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**“Institutions and Long-Run Economic
Performance
in Mexico and Spain, 1800-2000”**

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(1) Introduction

This paper argues that institutions, policies, and events played a fundamental role in determining the economic performance of Mexico and Spain over the long run. We do not dismiss geography, factor endowments, technological change, or indeed many other variables that helped shape economic performance over time. Our main point is that historical processes exogenous to the economy determined the extent to which each nation realized its economic potential.

Recently, Stanley Engerman and Kenneth Sokoloff have suggested that the relative backwardness of the Latin American economies may be attributed to "factor endowments" that created more unequal societies than in the United States by concentrating land and other resources (and therefore also political power) in fewer hands.¹ High levels of inequality in income and wealth discouraged widespread participation in the market and limited the development of rights and protections that efficient markets require. Spain, and by extension perhaps other southern European and third world cases, experienced relative retardation in the nineteenth century similar to that in Latin America. It makes sense, therefore, to consider whether Spain's trajectory can be fit into the same model. We consider this possibility, but prefer a contrasting, though not entirely contradictory, view that emphasizes the relative independence of institutions, policies, and events from any given distribution of wealth or income.

¹ See Stanley L. Engerman and Kenneth L. Sokoloff, "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, 1997), pp. 260-304.

We begin with a brief survey of what is known about relative levels and trends in per capita income from the eighteenth century to the end of the twentieth. The data show that both countries failed to keep pace with the industrializing countries of the North Atlantic during the nineteenth century and fell further behind during much of the twentieth century.

Levels of economic performance comparable to that of Mexico and even Spain in the early nineteenth century appear to have been within the reach of many regions subsequently left behind by the rapid growth of the North Atlantic economies. In the New World, both Cuba and Argentina had reached levels of GDP per capita comparable to Spain by the late eighteenth century.² In Europe, Italy and the German states had reached levels of per capita income just short of France and England by the 1830s, though both subsequently lost some ground over the course of the nineteenth century.³ By the end of the nineteenth century or early in the twentieth, many of the world's economies that had stagnated during the first industrial revolution began to grow. Many experienced more or less serious setbacks in the twentieth century, particularly after 1929. Thus, we do not claim that the two cases we examine were at all unique in their trajectories.

What we do wish to claim is that Spain and Mexico, like many other regions, lacked certain institutional requisites for capitalist development in the early nineteenth

² John H. Coatsworth, "Economic and Institutional Trajectories in Nineteenth-Century Latin America" in *Latin America and the World Economy Since 1800*, edited with Alan M. Taylor (Cambridge: Harvard University Press, 1998), pp. 23-54

³ See Gabriel Tortella, *The Development of Modern Spain: An Economic History of the Nineteenth and Twentieth Centuries* (Trans. Valerie J. Herr, Cambridge, MA: Harvard University Press, 2000), chap. 1. See also Angus Maddison, *Monitoring the World Economy 1820-1992* (Paris: OECD, 1995), chap. 1 and Appendix D.

century, experienced major setbacks in their economic progress due to domestic political strife and international warfare, and pursued policies that impeded economic growth for decades at a time over the subsequent two centuries. In this paper, we discuss (1) the legal system that developed in Castille and was extended to the country as a whole and to the Spanish colonies; (2) the problem of political risk via default, debasement of the money supply, and confiscation caused by numerous wars both civil and international; (3) the slow rate of human capital formation via literacy and basic schooling, and (4) the rise and fall of economic strategies that implied varying degrees of openness to external trade and capital.

We conclude by briefly reviewing the common causes of the long-term failure of the Mexican and Spanish economies and by emphasizing the differences in strategy and outcome that produced sharply contrasting trends during the last quarter of the twentieth century.

(2) Long-run Trends

Table I displays Maddison's PPP-adjusted estimates of Spanish and Mexican GDP per capita, which begin in 1820. The estimates suggest that the Mexican and Spanish economies grew at relatively slow rates during the nineteenth and most of the twentieth centuries. The Mexican economy declined from the early 1800s through the independence wars that ended in 1821. Despite sporadic and short-lived spurts toward recovery, the Mexican economy did not recover to its 1800 level of per capita income until the late 1870s or later. Rapid growth during the Porfiriato in the last quarter of the

nineteenth century brought the overall growth rate between 1820 and 1900 up to an average annual increase of 0.55 percent.

The Spanish economy also fell behind the pace of the industrializing countries between 1800 and the 1850s. Thereafter, Spain kept pace with Britain and France until the end of the century. On average, Spanish per capita GDP grew at 0.95 percent per annum between 1820 and 1900, nearly twice the Mexican pace. Both economies ended the nineteenth century much further behind the industrial economies than in 1800.

For most of the twentieth century, Mexico outpaced Spain, growing at an annual average rate of 1.5 percent from 1900 to 1960, while Spanish growth at 0.9 percent in this era mainly reflected the economic collapse precipitated by the civil war from which the country did not begin to recover until the 1950s. After 1960, however, Spain's economy took off, growing at 5.6 per cent per year through 1994 while Mexico's growth lagged. Mexico's 1982 financial and economic crisis and the ensuing decade and a half of stagnation lowered Mexico's growth to only 1.28 per year between 1960 and 1994.

