables 1 and 2, the relative cross-national and time series patterns are very similar.

¹⁴ Because we do not have data for U.S. cities with population less than 25,000 we do not present estimates of the Pareto coefficient using the lower population threshold of 2,500. However, as noted, we have estimates for Latin American countries and are happy to make them available on request.

¹⁵ Scholars generally believe that urban primacy is a salient character of urban development in Latin America but not in North America. While opinions vary, many believe that urban primacy arose in Latin America in the early nineteenth century or even earlier (Lyman, 1992). Morse (1971), using the share of the population of the largest city as a measure of primacy, finds that urban primacy emerged in Argentina and Cuba around 1800, in Colombia, Mexico, and Peru in 1850, and in Brazil and Venezuela by 1900. In all of these cases, the primate city was also the national capital. McGreevey (1971), however, using a measure based on the Pareto distribution of city sizes, dates the rise of primacy in Mexico to as early as 1750, Cuba to 1825, Chile to 1830, Argentina to 1850, Brazil to 1880, Peru to 1925, and Venezuela and Colombia to 1950. Portes (1976) argues that, by 1970, most Latin American countries, except for perhaps Brazil and Colombia, exhibited significant urban primacy characteristics.

TABLE 3: Urban Primacy in the Americas (Percent Share of Urban Population of the Largest City)

Country	1850	1860	1870	1880	1890	1900	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000
Canada	-	-	-	-	-	31.7	30.1	27.7	26.1	24.0	21.8	17.4	11.3	7.4	-	18.0
United States	-	-	-	-	-	17.4	17.5	15.3	14.6	14.1	12.8	10.2	9.0	7.6	7.0	6.8
Argentina	-	-	64.1	-	45.6	-	29.5	-	-	22.1	-	18.1	14.8	11.7	10.0	8.3
Bolivia	-	-	-	-	-	23.1	-	-	-	-	19.8	-	-	-	23.5	24.2
Brazil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.2	8.1
Chile	-	-	-	-	-	-	-	-	-	25.4	19.1	12.7	8.5	-	3.0	3.9
Chile**	-	-	-	-	-	-	-	-	-	44.2	45.2	44.0	49.5	-	39.2	36.8
Colombia	-	-	-	-	-	-	-	-	-	14.3	-	-	-	-	-	20.5
Costa Rica	-	-	-	-	-	-	-	-	-	-	-	-	-	19.3	13.6	9.3
Cuba	-	-	-	-	-	-	28.4	21.5	18.9	17.0	-	-	-	-	-	-
El Salvador	-	-	-	-	-	-	-	-	-	-	-	27.9	20.4	-	13.0	-
Ecuador	-	-	-	-	-	-	-	-	-	-	-	14.8	-	19.3	18.9	18.9
Guatemala	-	-	-	-	-	-	-	-	-	19.0	33.4	-	-	23.9	-	10.9
Honduras	-	-	-	-	-	-	-	-	-	-	-	33.1	-	-	-	22.5
Mexico	-	-	-	-	-	-	-	-	-	-	-	24.6	20.2	-	-	9.9
Nicaragua	-	-	-	-	-	-	-	-	-	-	-	46.6	-	-	-	28.2
Panama	-	-	-	-	-	-	-	-	-	-	-	51.7	47.7	38.4	33.4	47.1
Paraguay	-	-	-	-	-	-	-	-	-	-	-	-	-	28.8	21.1	15.0
Peru	-	-	-	-	-	-	-	-	-	9.1	-	19.8	-	27.4	27.4	28.0
Uruguay	-	-	-	-	-	-	30.7	-	-	-	-	46.8	44.8	44.4	42.5	40.9
Venezuela	-	-	-	-	-	-	-	-	14.1	16.2	-	-	-	-	11.8	8.8

Note: Sample consists of municipalities whose population is equal or greater than 25,000. Primate cities are as follows: Montreal (1900–1990) and Toronto (2000), Canada; Mexico City, Mexico; New York City (+ includes Brooklyn), U.S.; Buenos Aires, Argentina; Santa Cruz, Bolivia; Sao Paulo, Brazil; Santiago, Chile; Bogota, Colombia; San Jose, Costa Rica; Habana, Cuba; San Salvador, El Salvador; Guayaquil, Ecuador; Guatemala City, Guatemala; Tegucigalpa (Distrito Central), Honduras; Managua, Nicaragua; Panama City, Panama; Asuncion, Paraguay; Lima, Peru; Montevideo, Uruguay; Caracas, Venezuela. All of the primate cities are national capitals except for Sao Paulo, Brazil (Brasilia since 1960 and Rio de Janeiro from 1763–1960), Toronto, Canada (Ottawa), New York, U.S. (Washington DC), and Guayaquil, Ecuador (Quito).

**Uruguay's sample of cities consist of 19 largest cities.

TABLE 4: Size Distribution of Cities in the Americas
Pareto Coefficient Estimates of $\text{Log}(\text{Rank} - \frac{1}{2})$ on $\text{Log}(\text{Population})$

Country	1850	1860	1870	1880	1890	1900	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000
Canada	-	-	-	-	-	1.17	1.04	0.99	0.98	1.01	1.05	1.13	1.11	1.16	-	1.10
United States	-	-	-	-	-	1.11	1.11	1.12	1.13	1.12	1.12	1.19	1.24	1.24	1.30	1.20
Argentina	-	-	-	-	1.20	-	1.52	-	-	1.30	-	1.24	1.16	1.10	1.08	1.07
Bolivia	-	-	-	-	-	1.54	-	-	-	-	1.31	-	-	-	0.65	0.99
Brasil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.22	1.19
Chile	-	-	-	-	-	-	-	-	-	1.24	1.24	1.25	1.15	-	1.22	1.19
Colombia	-	-	-	-	-	-	-	-	-	1.69	-	-	-	-	-	1.09
Costa Rica	-	-	-	-	-	-	-	-	-	-	-	-	1.83	1.72	-	1.63
Cuba	-	-	-	-	-	-	1.45	1.77	1.58	1.40	-	-	-	-	-	-
El Salvador	-	-	-	-	-	-	-	-	-	-	-	1.47	1.62	-	1.47	-
Equador	-	-	-	-	-	-	-	-	-	-	1.36	1.49	1.10	1.18	1.23	1.19
Guatemala	-	-	-	-	-	-	-	-	-	1.99	1.13	-	-	1.73	-	1.75
Honduras	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.25
Mexico	-	-	-	-	-	-	-	-	-	-	-	1.47	1.34	-	-	1.25
Nicaragua	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.46
Panama	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.15	1.25
Paraguay	-	-	-	-	-	-	-	-	-	-	-	-	-	1.51	1.51	1.42
Peru	-	-	-	-	-	-	-	-	-	1.69	-	1.46	-	1.23	1.19	1.16
Uruguay**	-	-	-	-	-	-	1.59	-	-	-	-	1.11	1.10	1.08	1.06	1.06
Venezuela	-	-	-	-	-	-	-	-	1.79	1.93	-	-	-	-	1.21	1.18

Sample consists of municipalities whose population is equal or greater than 25,000.

Note: Mexico City is defined as Distrito Federal and includes the 16 boroughs.