Table 1 also shows how the gap between the Spanish and Mexican economies grew in the nineteenth century, receded in the twentieth up to 1960, and thereafter grew rapidly. This gap is now greater than ever before. The ratio of Spanish GDP per capita to that of Mexico, which stood at about 1.4 in 1800, rose to about 1.9 in the late nineteenth century, fluctuated up to 1930, fell to its lowest level of 1.14 in 1950, and reached its highest point at 2.46 in 1994.

In comparison to northwestern Europe and the United States, both Spanish and Mexican economic growth rates lagged by large margins from at least the eighteenth until the second half of the nineteenth century, though Spain started at a higher level and did

not fall as far behind as Mexico. Late in the nineteenth century, both economies experienced accelerated growth at or above North Atlantic levels for several decades, Spain from the 1850s to 1890s, Mexico from the 1870s to 1908.

Both economies suffered major setbacks in the first half of the twentieth century, though in a reversal of the nineteenth century comparison Spain's experience of Civil War and fascist autarky had a far more deleterious effect on the Spanish economy between 1936 and the 1950s than the Mexican Revolution and its aftermath (1911-40) on Mexican growth. Mexico's era of peak economic performance occurred during the two decades of import-substituting industrialization from the late 1940s to the late 1960s. Spain also experienced rapid economic growth in the 1950s and 1960s.

Both economies experienced difficulties in making the transition from the inward-looking, state-led economic strategy of the ISI era to the more open, market-oriented strategies they pursue today. Spain faced these problems almost a decade before Mexico did. In the Spanish political and economic transition after the death of Franco in 1974, economic growth slowed and many previously protected firms were forced to compete with far less government help. By the mid-1980s, however, Spanish growth accelerated as a result of its new economic strategy just as the Mexican economy was experiencing the prolonged effects of the 1982 financial and economic crisis. By 1985-86, Mexico also changed strategy and like Spain suffered more than a decade of virtual economic stagnation. In the last two decades of the twentieth century, Spain enjoyed an era of unprecedented growth linked to its integration into the European Union while Mexico plunged into a prolonged epoch of stagnation from which its integration into a North American Free Trade Area has yet to rescue it.

(3) Legal Systems

Recent work on the origins and significance of legal systems has emphasized the differences between the "Common Law" legal system of Great Britain and most of its former colonies, on one hand, and the "Civil Law" systems that developed from Roman legal doctrines eventually adapted and embodied in the Napoleonic codes.⁴ The Common Law systems evolved in a decentralized way; placed major responsibilities for justice in the hands of juries and local judges; relied mainly on general standards or principles for judges to apply to the unique circumstances of the cases they adjudicated; developed open and increasingly transparent adversarial procedures in public view; and recognized citizens' rights to pursue individual interests not harmful to others or expressly forbidden by statute. Civil Law systems evolved under centralizing monarchs who appointed judges to act as agents strictly accountable to the monarch rather than local magnates; required judges to apply the written law rather than general principles to all cases no matter how dissimilar; placed evidence gathering, pleading, and decisions in the hands of judges and magistrates protected from public scrutiny and local influence; avoided juries and open confrontations; and recognized no rights or obligations of citizens not expressly conferred on them by the written law.

Some historians have argued that these differences are often overdrawn for two reasons. First, prior to the Napoleonic codes in the first decade of the nineteenth century,

⁴ For an introduction, see John H. Merryman, *The Civil Law Tradition: An Introduction to the Legal Systems of Western Europe and Latin America* (Stanford: Stanford University Press, 1985); for a game theoretic approach to the history of the two divergent systems, see Andrei Shliefer and Edward L. Glaeser, "Legal Origins" (Unpub. paper, Second Draft, October 19, 2000).

centralizing monarchs often had to adjust their ambitions to accommodate local and regional customs and privileges. When they refused to do so explicitly, the magistrates they appointed often did so on their own due to corruption or ties to local interests. This is certainly true, but the fact that such systems operated imperfectly did not make them similar to the Common Law systems. On the contrary, it introduced costly uncertainties.

Second, many countries operating in one of the two traditions have over time adopted some of the characteristics of the other. Mutual contamination thus makes it difficult to reach conclusions about the impact of characteristics peculiar to one or the other legal system. The evidence that Common Law countries consistently outperform Civil Law countries seems more persuasive for earlier time periods than for recent decades, but even in the pre-1850 era, the impact of other variables cannot be excluded. For the modern era, the most convincing work is that of La Porta and his colleagues, who have shown that Common Law countries have significantly larger, more developed and more sophisticated capital markets.⁵ On the other hand, a number of modern Civil Law systems evolved in ways that proved compatible with relatively high rates of economic growth, either through convergence with Common Law practices or through other revisions and adaptations. In contrast, a number of Common Law countries have experienced long periods of economic stagnation or decay.

For our purposes, the contrast in legal systems seems a promising hypothesis for the era before the cycle globalization that transformed the world economy in the second half of the nineteenth century. Prior to this, little in the way of reciprocal influence

⁵ See Rafael La Porta, Florencio Lopez de Silanes, Andrei Shleifer, and Robert W. Vishny, "Law and Finance," *Journal of Political Economy*, 106:6 (December 1998): 1113-55.

between the two evolving systems can be detected, so the contamination issue does not arise -- though the omitted variable problem of course remains. The latter has no easy solution. Our approach is qualitative and comparative. We emphasize three characteristics of the Spanish and Spanish colonial legal systems that made production and transactions more risky and more costly in contrast to the early Anglo-Saxon world in the pre-1850 era. These were:

- (1) the contradictory combination of the Spanish crown's politically astute and possibly inevitable willingness to recognize local custom and precedent (of Germanic and Visigoth origin in Castille, indigenous in the New World) and its efforts to centralize justice by continuously extending the appellate jurisdiction of the king's courts and by holding judges strictly accountable to the written law;
- (2) the confusing proliferation of written laws, regulations, and decrees, many of which contained rules that specified required behaviors in excruciating (and sometimes apparently lunatic) detail, and the failure of every attempt at codification, which made it difficult and frequently impossible to determine what the written law actually required; and
- (3) the crown's tendency to grant relief from the chaos of the ordinary courts to corporate entities on grounds of moral or economic necessity, a practice that reached a high point in the Bourbon era.

Since the "Spanish" colonies belonged initially to the crown of Castille, the Castillian legal system formed the basis for the colonial systems. The Castillian system evolved over the course of the Reconquest under the influence of two opposing

tendencies.⁶ The first consisted of efforts by the monarch to centralize both political and legal authority. The second involved the creation and defense of local privileges and immunities (*fueros*) during the same epoch. Centralism gained from the introduction and spread of Roman legal doctrines and procedures at the king's court and in the new universities from the late twelfth century on. Early efforts in this direction were codified in the *Ley* (or *Fuero*) *de Leyes*, more commonly called the *Ley de Siete Partidas* of 1265. Appeals from local jurisdictions provided the earliest means to extend royal authority. Gradually, the crown amplified appellate jurisdiction by adding cases and causes, with the result that the doctrines and procedures of the appellate process trickled down to the municipalities. The crown aided the process by appointing agents, initially called *corregidores*, to settle disputes among nobles and remedy abuses of power. The authority of the crown as ultimate arbiter of legal contentions rose as procedures became more standardized, appeals from local jurisdictions to royal tribunals more common, and agents of the crown more assertive in defense of the royal prerogative.

This long-term trend toward centralism confronted major obstacles. At the outset of the Reconquest, Castille was actually governed by a welter of Germanic and Visigoth customary law, much of it unwritten. The *Siete Partidas* actually had little direct impact on the actual administration of justice for at least two centuries. The legal systems of the reconquered territories developed under prelates or nobles holding royal grants of

⁶On the early development of the Spanish legal system, see Javier Alvarado Plana, *Temas de historia del derecho y de las instituciones (Parte I)* (Madrid: Universidad Nacional de Educación a Distancia, 1997); Enrique Gacto Fernández, *Temas de Historia del Derecho: Derecho Medieval* (Sevilla: Universidad de Sevilla, 1979); Alfonso García Gallo, *Manual de Historia del Derecho Español* (Madrid, 1967); Richard L. Kagan, *Lawsuits and Litigants in Castille, 1500-1700* (Chapel Hill, NC: University of North Carolina Press, 1981); Joseph F. O'Callaghan, *A History of Medieval*

immunity, whose relative independence of the crown encouraged local variation and resistance to royal authority both legal and political. Various efforts by learned immunists or their appointees to codify customary law became influential as early as the eleventh century. The spread of Roman rules and royal jurisdiction at the appellate level never entirely replaced local custom and privilege.

In the New World, the crown created obstacles to the development of a centralized legal system similar to those it faced in Castille itself. To provide incentives to erstwhile *conquistadores*, the crown initially agreed to devolve authority over conquered peoples and resources to those who risked lives and fortunes subjecting them. *Encomenderos* briefly held authority as independent of the crown as the medieval immunists. More important in the long run, however, was the crown's willingness to accommodate to indigenous legal and political structures. Native lords survived as a social stratum in the Andes, though not in most of central Mexico, mainly because the colonial administration found them irreplaceably convenient. In much of Mexico, indigenous *caciques* were chosen and governed as officials and judges according to norms and customs that survived (though not unchanged) despite their contrasts to Spanish law and practice.