**Uruguay's sample of cities consists of the 19 largest cities.

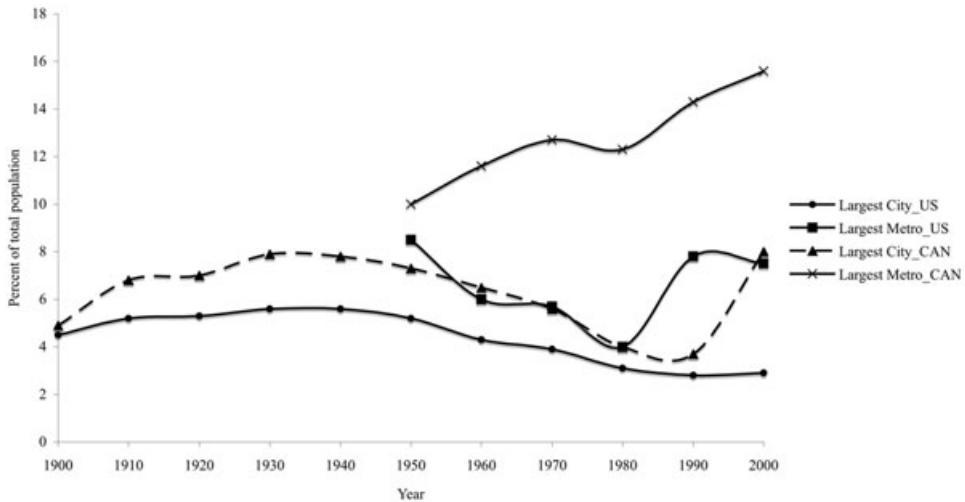


FIGURE 1: Urban Primacy in the U.S. and Canada: Percentage of Total Population in the Largest City and Metro Area.

primate than Latin America; over the twentieth century, the data also indicate that the city-size distributions in the U.S. and Canada have become less primate, whereas the pattern is reversed for many countries in Latin America. Additionally, controlling for GDP per capita and population size, we find that countries that were more centralized according to data in Table 1 had greater urban primacy.¹⁶

Because we have consistent population data on city sizes and for Canada and the U.S., we computed measures of urban primacy for U.S. and Canadian cities during the twentieth century. A comparison of the patterns of primacy between these two countries is informative because the two countries share much in common (language, British colonial and legal institutions, a common border, etc.), but the degree of political centralization of state or provincial government authority over local governments varied between the two countries. Accordingly, we may observe different trends in the degree of primacy in Canada and the U.S. Additionally, the richness of our Canadian and U.S. data sets allows us to investigate whether primacy varies by region.

Figure 1 plots the percentage of the total population residing in the largest city and largest metropolitan area in Canada and the U.S. for each decade during the twentieth century. Regardless of which measure of we use, Canada is more primate than the United States. Additionally, while the U.S. measures of primacy have either remained constant or declined over time, there is evidence of an increase in primacy in Canada, particularly in recent decades. Table 5 shows estimates of the Pareto exponent for the largest 50 and 100 cities in Canada and the U.S., as well as for metropolitan areas. While the overall

¹⁶ Specifically, in a regression of the percentage of the urban population in the largest city in 2000 on an indicator variable equal to 1 for centralized or moderately centralized countries (and 0 otherwise), real per capita GDP in 2000 and total population in 2000 for the countries in our sample ($N = 19$), we find that countries that are classified as either centralized or moderately centralized have 11 percent more of their urban population residing in the largest city (we classified the U.S. and Canada as decentralized). This effect is both economically and statistically significant. We do not find a statistically significant relationship between centralization and our estimates of the Pareto exponent.

TABLE 5: Pareto Coefficient for U.S. and Canada, 1900–2000 Using $\text{Log}(\text{Rank} - \frac{1}{2})$ as the Dependent Variable

A: Largest 50 U.S. and Canadian Cities											
	1900	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000
U.S.	1.16 (0.03)	1.18 (0.02)	1.20 (0.02)	1.21 (0.02)	1.22 (0.02)	1.28 (0.02)	1.38 (0.02)	1.45 (0.03)	1.47 (0.04)	1.50 (0.04)	1.50 (0.02)
Canada	1.08 (0.05)	1.03 (0.04)	1.04 (0.05)	1.01 (0.04)	1.03 (0.04)	1.05 (0.04)	0.93 (0.21)	1.26 (0.07)	1.26 (0.01)	–	1.17 (0.03)
B: Largest 100 U.S. and Canadian Cities											
	1900	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000
U.S.	1.11 (0.02)	1.15 (0.02)	1.16 (0.02)	1.17 (0.01)	1.16 (0.01)	1.16 (0.02)	1.24 (0.02)	1.28 (0.02)	1.36 (0.02)	1.41 (0.02)	1.41 (0.01)
Canada			1.04 (0.03)	1.00 (0.02)	1.01 (0.02)	1.07 (0.03)	1.07 (0.10)	1.11 (0.05)	1.20 (0.06)		1.17 (0.02)
C: U.S. and Canadian Metropolitan Areas											
	1950		1960		1970		1980		1990		
U.S.	1.05 (0.01)		1.01 (0.01)		0.97 (0.01)		0.98 (0.01)		0.92 (0.01)		
Canada	0.98 (0.03)		0.90 (0.03)		0.82 (0.02)		0.81 (0.01)		0.79 (0.01)		

Note: Robust standard errors are displayed in parentheses.

distribution of city sizes in both countries appears to be become less primate over time, the degree of primacy is less in the U.S., and the trend away from primacy more pronounced for the U.S. than for Canada.

Table 6 shows the trends in primacy, as measured by the Pareto exponent, for U.S. and Canadian regions. For U.S. regions (with the exception of East South Central), the Pareto coefficient becomes larger over time, indicating greater equality in city sizes over time. Accordingly, the trend away from primacy is fairly uniform across U.S. regions, which is consistent with the view that political decentralization at the local level has contributed to greater equality in city sizes across most U.S. regions. Additionally, at any point in time, New England has a larger Pareto coefficient than other regions. This is perhaps a long-lasting consequence of the early diffusion of local political authority in New England within towns and villages.¹⁷

Different patterns are apparent from an analysis of the data from Canadian regions. While the estimates of the Pareto exponent for Canada as a whole indicated declining primacy, the estimates for most Canadian regions suggest an increase in primacy. While the city-size distribution became more equal for Quebec, it became less equal for other regions. The experience for most Canadian regions is consistent with the idea that political centralization within Canadian provinces has contributed to greater urban primacy in Canada.

¹⁷ Within individual U.S. states, there may also be interesting institutional variation. For instance, in California, where initial institutions were Spanish, the land grants of ranchos were inscribed into the number and size of counties, and to some degree, into municipalities. This has had lasting effects on the gradient of county size as one goes from northern to southern California. Accordingly, the level of aggregation we employ may mask important within region/state heterogeneity.