Thus, both in Castille and the New World, the crown found it convenient to ignore and even encourage the use of local legal and judicial processes when its interests were not directly affected and when doing so lowered the costs of administering its vast territories. Crown officials intervened and supervised as convenient, while appellate jurisdiction gave the crown and its agents ultimate authority in most cases where

Spain (Ithaca: Cornell University Press, 1975); Charlotte Villiers, *The Spanish Legal Tradition*

contending litigants were wealthy and important enough to hire lawyers. In both Castille and the New World, jurisdictional controversies arose when litigants belonged to differing corporate bodies or castes. In the Americas, for reasons of state, the crown subsidized cases brought by indigenous communities against Spaniards, creoles, or mestizos.

The most ambitious efforts to centralize the administration of justice in the colonies occurred during the reign of Charles III. Among other efforts, the crown sought to reduce the independence of the colonial *audiencias*, which held original jurisdiction in some cases and served as appellate courts for others, by replacing creole members with Spaniards from the peninsula. This effort did not succeed. Nor did the introduction of the Intendency system beginning in Cuba in 1764 and reaching Mexico in 1786. In the latter, a total of twelve *intendentes* (each with *subdelegados* with local powers) replaced roughly 200 *corregidores* and *alcaldes mayores*. The new system did help to improve revenue collection, but it is doubtful that it accomplished much else.⁷

Because the crown insisted both on obedience to the written law and on writing many laws, confusion and miscommunication often resulted. Lawyers and judges agreed that codification would help to solve this problem, but every effort at codification ended in failure. In the New World, Spain's most ambitious effort at codification was the *Recopilación de leyes de las Indias*. To produce it, a team of experts worked from 1624 to 1635 to reduce over 400,000 royal *cédulas* to a mere 11,000 statutes. After nearly a

(Brookfield, VT: Ashgate Dartmouth, 1999).

⁷On the intendency system, see the classic work by Lillian Estelle Fisher, *The Intendant System in Spanish America* (Berkeley: University of California Press, 1929).

half century of revisions and reviews, this had been reduced to just over 6,400 when the *Recopilación* was finally published in 1681. By which time it was already outdated.⁸

The most efficient administration of justice from the point of view of the individual litigant was to be found in special tribunals created to adjudicate cases involving litigants who belonged to specially designated corporate bodies. In some of these special tribunals, the judges were selected from among the members of the corporate body to which the *fuero* was granted. In these cases, a special subcode of laws and procedures was applied which in some instances reduced the uncertainties involved in litigation and discouraged costly appeals to higher bodies. The two most important of these special courts were those established by the *fuero mercantil* and the *fuero de minería*. The first heard disputes involving merchants; the second took up litigation involving mine owners. The creation of the *fuero mercantil* and the simultaneous application in the colonies of the *Ordenanzas de Bilbao* (one of the earliest of Spanish commercial law codes) probably reduced the costs of litigation between merchants after 1792.⁹ Mine owners benefited in the same way after creation of the *fuero de minería* in 1783.¹⁰

⁸Clarence H. Haring, *The Spanish Empire in America* (New York: Harcourt, Brace and World, 1947, 1952), pp. 101-5.

⁹Jacinto Pallares, *El poder judicial, o Tratado completo de la organización, competencia y procedimientos de los tribunales de la República Mexicana* (Mexico: Impr. de N. Chávez, 1874), 28-31. It is likely that the *Ordenanzas de Bilbao*, most recently updated in 1847, had been in use in Mexico for some time prior to the decree of 1792. See Enrique Orozco, *La evolución de la legislación mercantil en la República* (Mexico: F. Díaz de León, 1911), 8.

¹⁰Disputes over the proper application of the *fuero de minería*, the right of the Viceroy to intervene in cases before the mining courts, and creation of an appellate court in Mexico City reduced the efficacy of this measure. See Brading, *Miners and Merchants*, chap. 10.

Special courts have negative effects on the efficiency with which general property rights are defined and enforced, however. One of the colony's most distinguished viceroys, Conde Revillagigedo, commented on the constant efforts of litigants to move their cases from one court to another.¹¹

Everyone in his own court believes he will be better treated than in that of others, and thus all efforts are bent towards moving disputes and suits to one's own ground.

Overlapping jurisdictions caused multiple confusion, with different courts claiming jurisdiction in the same cases. Long before actual litigation began, litigants disputed at length over where cases should be heard.

In Mexico, fifteen different kinds of courts and tribunals existed in the late eighteenth century, each with a distinct jurisdiction and a separate set of rules and procedures. One of these, the *fuero de hacienda*, was actually composed of fourteen different courts each set up to deal with disputes involving tax issues or disputes between litigants in any of the activities reserved as monopolies of the crown or regulated by royal order, from tobacco growers to cockfight empresarios.¹² The confusion was somewhat reduced by the establishment of the intendencies in 1786, which reduced the fourteen fiscal courts to a single tribunal and provided somewhat more unified rules for pleading cases in the ordinary or common courts. Later, the Spanish Constitution of 1812 reformed

¹¹Cited in Pallares, *Poder Judicial*, 35.