TABLE 6: Pareto coefficient for US and Canadian regions 1900-2000 using $\log(\text{rank} - \frac{1}{2})$ as dependent variable

A: US Regions using cities with population greater than 25,000												
	1900		1920		1940		1960		1980		2000	
	A	N	A	N	a	N	a	N	a	N	a	N
New England	1.44	30	1.39	39	1.42	60	1.52	64	1.66	69	1.66	71
	(0.06)		(0.06)		(0.04)		(0.06)		(0.08)		(0.07)	
Mid Atlantic	0.91	40	0.94	56	0.99	79	1.03	94	1.08	92	1.05	84
	(0.03)		(0.03)		(0.04)		(0.05)		(0.08)		(0.9)	
East North Central	0.92	31	1.01	61	1.09	101	1.21	155	1.35	206	1.41	214
	(0.04)		(0.02)		(0.02)		(0.02)		(0.03)		(0.03)	
West North Central	1.05	18	1.04	19	1.00	31	1.12	53	1.31	78	1.36	85
	(0.06)		(0.08)		(0.07)		(0.06)		(0.07)		(0.08)	
South Atlantic	1.04	11	1.17	47	1.23	47	1.20	77	1.26	116	1.32	141
	(0.08)		(0.05)		(0.05)		(0.05)		(0.05)		(0.05)	
East South Central	1.39	11	1.30	11	1.05	20	1.15	38	1.06	46	1.12	47
	(0.05)		(0.22)		(0.13)		(0.08)		(0.08)		(0.08)	
West South Central	1.08	7	1.29	16	1.06	29	1.04	63	1.08	89	1.07	104
	(0.10)		(0.10)		(0.10)		(0.06)		(0.04)		(0.04)	
Mountain	1.18	4	1.05	7	1.18	11	1.14	31	1.23	61	1.14	71
	(0.08)		(0.07)		(0.05)		(0.09)		(0.05)		(0.06)	
Pacific	1.12	8	0.95	15	0.93	33	1.17	97	1.34	187	1.33	249
	(0.05)		(0.13)		(0.04)		(0.02)		(0.02)		(0.02)	

B: Canadian regions using cities with population greater than 25,000												
	1900		1920		1940		1960		1980		2000	
	A	N	a	N	a	N	a	N	a	N	a	N
West			1.26	7	1.15	7	0.89	15	0.96	27	0.95	30
			(0.17)		(0.22)		(0.14)		(0.11)		(0.09)	
Ontario	1.12	4	0.85	6	0.95	15	1.08	26	1.07	50	1.02	60
	(0.08)		(0.03)		(0.04)		(0.14)		(0.09)		(0.03)	
Quebec			0.51	3	0.74	8	1.09	24	1.35	41	1.41	49
			(0.04)		(0.05)		(0.15)		(0.09)		(0.09)	
Atlantic					1.65	4	1.97	7	1.79	7	1.05	6
					(0.32)		(0.36)		(0.48)		(0.05)	

Note: Robust standard errors are displayed in parentheses.

4. THE NUMBER, SIZE, AND SCOPE OF LOCAL GOVERNMENTS: THE U.S. VERSUS CANADA

Institutions not only affect urban primacy or the size distribution of cities. They also influence the number, size, and scope of local governments. We focus on the differences in the number and composition of local governments in U.S. and Canada. In the U.S., the institutional rules that provide local governments with significant autonomy have led to a bewildering proliferation of the number and types of local governments. In Canada, by contrast, the centralization of political authority by provincial governments over their local governments has led to the physical and functional consolidation of cities within metropolitan areas. Thus, the number, size, and functions of cities in Canada sharply differ from the U.S.

Local governments vary by size, function, and political hierarchy. There is no widely accepted definition of local government, but, for Anderson (1949), the key characteristics

of a “unit of government” are that it has authority over persons within its territory, has a legislative body composed of elected or appointed officials, has a separate legal identity, a degree of autonomy, is empowered by law to perform governmental service, and has the power to raise revenue by taxation, by special assessment, or by other means. By this definition, the generally recognized units of local government in the U.S. are counties, cities, villages, boroughs, incorporated towns, towns, townships, school district, and other special districts for parks, sanitation, drainage, and so forth. In Canada, they are the urban incorporated city, town and village, rural district, county or municipality, as well as various agencies, boards, and commissions (ABCs) for education, parks, utility, and transportation, among other functions. In general, electoral districts, judicial administration areas, and civil administration districts are not considered to be units of local government.

In the U.S., counties are considered a major unit of local government because they are the principal or the largest territorial division of a state for purposes of local governance. Counties were originally designed to serve functions of general- and state-wide interest that the state legislature desired to have performed uniformly. The second category is incorporated places. These are generally urban municipalities but also include towns, villages, or boroughs. As a rule, these units are part of the county or counties in which they are situated. The third class is rural government units, which include towns and townships. Like the second class, these units belong to a county. The fourth class consists of special districts that are organized for a single special purpose such as schools, drainage, or sanitation (Bollens, 1957).

There are four striking differences in the structure of local government in Canada and the U.S. First, Canada does not possess an American county government system. In Nova Scotia and New Brunswick, counties are rural units of local government, not much different from other types of rural districts. In Ontario and Quebec, county boundaries are similar to the U.S. in that they encompass other local governments, but unlike those in the U.S., Canadian counties are not technically governmental units as they do not have direct tax levying and tax collection functions. Rather, county councils allocate amounts to municipalities based on equalized assessments. In other provinces, counties simply do not exist. Second, Canada does not have U.S.-style special-purpose districts. While ABCs in Canada perform specialized functions, they are substantially different from U.S. special-purpose districts. Whereas U.S. special-purpose districts are locally created and controlled, the creation and control of ABCs in Canada are in the hands of municipal representatives or the provincial government.¹⁸ Given the influence of provincial governments over their operation, it is not obvious whether Canadian ABCs should be counted as units of “local” government. Third, Canada’s federal government is restricted in its interaction with local governments. In the U.S., starting with Richard Nixon’s general revenue sharing and community programs in 1968, the federal government began to distribute funds to local governments directly with few strings attached. In Canada, on the other hand, federal intergovernmental transfers are primarily sent to provincial governments. Provinces, in turn, disburse funds to local government units, generally for very specific purposes. The nature of Canadian fiscal federalism has therefore increased provincial governments’ authority over local governments, whereas, in the U.S., fiscal federalism has strengthened the authority and autonomy of local governments with respect to state governments (Goldberg and Mercer, 1986). Finally, and perhaps most importantly, with

¹⁸ Scholars believe that the idea of ABCs was imported from the U.S. In particular, they point to the Metropolitan Police District of New York City whose board was controlled by state. Interestingly, these practices in the U.S. were met with significant local opposition and led to the movement toward home rule; in Canada, however, these practices seem to have continued in the form of ABCs. See Sproule-Jones (1993).

respect to the evolution of own-source revenues at the provincial (state) and local levels, there has been a major divergence between Canada and the U.S. that has given Canadian provinces significantly more fiscal clout relative to Canadian cities. In the mid-twentieth century, provincial (state) and local governments' own source revenues as a share of GNP were roughly equivalent in both countries. Although this parity in state and local own-source revenues has been maintained in the U.S., in Canada, local government's own source revenues as a share of GNP have remained flat, while those of provincial governments have more than tripled (Kim and Law, 2010).

The diverging trends in centralization between Canadian provinces and U.S. states have implications for the autonomy, scope, and number of local government units in Canada and the U.S. In the U.S., the continued emphasis on localism within states should result in more autonomous local government units, and also more local governments (normalized by population or land area). Local governments within the U.S. should not only retain significant autonomy, but also to have broader scope of jurisdiction. In Canada, on the other hand, political centralization within Canadian provinces should give rise to less autonomous local government units and also fewer local governments. Greater political centralization may manifest itself in fewer local government units because centralization makes it more costly to establish new units of local government; because uniform standards of regulation or public services are easier to establish when there are fewer local governments; or because economies of scale in administration and public service delivery are more easily achieved when there are fewer local governments.¹⁹ Comparing metropolitan areas in Canada and the U.S., we also expect greater metropolitan fragmentation (i.e., more local government units per metropolitan area) in the U.S. than in Canada.

While it is difficult to compare quantitatively the scope, functions, and autonomy possessed by local government units in Canada and the U.S., it is possible to compare the number of local government units in each country over time. Unfortunately, data limitations prevent us from comparing at the broadest level the number of local government units. While for the U.S., the decennial Census of Government provides a very comprehensive portrait of all types of local government within the U.S., we only have data on the number of general-purpose local government units for Canada.²⁰ Accordingly, for most of the subsequent comparative analysis, we will restrict our attention to subcounty general-purpose local government units (i.e., municipalities) within the two countries, although we will also present some data on U.S. special districts.

Tables 7–9 show, for Canadian provinces and U.S. states, the number of local government units by decade from 1950 to 2000. As noted, the Canadian figures include only general-purpose local government units. For the U.S., we report the average number of subcounty general-purpose local governments (cities, towns, townships, villages, and boroughs) as well as the number of special districts (not including school districts) per state within each census region. We exclude counties because counties in the U.S. and Canada are not comparable in terms of form or function. The data show growth in the number of

¹⁹ Along these lines, it is noteworthy that the municipal and metropolitan consolidations that have occurred within Ontario, Quebec, and Nova Scotia in recent decades were motivated largely by a desire on the part of provincial governments to attain greater economies of scale in public service delivery, and, in so doing, reduce provincial transfers to municipalities. The fact that these consolidations were pursued and implemented in spite of tremendous local opposition is evidence of the extent to which political power over local government in Canada is centralized within provincial governments.

²⁰ For Canada, the number of general-purpose local government units corresponds with the number of Statistics Canada census subdivisions. Canadian urban scholars believe that this is the best estimate of the number of municipal governments in Canada. Unfortunately, there is no Canadian equivalent to the U.S. Census of Government.

TABLE 7: General-Purpose Local Governments in Canada by Province

A: Number of Local Government Units					
	1960	1970	1980	1990	2000
Alberta	360	390	416	394	452
British Columbia	126	232	285	406	816
Manitoba	206	274	282	270	298
New Brunswick	179	277	285	277	275
Newfoundland	88	321	403	389	381
Nova Scotia		110	113	107	98
Ontario	938	916	932	878	586
PEI	94	104	112	124	113
Quebec	1,684	1,654	1,619	1,516	1,476
Saskatchewan	798	839	889	861	1,002
Provincial avg.	497	512	534	522	550
B: Number of Local Government Units per 1,000 Persons					
	1960	1970	1980	1990	2000
Alberta	0.27	0.24	0.19	0.15	0.15
British Columbia	0.08	0.11	0.10	0.12	0.21
Manitoba	0.22	0.28	0.28	0.25	0.27
New Brunswick	0.30	0.44	0.41	0.38	0.38
Newfoundland	0.19	0.61	0.71	0.68	0.74
Nova Scotia		0.14	0.13	0.12	0.11
Ontario	0.15	0.12	0.11	0.09	0.05
PEI	0.90	0.93	0.91	0.96	0.93
Quebec	0.32	0.27	0.25	0.22	0.20
Saskatchewan	0.86	0.91	0.92	0.87	1.02
Provincial avg.	0.37	0.40	0.40	0.38	0.39
C: Number of Local Government Units per 1,000 Square Miles					
	1960	1970	1980	1990	2000
Alberta	1.45	1.57	1.58	1.59	1.82
British Columbia	0.35	0.65	0.80	1.14	2.28
Manitoba	0.96	1.28	1.32	1.26	1.39
New Brunswick	6.49	10.04	10.33	10.04	9.97
Newfoundland	0.61	2.22	2.79	2.69	2.64
Nova Scotia		5.34	5.49	5.20	4.76
Ontario	2.65	2.59	2.63	2.48	1.65
PEI	43.02	47.6	51.26	56.75	51.72
Quebec	3.19	3.14	3.07	2.87	2.80
Saskatchewan	3.49	3.67	3.89	3.77	4.39
Provincial avg.	6.91	7.81	8.33	8.79	8.34

local government units in both countries over time, although the growth is more dramatic for the U.S. than for Canada, and within the U.S., much of that growth is due to increases in the number of special districts. In some Canadian provinces (Ontario, Quebec, and Nova Scotia), the total number of local government units has declined in the last two to three decades, largely as a result of amalgamations imposed by provincial governments. In contrast, few U.S. states have experienced declines in the number of local government units. On average, Canadian provinces have fewer general-purpose local governments than U.S. states.

The tables also present information on the “density” of local government units within each state and province. We compute density in two ways. The first is by normalizing the number of government units by population (per 1,000 persons) within each state or

TABLE 8: Local Government Units in the United States: General-Purpose Government Units (Average per State by Census Region)

A: Number of General-Purpose Governments						
Region	1952	1962	1972	1982	1992	2002
NE	230	230	230	232	263	263
MA	1,554	1,556	1,560	1,560	1,562	1,552
ENC	1,990	2020	2,025	2,034	2,034	2,034
WNC	1,564	1,590	1,581	1,555	1,546	1,528
SA	255	287	287	293	298	303
ESC	279	315	340	371	377	380
WSC	453	519	567	619	637	647
MT	123	130	1312	137	140	143
PC	171	193	211	215	223	229
State avg.	675	798	705	712	718	718
B: General-Purpose Governments per 1,000 Population						
Region	1952	1962	1972	1982	1992	2002
NE	0.29	0.27	0.24	0.21	0.22	0.20
MA	0.15	0.14	0.13	0.13	0.13	0.12
ENC	0.35	0.30	0.27	0.26	0.26	0.24
WNC	1.19	1.13	1.11	1.03	1.02	0.95
SA	0.11	0.10	0.08	0.07	0.07	0.06
ESC	0.10	0.11	0.11	0.10	0.10	0.09
WSC	0.15	0.16	0.15	9.14	0.13	0.12
MT	0.20	0.17	0.15	0.12	0.11	0.09
PC	0.07	0.06	0.06	0.04	0.04	0.07
State avg.	0.32	0.30	0.28	0.26	0.25	0.24
C: General-Purpose Governments per 1,000 Square Miles						
Region	1952	1962	1972	1982	1992	2002
NE	31.38	31.38	31.21	31.17	31.97	31.95
MA	55.36	55.41	55.49	55.52	55.52	55.28
ENC	41.76	42.34	42.43	42.63	42.63	42.63
WNC	21.24	21.60	21.48	21.18	21.06	20.82
SA	10.54	11.36	11.44	11.83	12.04	12.16
ESC	6.32	7.13	7.69	8.39	8.51	8.58
WSC	5.48	6.25	6.76	7.18	7.33	7.42
MT	1.26	1.32	1.33	1.39	1.41	1.44
PC	1.80	1.97	1.99	1.92	1.98	2.03
State avg.	17.25	17.64	17.82	17.85	17.99	17.99

province. The second is by dividing by the land area (per 1,000 square miles) of each state or province. We remain agnostic as to which measure is more appropriate. On the one hand, the number of local government units may increase with population since economies of scale in local government public service delivery depend on population. On the other hand, the number of local government units should increase with land area since economies of scale are also a function of geographic size.