¹² *Ibid.*, 28-35.

the judicial system and reduced the number of separate courts from fifteen to six. Little was accomplished however towards producing an up-to-date and consistent legal code.¹³

In addition to the litigation costs for those directly involved, the existence of privileged corporate bodies whose members operated outside the ordinary civil laws and sat in judgment on one another outside the jurisdiction of the regular court system increased the risks and liabilities of enterprise for the rest of the population. Since the judicial system was already inefficient, however, the value of special tribunals from an economic standpoint could have been high. The issue is whether the benefits of special tribunals to the industries or occupations which enjoyed them outweighed the costs imposed on the rest of society. In the case of New Spain, the benefits of the *fueros* to merchants and miners were great, and given the massive inefficiency of the judicial system, which existed long before their creation, the additional negative effects on the rest of society were probably small.

Special *fueros*, of course, were granted not only to merchants and miners, but to other groups as well. Special courts (*juzgados*) held jurisdiction in all cases involving Indians, while *fueros* involving internal courts existed for royal officials, church employees, the military, persons living within entailed estates (*mayorazgos*), and others.¹⁴ The costs and uncertainties of litigation involving merchants or miners and persons with access rights to any of these other tribunals were not always reduced by the creation of the merchant and mining *fueros*. The structure of the judicial system evolved as though each corporate body existed apart from all others; relations among the members of each

¹³*Ibid.*, 34-35.

group might be more or less precise at least with respect to the less complicated kinds of litigation, but relations between members of different corporate bodies were often unclear, as though each corporation and its members existed independently and were linked only by separate and special ties to the sovereign alone. The result was a judicial system that failed to define and enforce property rights with anything like reasonable efficiency and precision.

The time and expense of litigation, despite the reforms of the late eighteenth century, remained extremely high. As Revillagigedo put it,¹⁵

It is no wonder that the administration of justice is slow, uncertain and so extremely costly to litigants. If one could arrive at an accurate calculation, it would be horrifying to see the amounts that have been spent [in litigation] in America, and even more worthy of admiration would be the time lost by litigants and petitioners.

The high cost of litigation and the loss of time work in modern societies to the benefit of those who possess the resources to pay and wait. Care should be taken, however, not to confuse the streamlined operation of modern judicial bias in favor of wealthy litigants with the functioning of Spanish colonial jurisprudence. The colonial legal system did not function to protect the rights between citizens, even wealthy ones. It functioned to protect the King's interest and the royal prerogative of arbitrary intervention in every instance. Despotism and bourgeois legality belong to different epochs in legal history.

¹⁴ *Ibid.*, 28-33.

¹⁵Cited in *Ibid.*, 38.

Spain and its colonies thus developed neither the protections afforded by uniform principles nor the relative transparency and authorized flexibility delegated to juries and local judges in the Common Law systems. Instead, the Spanish system worked because of unauthorized flexibility in the application of minutely detailed statutes by judges and officials whose actions were seldom public and infrequently scrutinized even by higher authorities. An interesting example of how this system worked can be seen in the operation of the *repartimiento de mercancías* in New Spain. In apparent contrast to the Andean institution of the same name, the Mexican *repartimiento* worked principally to overcome the legal (and to some extent cultural) barriers to market activity in transactions between the indigenous population and Spanish or mestizo traders.¹⁶ When the latter made crop loans or extended credit on some other security to the former, they sought assurance that in case of default or malfeasance, the debtor would be obliged to meet his commitment or suffer penalty. Since *corregidores* (also known as *alcaldes mayores*) had the authority to imprison indigenous debtors who failed to pay, merchants reduced default risks by contracting these public officials to act as their credit agents. When independent traders purchased crops promised to *corregidores* and debtors absconded with the cash they received without repaying their loans, *corregidores* and their merchant backers lost money. *Corregidores* therefore occasionally abused their authority by excluding or even jailing interlopers (as well as defaulting debtors). Such arrangements thus tended to reduce competition and make markets less efficient in

¹⁶ See Jeremy Baskes' excellent work, *Indians, merchants, and markets : a reinterpretation of the Repartimiento and Spanish-Indian economic relations in colonial Oaxaca, 1750-1821* (Stanford: Stanford University Press, 2000).

contrast to areas with Common Law legal systems in which local magistrates functioned more transparently to enforce contracts even when their own interests were not involved.

The deficiencies of the Spanish and Spanish colonial systems persisted well into the nineteenth century, despite efforts both in Spain and in the New World to reform them. In both countries, the dual legacy of militant centralism and elite conservatism warred for more than a half century against liberal efforts to modernize juridical doctrines and judicial institutions. We take up this issue in the next section on political risk

(4) Political Risk

The Spanish and Spanish colonial legal systems tended to magnify the effects of fiscal, monetary and political instability, in contrast to England and the British colonies where judicial and legislative constraints on the monarch made arbitrary taxation, default on public debt, debasement of the currency, and expropriation of private property more difficult. Real interest rates on public debt and private lending in England fell during the Tudor period and remained low even during the English civil wars of the seventeenth century. In Spain and the New World, so far as we know, interest rates never fell to English levels at any time before the end of the nineteenth century.