Restricting attention to general-purpose local governments in Canada and the U.S., the tables reveal several interesting facts about trends in the density of local government units. First, there is substantial cross-sectional variance in the density of local governments in both countries, regardless of how density is measured. Second, over time, density in terms of population has fallen for the U.S. and remained roughly constant for Canada. Third, while density in terms of population, averaged across states or

TABLE 9: Local Government in the United States: Special Districts (Average per State by Census Region)

A: Number of Special Districts						
Region	1952	1962	1972	1982	1992	2002
NE	119	123	144	184	211	231
MA	359	889	1,024	1,142	1,120	1,099
ENC	427	606	755	865	1,005	1,190
WNC	355	440	607	761	809	897
SA	97	162	245	315	349	339
ESC	135	229	368	423	469	545
WSC	240	349	601	658	845	889
MT	147	219	289	368	471	593
PC	492	716	1,021	896	964	992
State avg.	247	369	494	568	639	701
B: Special Districts per 1,000 Population						
Region	1952	1962	1972	1982	1992	2002
NE	0.11	0.11	0.10	0.12	0.12	0.13
MA	0.03	0.08	0.08	0.10	0.09	0.08
ENC	0.06	0.08	0.09	0.10	0.12	0.13
WNC	0.19	0.25	0.38	0.45	0.47	0.50
SA	0.05	0.06	0.08	0.10	0.11	0.10
ESC	0.05	0.08	0.11	0.12	0.13	0.14
WSC	0.07	0.09	0.14	0.12	0.14	0.14
MT	0.25	0.29	0.34	0.32	0.37	0.42
PC	0.14	0.17	0.21	0.14	0.13	0.12
State avg.	0.12	0.15	0.19	0.20	0.21	0.22
C: Special Districts per 1,000 square miles						
Region	1952	1962	1972	1982	1992	2002
NE	21.60	23.62	29.04	34.60	39.42	40.43
MA	10.69	30.50	35.28	42.17	38.64	34.44
ENC	8.45	12.24	15.58	17.82	20.62	24.48
WNC	4.87	6.01	8.27	10.39	11.06	12.35
SA	6.16	9.18	12.70	18.62	22.64	24.87
ESC	3.03	5.16	8.49	9.70	10.71	12.44
WSC	2.75	3.97	6.79	5.73	6.94	7.82
MT	1.52	2.21	2.90	3.63	4.65	5.74
PC	4.88	7.14	10.13	8.77	9.30	9.56
State avg.	6.94	10.00	13.11	15.59	17.37	18.57

provinces, is higher in Canada, density in terms of land area is significantly higher in the U.S.

Tables 10 and 11 present data on the number of local government units within the largest metropolitan areas in Canada and the U.S. For Canada, we show data on the number of municipalities for each of the largest 20 metropolitan areas from 1960 to 2000. For the U.S., we present data on subcounty general-purpose local government units as well as for the special districts (exclusive of school districts) for the top 50 metropolitan areas in 1997. While the U.S. and Canadian figures exhibit substantial variance, the U.S. numbers are generally larger, indicating greater political fragmentation within metropolitan areas and greater decentralization.

While these patterns are roughly consistent with our hypotheses regarding the effects of political centralization on the number of local government units, there are other factors

TABLE 10: Number and Density of Municipalities within the 20 Largest Canadian Metropolitan Areas, 1960–2000

Metro Area	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	1960 Number	1970	1980	1990	2000	1960 per 100,000	1970	1980	1990	2000
Toronto, ON	28	29	20	28	24	1.53	1.1	0.67	0.72	0.51
Montreal, QC	84	104	100	104	109	3.98	3.8	3.54	3.33	3.16
Vancouver, BC	17	24	35	39	39	2.15	2.22	2.76	2.44	1.96
Ottawa-Hull, ON/QC	13	25	18	23	13	3.03	4.15	2.41	2.5	1.21
Calgary, AB	6	1	1	9	9	2.15	0.25	0.17	1.19	0.95
Edmonton, AB	7	10	11	35	35	2.07	2.01	1.67	4.17	3.73
Quebec City, QC	33	37	41	46	45	9.23	7.7	7.12	7.12	6.55
Winnipeg, MB	16	14	6	8	11	3.36	2.6	1.02	1.23	1.62
Hamilton, ON	12	12	8	8	3	3.04	2.41	1.48	1.33	0.45
London, ON	3	9	8	12	7	1.65	3.15	2.82	3.15	1.61
Kitchener, ON	9	9	5	5	5	5.81	3.97	1.74	1.4	1.21
St. Catherines, ON	3	8	8	10	10	2	2.64	2.63	2.74	2.65
Halifax, NS	8	8	10	10	4	4.34	3.59	3.6	3.12	1.11
Victoria, BC	8	9	16	21	23	5.19	4.6	6.85	7.29	7.37
Windsor, ON	8	12	10	11	5	4.14	4.64	4.06	4.2	1.52
Oshawa, ON	4	3	2	3	3	4.94	2.49	1.3	1.25	1.01
Saskatoon, SK	1	1	1	21	24	1.05	0.79	0.65	10	10.62
Regina, SK	1	2	1	17	17	0.89	1.42	0.61	8.87	8.92
St. John's, NF	10	14	20	19	13	11	10.62	12.92	11.06	7.52
Greater Sudbury, ON	10	12	6	7	3	9	7.72	4	4.44	1.93

that influence the number of local government units within a political jurisdiction.²¹ In order to obtain sharper estimates for the effect of political centralization on the number of local governments within U.S. states ($N = 50$) and Canadian provinces ($N = 9$ for 1960 and $N = 10$ for 1970 onward), we pooled the Canadian and U.S. data to estimate the following regression for each year:

$$(1) \quad \log(LGU_i) = \alpha + \beta \log(POP_i) + \chi \log(Area_i) + \delta(Canada) + X_i\phi + \varepsilon_i,$$

where LGU_i denotes the number of subcounty general-purpose local government units in state or province i ; POP_i is the population of state or province i ; $Area_i$ is land area (in square miles) of state or province i ; $Canada$ is an indicator variable equal to 1 for Canadian provinces and 0 for U.S. states; X_i is a vector of state or province-specific control variables; and ε_i is an error term. As control variables we include the latitude and longitude of a province or state's geographic center, an indicator equal to 1 if the province or state has access to a major port and 0 otherwise; an indicator equal to 1 if the province or state has civil law legal origins;²² and the number of years since a state or province joined

²¹ Economists who study local government posit that there is a trade-off that must be balanced when determining the optimal number of local governments within a geographic area. On the one hand, there are competitive benefits from having more governments. On the other hand, there is a loss of scale economies in tax collection and public service provision and the fixed costs of establishing local government must be replicated. It is difficult to find appropriate proxies for these factors, given the aggregated nature of our dataset (U.S. states and Canadian provinces). By including controls for land area, population, and other geographic variables, we hope to net out some of these factors.

²² The civil law indicator equals to 1 for AL, AZ, AR, CA, FL, IN, IL, LA, MI, MS, MO, MN, TX, and QC (Quebec). The list of civil law states is taken from Berkowitz and Clay (2006).

TABLE 11: Number and Density of Local Government Units within the Largest 50 Metropolitan Areas in the United States, 1997

	General- Purpose (GP) Local Governmets	Special Districts (SD)	GP per 100,000 Population	GP plus SD per 100,000 Population
New York	80	65	0.93	1.68
Los Angeles—Long Beach	88	196	0.96	3.08
Chicago	455	662	5.73	14.06
Philadelphia	354	296	7.16	13.15
Washington	96	49	2.06	3.12
Detroit	212	44	4.75	5.73
Houston	79	669	2.02	19.05
Atlanta	107	109	2.86	5.77
Boston	380	409	11.57	24.02
Dallas	145	98	4.53	7.59
Riverside—San Bernardino	48	223	1.55	8.70
Phoenix—Mesa	32	105	1.10	4.68
Minneapolis—St. Paul	331	97	11.70	15.13
San Diego	18	113	0.66	4.74
Orange County	31	86	1.14	4.30
Nassau—Suffolk	110	199	4.12	11.57
St. Louis	300	357	11.72	25.65
Baltimore	20	55	0.81	3.03
Pittsburgh	412	334	17.57	31.82
Oakland	32	142	1.39	7.52
Seattle—Bellevue—Everett	56	191	2.43	10.69
Tampa—St. Petersburg—Clearwater	35	51	1.56	3.82
Cleveland—Lorain—Elyria	200	55	9.00	11.47
Miami	27	6	1.26	1.54
Newark	129	35	6.63	8.42
Denver	31	378	1.61	21.12
Portland—Vancouver	56	163	3.08	12.04
Kansas City	171	231	9.85	23.15
San Francisco	32	111	1.91	8.5
San Jose	15	42	0.92	3.48
Cincinnati	198	101	12.25	18.49
Fort Worth—Arlington	60	27	3.77	5.47
Sacramento	13	221	0.84	15.06
Norfolk—Virginia Beach—Newport	11	15	0.71	1.68
San Antonio	33	32	2.15	4.23
Indianapolis	184	220	12.12	26.6
Fort Lauderdale	28	35	1.86	4.18
Orlando	36	33	2.40	4.60
Columbus	178	48	12.09	15.35
Milwaukee—Waukesha	90	48	6.17	9.46
Charlotte—Gastonia—Rock Hill	52	25	3.77	5.57
Bergen—Passaic	86	7	6.44	6.96
Las Vegas	10	47	0.76	4.32
New Orleans	17	5	1.31	1.69
Salt Lake City—Ogden	41	91	3.25	10.45
Greensboro—Winston-Salem—Hi	43	27	3.69	6.00
Nashville	43	58	3.73	8.74
Buffalo—Niagara Falls	63	37	5.48	8.69
Hartford	58	110	5.08	14.70
Providence—Fall River—Warwick	33	69	2.95	9.10

TABLE 12: Determinants of the Log Number of General-Purpose Local Government Units within Canadian Provinces and U.S. States

	(1a)	(1b)	(2a)	(2b)	(3a)	(3b)	(4a)	(4b)	(5a)	(5b)
	1960	1960	1970	1970	1980	1980	1990	1990	2000	2000
Constant	-7.29*** (2.11)	-7.24*** (2.26)	-6.77*** (1.88)	-6.57*** (1.91)	-6.35*** (1.94)	-6.21*** (0.19)	-5.47*** (1.95)	-5.47*** (1.98)	-6.25*** (1.97)	-8.47*** (2.06)
Log(population)	0.81*** (0.15)	0.79*** (0.14)	0.68*** (0.13)	0.68*** (0.15)	0.63*** (0.15)	0.62*** (0.16)	0.55*** (0.14)	0.51*** (0.15)	0.53*** (0.13)	0.43*** (0.14)
Log(land area)	0.26* (0.14)	0.23 (0.15)	0.37*** (0.12)	0.32** (0.14)	0.40*** (0.12)	0.34** (0.15)	0.45*** (0.12)	0.41*** (0.15)	0.45*** (0.12)	0.43*** (0.14)
Latitude	0.06*** (0.02)	0.07*** (0.02)	0.07*** (0.02)	0.08*** (0.02)	0.07*** (0.02)	0.08*** (0.02)	0.07*** (0.02)	0.08*** (0.02)	0.09*** (0.01)	0.10*** (0.02)
Longitude	-0.04*** (0.01)	-0.04*** (0.01)	-0.04*** (0.01)	-0.04*** (0.01)	-0.04*** (0.01)	-0.04*** (0.01)	-0.04*** (0.01)	-0.04*** (0.01)	-0.04*** (0.01)	-0.03*** (0.01)
Major port	-0.89*** (0.29)	-0.93** (0.50)	-0.69*** (0.23)	-0.73*** (0.23)	-0.62*** (0.23)	-0.66*** (0.22)	-0.52** (0.23)	-0.56** (0.22)	-0.41* (0.21)	-0.42** (0.19)
Canada indicator	-0.75 (0.46)	-0.75 (0.50)	-0.88** (0.40)	-0.91** (0.42)	-0.91** (0.41)	-0.92** (0.43)	-1.06** (0.42)	-1.03** (0.44)	-1.15*** (0.41)	-1.04* (0.49)
Years of settlement		0.00 (0.00)		-0.00 (0.00)		0.00 (0.00)		0.00 (0.00)		0.00 (0.00)
Civil law indicator		0.27 (0.27)		0.29 (0.26)		0.34 (0.27)		0.36 (0.27)		0.42 (0.28)
R-squared	0.72	0.72	0.70	0.72	0.70	0.71	0.68	0.69	0.66	0.69
N	59	59	60	60	60	60	60	60	60	60

Note: Robust standard errors are displayed in parentheses.

the U.S. or Canada to approximate the number of years of settlement within a state or province. We expect the number of local government units within a state or province to be increasing in the population and land area, decreasing with civil law legal origins (it is usually argued that civil law legal origins give rise to more centralizing political institutions), and increasing with years of settlement. Finally, if political centralization within Canadian provinces reduces the number of local government units, the coefficient on the Canada indicator should be negative. We estimate Equation (1) separately for each decade from 1960 to 2000.

Coefficient estimates are displayed in Table 12. We estimate the model with and without the civil law and years of settlement control variables. The Canada indicator is negative and statistically significant in all regressions from 1970 onward. Additionally, in absolute value, the size of the Canada indicator has also increased over time. By 2000, being in Canada reduced the log number of local governments by almost three-fourths of a standard deviation. Other things held constant, greater political centralization within Canadian provinces (relative to U.S. states) has resulted in fewer local government units in Canada, an effect that has been increasing over time.

The coefficients of the other variables are generally significant and have the expected signs. Access to a major port has a negative and statistically significant effect on the number of local governments, perhaps because ports are natural sources of agglomeration and concentrate economic and political power. States and provinces with more people and greater land area also have more local governments. The coefficient on latitude is positive and significant, implying that the number of local government units increases moving northward, while the coefficient on longitude is negative and significant, indicating fewer local governments moving westward. The latter effect reflects denser settlement in eastern states and provinces. Finally, the civil law indicator and years of settlement are not statistically significant.