International, colonial, and domestic warfare pushed Spain toward fiscal crisis with extraordinary regularity from the age of the Catholic monarchs to the 1930s. By the seventeenth century, it was abundantly clear that the Hapsburgs did not possess the resources to defend their dynastic possessions, particularly in Europe and the Caribbean. Imperial overreach proved Spain's undoing in two senses. First, Spain fought repeated international wars, stubbornly clinging to its European and New World territories at

enormous cost long past the time when it made sense to do so. Second, the same political constraints that made it impossible, even for liberals, to give up on the empire in a timely way and this made it more difficult for Spain to modernize its fiscal and economic institutions without turmoil and civil war.

Mexico, and other New World colonies, inherited this conundrum particularly in regions where institutional modernization could not be accomplished without calling into question the subordination of non-European populations. Had it not been for repeated foreign invasions, Mexico might well have fallen into the Spanish nineteenth-century pattern in which brief episodes of sweeping liberal reforms were followed by a generation or more of consolidation under conservative (*moderado*) governments. Instead, Mexico's domestic social and political strife intensified with each foreign invasion (1829, 1837, 1846-48, 1864-67). Between 1825 and 1855, Mexico changed presidents 48 times and finance ministers 111 times.¹⁷

The rigidities of the Spanish fiscal system are too well known to require extended elaboration. In both the peninsula and the New World, the Spanish fiscal system exempted those who could afford to pay the most and taxed subjects of little or no means. In Spain, direct taxation fell mainly on commoners. In New Spain, the largest direct tax was the *tributo* paid exclusively by the indigenous population. The remaining sources of regular revenue both in Spain and New Spain consisted mainly of taxes that fell disproportionately on internal commerce and urban consumers. During periods of warfare and acute fiscal crisis, the Spanish government frequently resorted to arbitrary and

¹⁷ Donald Fithian Stephens, *Origins of Instability in Early Republican Mexico* (Durham, NC: Duke University Press, 1991), p.11.

destructive expedients that raised funds through forced loans and other "*contribuciones*." Such measures often deepened the bankruptcy of the treasury by throwing still primitive capital markets into turmoil, bankrupting banks and commercial houses and raising the cost of capital even higher throughout the economy both in the peninsula and the colonies. One such measure, the ill-starred *consolidación de vales reales* decreed just before the Napoleonic invasion of the peninsula, outraged both the Church and the creole elite because it essentially required the Church to raise cash for remission to Spain by demanding repayment of the principal on outstanding mortgage loans, some more than two centuries old.

In Mexico, the colonial tax system was so keyed to the caste system and to the privileges of various private interests and the Church that altering it proved to be extremely contentious. After independence, the colonial pattern of taxation became unstable. The *tributo* was abolished (first by the Cadiz Cortes) then briefly revived as a head tax on all citizens, but was soon abolished when it and many other taxes became difficult or impossible to collect. As political strife escalated, the government's capacity to extract revenues declined sharply. The result was a shift in Mexico, promoted by liberals and resisted by conservatives, toward a fiscal regime based largely on customs revenues. This shift was embodied in the federalist Constitution of 1857, which made customs revenues the main source of revenue for the central government and delegated the authority to raise other taxes mainly to state governments.

The independence of Mexico, which had become the major source of colonial revenues for Spain in the eighteenth century, forced the former mother country back toward liberal reforms first introduced by the Cortes of Cadiz. Spain could not rely on

customs revenues to finance the government because external trade fell after the loss of the American colonies and did not recover until after mid-century. The liberal tax measures, which culminated in the Mon-Santillán reform of 1845, therefore focused principally on the introduction of new direct taxes on land and on commercial and industrial profits. As in the case of Mexico, however, the new Spanish tax system kept the central government starved for revenue and continuously in search of fiscal and monetary expedients. The two countries did not achieve relative fiscal stability until the 1870s following the restoration of the republic in Mexico in 1867 and the Restoration of the monarchy in Spain in 1875. As military expenditures diminished and the two economies (and tax revenues) revived, fiscal problems moderated.

By this time, of course, it was already too late. Centuries of recurrent fiscal crises had already undermined the economies of both Spain and its colonies. The Spanish government openly or covertly defaulted on its debts or declared unilateral conversions that made major detrimental changes in terms and interest rates in 1557, 1575, 1596, 1606, 1627, 1647, 1739, during the Napoleonic wars, 1851, 1882, and 1899. The Mexican government did so in 1827 and remained more or less continuously in default on its external debt until the Anglo-Mexican debt agreement of 1888. As one recent study concluded, "The repeated bankruptcies of the Spanish state had ruined several generations of bankers and effectively destroyed whatever financial and credit system existed in early modern Spain."¹⁸ The Spanish colonies, however, seem to have been less

¹⁸ Gabriel Tortella and Francisco Comin, "Fiscal and Monetary Institutions in Spain (1600-1900)" in *Transferring Wealth and Power from the Old to the New World: Monetary and Fiscal Institutions in the 17th through 19th Centuries* edited by Michael D. Bordo and Roberto Cortés-Conde (Cambridge, UK: Cambridge University Press, 2001), p. 160.

affected by these repeated defaults than Spain itself, though perhaps more likely to suffer from demands for extraordinary taxes and loans.

In addition to full and partial defaults, the Spanish government repeatedly resorted to debasing the money supply in ways that effectively amounted to confiscation in order to raise revenues. Here, too, the colonies were generally spared, but confiscations of property during internal civil strife appear to have increased in both countries in the nineteenth century.

(5) Human capital

Spain and Mexico lagged behind the North Atlantic economies in literacy and educational attainment beginning in the second half of the eighteenth century. Spain managed to catch up by the end of the twentieth century. Mexico still lags behind. Table 2 provides some comparative data on Spain and Mexico as well as the USA, UK, and Russia. The two most common thresholds cited in the literature on education and economic growth are the 30 percent and 70 percent literacy levels.¹⁹ Some empirical work has suggested that literacy rates below 30 percent are too low to stimulate much economic growth while the marginal impact of increases in literacy rates above 70 percent tends to diminish. Literacy rates as high as 30 percent have been achieved in many countries, beginning with Britain and the United States, with little direct

¹⁹For data and analysis on literacy, education, and development, see Gabriel Tortella, ed., *Education and Economic Development since the Industrial Revolution* (Valencia: Generalitat Valenciana, 1990), and Clara Eugenia Nuñez and Gabriel Tortella, eds., *La maldición divina: Ignorancia y atraso económico en perspectiva histórica* (Madrid: Alianza Universidad, 1993).

government intervention while rates above that level have everywhere required the development of public school systems and obligatory attendance.

As early as 1780, United States may have been the first country to reach the 30 percent level (though Sweden followed or may even have preceded closely), followed at roughly half-century intervals by Britain (1820), Spain (1880) and finally Russia and Mexico (1920). The second threshold of 70 percent literacy was achieved decades later in each case, with the shortest interval in the USSR (two decades) and the longest delay in the case of the USA (at least seven decades). The Spanish delay in spreading literacy and promoting education paralleled that of Italy and Portugal. In the New World, the export of this EuroLatin pattern resulted in even longer delays, especially in countries with large populations of indigenous or African descent. Mexico did not reach 30 percent literacy until the decade of the Revolution of 1910, four decades later than Spain.

The chronological gap between the achievement of the 30 and 70 percent levels is one measure of the commitment and effectiveness of government policy. In both Spain and Mexico, this gap equaled roughly four decades, though Spain had a four-decade headstart. More surprising still, the Mexican Revolution unlike the Russian Revolution failed to accelerate progress in educational attainment beyond the leisurely nineteenth-century pace the new authorities inherited. Mexico reached 70 percent literacy only in the 1970s. The contrast between the Soviet and Mexican experiences is especially interesting, because it demonstrates that it is possible to raise educational levels rapidly even in relatively backward countries with sparse and ethnically diverse populations scattered over great stretches of inhospitable landscape, given the political will to do so.

In both Spain and Mexico, aggregate economic growth appears to have begun decades before either country reached the 30 percent threshold. As Nuñez pointed out for Spain, however, productivity advance in the late nineteenth and twentieth centuries tended to occur first in those provinces where literacy rates had begun moving up 20 to 30 years earlier. The same pattern may also have developed in Mexico, with a lag due at least in part to more frequent wars and greater political and social turmoil (1810-67 and 1910-16). Measuring the unique contribution of education is complicated, however, by the parallel and simultaneous trends in other variables such as transport innovation, large-scale location-sensitive foreign investment, rural to urban and south to north migratory flows, and rapid export growth.

In the eighteenth and early nineteenth centuries, the Common Law countries achieved first-threshold rates of basic literacy mainly because private citizens, non-governmental organizations (including protestant sects opposed to the official Church of England), and some few local communities encountered no official obstacles to pursuing their interests. In Civil Law countries, where explicit authorization for such activities was required and dissenting religious movements were subject to discrimination until 1857 in Mexico and episodically up to more recent times in Spain, literacy rates lagged. Catholic doctrine stressed the authority of the priest rather than access to written texts like the Bible. Thus, literacy in Catholic countries lagged behind Protestant nations everywhere, except in border regions subject to Protestant competition, such as Belgium and northern France. After the first threshold, however, with concerted governmental action required to reach 70 percent and above, the Civil Law countries may have had an advantage in

their tendency to centralization and specific rule making -- an advantage that even more centralized and authoritarian regimes would surpass elsewhere.

(6) Openness to trade

Geography as well as institutional arrangements and policies determined the extent to which the Spanish and Mexican economies have been able to exploit potential comparative advantages in international trade. In both countries, internal transportation prior to the railroad relied mainly on wagons and mules with few navigable rivers and no canals. The high cost of transportation discouraged export production and provided significant non-tariff protection for domestic producers in both countries. Except for high value to bulk commodities like precious metals and dyes, both countries produced most of their exports within a few miles of a seaport prior to the railroad.