Pooling data on metropolitan areas for Canada in 2000 ($N = 138$) and the U.S. in 1997 ($N = 314$), we estimate the effect of differences in the degree of political

TABLE 13: Determinants of the Number of General-Purpose Local Governments in Canadian and U.S. Metro Areas for 1997/2000

	(1) Baseline Regression	(2) Include Climate Controls	(3) Include Climate and Political Controls
Log(population)	0.52*** (0.04)	0.52*** (0.04)	0.54*** (0.04)
Log(land area)	0.19*** (0.04)	0.19*** (0.04)	0.18*** (0.04)
Latitude	0.09*** (0.01)	0.10*** (0.03)	0.11*** (0.03)
Longitude	-0.02*** (0.00)	-0.02*** (0.00)	-0.02*** (0.01)
River	0.21** (0.09)	0.22** (0.09)	0.22** (0.09)
Port	-0.10 (0.12)	-0.11 (0.11)	-0.13 (0.12)
Canada	-1.43*** (0.16)	-1.46*** (0.18)	-1.48*** (0.19)
Temperature		0.01 (0.03)	0.01 (0.03)
Precipitation		0.00** (0.00)	0.00 (0.00)
National capital indicator			-0.78*** (0.23)
Prov/state capital indicator			-0.06 (0.13)
Civil law indicator			0.17** (0.08)
R-squared	0.68	0.68	0.69
N	452	452	452

Note: Robust standard errors are displayed in parentheses.

centralization on metropolitan fragmentation within Canada and the U.S. To do this, we estimate a regression similar to Equation (1) where the dependent variable is the number of subcounty general-purpose local governments within each metropolitan area;²³ population is the number of people residing within a metropolitan area; land area is the number of square miles of the metropolitan area; and the Canada dummy is an indicator equal to 1 for Canadian metropolitan areas. As before, we predict that the Canada indicator should be negative. We also include the geographic coordinates (latitude and longitude) of each metropolitan area; a port indicator equal to 1 if the metropolitan area includes a major port; and a civil law indicator equal to 1 if the metropolitan area is located in a jurisdiction with civil law legal origins; an indicator equal to 1 if the metropolitan area is located on a major river; climate controls (average daytime temperature and annual average precipitation); an indicator variable that is equal to 1 if the metropolitan area includes a national capital (i.e., Washington, DC, and Ottawa); and another indicator equal to 1 if it includes a subnational (state or provincial) capital city.

As shown in Table 13, the coefficient on the Canada indicator is negative and statistically significant. Canadian metropolitan areas have fewer local government units than

²³ Qualitatively similar results were found using the number of local government units per capita as the dependent variable.

TABLE 14: Effect of Home Rule Status in 1950 and 1970 on the Number of Subcounty General-Purpose Government Units in U.S. States, 1960–2000

	1960	1970	1980a	1980b	1990a	1990b	2000a	2000b
Log(population)	0.71*** (0.16)	0.65*** (0.17)	0.58*** (0.18)	0.56*** (0.18)	0.45*** (0.17)	0.44** (0.17)	0.45*** (0.15)	0.45*** (0.15)
Log(land area)	0.45*** (0.12)	0.41*** (0.12)	0.53*** (0.13)	0.51*** (0.13)	0.60*** (0.13)	0.59*** (0.12)	0.61*** (0.12)	0.58*** (0.12)
Latitude	0.06 (0.03)	0.07*** (0.02)	0.07*** (0.02)	0.07*** (0.02)	0.07*** (0.02)	0.07*** (0.02)	0.08*** (0.02)	0.08*** (0.02)
Longitude	-0.05*** (0.01)	-0.05*** (0.01)	-0.05*** (0.01)	-0.05*** (0.01)	-0.06*** (0.01)	-0.05*** (0.01)	-0.06*** (0.01)	-0.05*** (0.01)
Major port	-0.62*** (0.27)	-0.52** (0.25)	-0.44* (0.25)	-0.49* (0.24)	-0.30 (0.24)	-0.35 (0.24)	-0.22 (0.25)	-0.29 (0.25)
Years since statehood	-0.00 (0.01)	-0.00 (0.01)	-0.00 (0.01)	0.00 (0.01)	-0.00 (0.01)	-0.00 (0.01)	-0.00 (0.01)	-0.00 (0.01)
Civil law indicator	0.04 (0.31)	0.13 (0.30)	0.17 (0.30)	0.26 (0.27)	0.18 (0.31)	0.28 (0.28)	0.23 (0.30)	0.32 (0.28)
HR in 1950	0.40 (0.27)	0.39 (0.26)	0.46* (0.26)		0.52** (0.26)		0.49* (0.25)	
HR in 1970				0.45* (0.25)		0.48* (0.25)		0.49* (0.24)
R-squared	0.77	0.75	0.76	0.77	0.76	0.76	0.75	0.74
N	50	50	50	50	50	50	50	50

Note: Robust standard errors are displayed in parentheses.

their U.S. counterparts. Differences in the degree of political centralization have therefore also contributed to a divergence in the extent of metropolitan fragmentation across the two countries. Metropolitan areas with more population and larger land area have more local government units. Again, we find that the number of local government units increases with latitude and decreases as one moves west. Metropolitan areas located on major rivers have more local governments. Finally, national capital city status reduces the number of local government units. This is consistent with the idea that concentrations of political power result in less metropolitan fragmentation and fewer local government units within a metropolitan area.

5. HOME RULE STATUS AND THE NUMBER OF LOCAL GOVERNMENTS WITHIN U.S. STATES

The data on local government reveal substantial variation in the number and density of local government units even within U.S. states and metropolitan areas. In this section, we use variation in municipal home rule status—a proxy for the degree of political decentralization within a state—to explore the effect of political decentralization on the number of local government units within U.S. states, as well as the extent of metropolitan fragmentation across U.S. metropolitan areas.

Home rule grants citizens an explicit right to local self-government. With home rule, citizens are free to abolish and create new governments as they choose. Without home rule, the structure of local governments can only be altered through the actions of state legislatures or constitutional amendments. Because home rule significantly lowers the costs of creating local governments, the diversity and density of local government have increased greatly in states in which home rule has been adopted (Ostrom, Bish, and Ostrom, 1988).

TABLE 15: Effect of Home Rule Status on the Log Number of Subcounty General-Purpose Government Units in U.S. Metro Areas, 1997

	(1a)	(1b)	(2b)	(2b)	(3a)	(3b)
	Baseline	Baseline	Include Climate Controls	Include Climate Controls	Include Climate and Political Controls	Include Climate and Political Controls
Log(population)	0.60*** (0.07)	0.61*** (0.06)	0.62*** (0.07)	0.64*** (0.06)	0.65*** (0.07)	0.67*** (0.07)
Log(land area)	0.18* (0.10)	0.17* (0.09)	0.16* (0.09)	0.15* (0.09)	0.15* (0.09)	0.14 (0.09)
Latitude	0.08*** (0.01)	0.09*** (0.01)	0.02 (0.03)	0.02 (0.03)	0.03 (0.04)	0.03 (0.04)
Longitude	-0.03*** (0.01)	-0.03*** (0.01)	-0.03*** (0.01)	-0.03*** (0.01)	-0.03*** (0.01)	-0.03*** (0.01)
River	0.23** (0.11)	0.23** (0.11)	0.22* (0.12)	0.22* (0.11)	0.21* (0.11)	0.21* (0.11)
Port	-0.15 (0.11)	-0.18 (0.12)	-0.11 (0.10)	-0.13 (0.11)	-0.14 (0.10)	-0.16 (0.11)
Temperature			-0.07* (0.04)	-0.08** (0.04)	-0.08** (0.04)	-0.09** (0.03)
Precipitation			-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)
Home rule status in 1950	0.33*** (0.09)		0.29*** (0.09)		0.22** (0.01)	
Home rule status in 1970		0.21** (0.09)		0.18** (0.09)		0.12 (0.09)
National capital indicator					-0.63** (0.18)	-0.66*** (0.19)
State capital indicator					-0.12 (0.14)	-0.15 (0.14)
Civil law indicator					0.29*** (0.11)	0.33 (0.14)
R-squared	0.61	0.60	0.62	0.62	0.63	0.63
N	314	314	314	314	314	314

Note: Robust standard errors are displayed in parentheses.

Because there are many dimensions to municipal home rule, there is no single widely agreed-upon measure of home rule status. Various studies have categorized states according to the type and form of municipal home rule that is present (Zimmerman, 1981). At one extreme, home rule status could imply significant local government autonomy in terms of form, function, and finances. At the other, home rule status may be met if Dillon's rule does not apply within a state. For our purposes, we use an intermediate definition of home rule. We classify a state as having home rule status by a given year if the municipalities within the state have some degree of formal and functional home rule. Our information on municipal home rule within each state comes from Krane, Rigos, and Hill (2001).²⁴

To investigate the effect of home rule status on the number of local government units within U.S. states ($N = 50$), we estimated regressions similar to Equation (1) except we

²⁴ By this definition, AR, CA, CO, DE, ME, MN, MO, NJ, NY, ND, OH, TX, and WI are classified as home rule states by 1950, and all of these states plus AK, FL, GA, IA, KS, MD, MA, and SD are home rule states by 1970.

omit the Canada indicator and replace it with a municipal home rule status indicator equal to 1 if the state has home rule status by 1950 or by 1970, and 0 otherwise. We estimate the equation separately for each decade from 1960 to 2000. For 1960–2000, we use home rule status in 1950 as our measure of political decentralization. For 1980–2000, we also use home rule status in 1970 to proxy for political decentralization. Our identification strategy is to use home rule status in earlier decades since this provides a more plausibly exogenous source of variation in the extent of political decentralization.

The estimates shown in Table 14 indicate that for all years from 1980 to 2000, states that had implemented municipal home rule by 1950 or 1970 had more subcounty general-purpose local government units. The effect is also economically significant. For 2000, home rule status increased the log number of local government units by more than one-third of a standard deviation. Decentralization of political power away from states and toward municipalities increases the number of local government units. The number of local governments is increasing in latitude, decreasing in longitude, and increasing in both population and land area. Additionally, states that include a major port have fewer local governments, although the effect is not robust across years.

Table 15 reports coefficient estimates on the effect of home rule status on metropolitan fragmentation within U.S. metropolitan areas ($N = 314$) in 1997. These regressions are identical to those estimated using Canadian and U.S. metropolitan areas except that we replace the Canada indicator with the home rule indicator for either 1950 or 1970.²⁵ The coefficient on the home rule indicator is positive and significant in most regressions. Home rule, by decentralizing political power away from state governments and toward local authorities, has contributed to greater metropolitan fragmentation. Metropolitan fragmentation is increasing in population and land area. Moving north, fragmentation increases. Moving west, fragmentation falls. Major rivers increase fragmentation. Finally, fragmentation is lower for the national capital.

6. CONCLUSION

In a relatively short period of time, a significant literature has emerged linking institutions and economic growth, especially for the European colonial economies (North, 1981; Engerman and Sokoloff, 1997, 2002; Acemoglu et al., 2001). The urban literature, in contrast, has been much slower to examine the impact of institutions on urban and spatial development. This lack of interest is puzzling as cities and local governments are foremost “creatures of states,” meaning that a higher level government has the political authority to determine the “rules” by which the local governments can be established, abolished, and annexed, their geographic boundaries, the authority that local governments possess, and the revenues sources they tap.

In the Americas, the diversity of European colonial experience and local conditions contributed to the emergence and persistence of a variety of political institutions that affected local and urban development. In Latin America, Spanish or Portuguese colonial rule, in conjunction with factor endowments that fostered income inequality, led to the emergence of nondemocratic institutions where political power was centralized nationally at the expense of regional and local governments. In North America, on the other hand, British rule combined with factor endowments that fostered relative income equality led to the rise of democratic institutions and a federalist form of government that granted significant autonomy to regional and local governments. Yet, even between U.S. and

²⁵ Once again we obtain similar results using the number of local government units per 100,000 as the dependent variable.

Canada, federalism diverged, causing significant differences in their patterns of urban and local development.

In this paper, we present a variety of evidence suggesting that differences in the extent of national or regional political centralization—differences that have strong colonial roots—affect the degree of urban primacy, the size distribution of cities, and the number and mix of local governments. First, we find that political centralization at the national or regional levels is generally accompanied by urban primacy, or a distribution of city sizes skewed toward the largest cities. Second, it is associated with a greater use of general-purpose (cities, counties, towns, etc.) as compared to special-purpose (school districts, water, sewage districts, etc.) local governments. Third, it limits the number, density, and the variety of local governments.

For a variety of reasons, we believe that an institutional hypothesis, while not yet definitively proven, is likely to be superior to other potential explanations.²⁶ In urban economics, the size distribution of cities usually arises from a random urban growth processes, often assuming local externalities and congestion costs (see, for instance, Eeckhout, 2004 and Rossi-Hansberg and Wright, 2007). These models cannot easily explain why the size distribution of cities varies so greatly and systematically across the countries in the Americas, especially between North and Latin Americas. In particular, they cannot explain why capital cities in the U.S. are so small and unimportant whereas those in Latin America, and to a lesser extent in Canada, are much more prominently represented in the upper tail of the size distribution (Galiani and Kim, 2011; Kim and Law, 2010). Finally, these models cannot explain why revenue sources and the general autonomy of cities in Latin America, and to a lesser extent in Canada, are much more restricted relative to cities in the U.S.

This paper, along with Kim and Law (2010), sets out to investigate the theoretical and empirical linkages between political institutions and geography. While the research design we employ does not allow us to make definitive causal claims, the correlations we investigate are strongly suggestive of a causal link. We hope to more cleanly identify this relationship in the future, perhaps by examining these relationships at a lower level of aggregation. Additionally, our findings suggest several new avenues for research. If institutions affect the spatial distribution of economies, they may also matter for urban and regional economic performance. Future scholarship should examine how variation in political centralization affects regional and urban economic growth, the diffusion of public policies at the state and local levels, as well as the extent of metropolitan sprawl.

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²⁶ In a related vein, Libecap and Lueck (2011) demonstrate the persistent effects of institutions on geography and economic growth at a finer geographic level by exploring the impact of different land demarcation systems. Historically, two systems have been used to demarcate land parcels: the metes and bounds system, where each individual property owner defines land parcels independently and idiosyncratically using various temporary or natural fixtures, and the rectangular grid system, where a government authority defines a standardized system of squares in a large grid. Taking advantage of a natural experiment within the U.S., Libecap and Lueck find that there are large and persistent benefits from the rectangular grid system that likely come from lower transaction costs and greater network effects.

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