Thus, despite Spain's vast mercantilist empire and Mexico's vast mineral wealth, foreign trade played a limited role in both economies in the eighteenth and most of the nineteenth centuries. At the end of the eighteenth century, Spanish exports in peacetime (1787-89) amounted to roughly eight to 8.5 percent of GDP, but fell to roughly 5.6 percent by 1799 as the wartime disruption of trade deepened.²⁰ In 1800, Mexican exports were equal to an even smaller 5.2 percent of GDP. In contrast, more export-oriented countries like Britain (over 15 percent even in wartime) and colonies like Cuba

(20.4 percent)²¹ were much more heavily committed to trade at the outset of the modern era. In the first quarter of the nineteenth century, the external sectors of both economies fell sharply (in Mexico during the independence wars, in Spain following the collapse of the empire) and did not recover levels achieved in late eighteenth century until after 1850 (Spain) or 1870 (Mexico). Both economies experienced export booms that coincided with the restoration of stable government after decades of instability and the construction of railroads beginning in the 1870s.

During the nineteenth and twentieth centuries, the Spanish and Mexican governments implemented tariff policies that protected domestic producers of both agricultural and industrial products, though appeals from free trade advocates did have some impact on policy. Spanish tariffs fell for brief periods following liberal legislation in 1841, 1869, and 1882. The 1869 and 1882 tariff laws probably contributed to the export-led growth and general economic recovery during the Restoration era after 1875, but from 1891 on Spain reverted to protectionist principles. Despite the moderate protectionism of this era, however, exports as well as GDP per capita increased at a satisfactory pace between 1900 and 1930.

²⁰ The 1787-89 estimates result from dividing mean exports for 1787 to 1789 (481 thousand reales) by total GDP of 5.685 to 6.0 million reales. The 1799 figure assumes exports of 506 thousand reales and GDP of 8.9 million reales. For export data see Leandro Prados de la Escosura, "La pérdida del imperio y sus consecuencias económicas en España" in *La independencia americana: consecuencias económicas* edited by Prados de la Escosura and Samuel Amaral (Madrid: Alianza Universidad, 1993), p. 287. For a discussion of GDP estimates for the same time frame, see *Ibid.*, 271-73.

²¹ For Cuban and Mexican estimates see Coatsworth, "Economic and Institutional Trajectories," 31. For Great Britain, see B.R. Mitchell, "Statistical Appendix" in *The Fontana Economic History of Europe* (Glasgow: Fontana/Collins, 1973), 795, 808.

In Mexico, protectionism developed early and persisted until the 1980s. Despite relatively high rates of protection, which were compounded after 1880 by the depreciation of the country's silver-based currency, Mexico experienced relatively rapid export-led economic growth from the 1870s to the eve of the Revolution of 1910. The export to GDP ratio rose from 4.6 percent in 1860 to 17.5 percent in 1910.

Spain and Mexico each experienced a period of major political, social, and economic upheaval in the twentieth century with significant consequences for economic growth. The violent phase of the Mexican Revolution reached a peak in 1913 to 1916, but the effects of the upheaval persisted at least through the popular reformism of the Cárdenas presidency (1934-40). Similarly, the violent phase of the Spanish Civil War lasted only three years (1936-39), but the inward-looking statist features of the succeeding regime persisted for decades.

From an economic standpoint, the Mexican Revolution had fewer negative and more positive consequences for economic growth than the Spanish Civil War. In the Mexican case, world demand for Mexican exports during World War One helped to minimize the economic impact of the turmoil. This in turn strengthened the moderate Constitutionalists, who sought to promote and profit from a quick reactivation of the economy. The Cardenista reforms of the 1930s were also well timed. However radical they appeared to some at the time, they did little to discourage foreign investment (which would not have occurred anyway) and did contribute to endowing the Mexican regime with the political capital and legitimacy it needed to impose more conservative policies in the Post World War Two era.

In Spain, by contrast, the disaster of the Civil War was followed by a decade of fascist autarky that blocked growth and caused widespread suffering. Per capita income actually fell from 1930 to the early 1950s. Exports, which had averaged near ten percent of GDP from 1900 through the 1920s fell back and, despite occasional recoveries, reached a low point of less than three percent on the eve of the 1959 liberalization.

Both economies experienced serious adjustment problems in the transition from import substituting industrialization to more open, market-based strategies. Spain's Post-Franco reforms (and the economic crisis of 1975-85 that accompanied them) proved to be worth the sacrifices they imposed in the extraordinary economic boom that occurred with Spain's entry into the European Union. Mexico's transition, with its similarly momentous implications for the political regime, has not yet proved as successful. In part, this is due to the important differences between the European Union and NAFTA.

(7) Conclusions

Mexican and Spanish economic and political histories after colonial independence show remarkable parallels. In both cases the nineteenth century and the first half of the twentieth were periods of painful institutional reform and adjustment, including violent revolutions plus civil and foreign wars. In both cases the first half of the nineteenth century was a period of economic stagnation or even regression, while the period from roughly 1870 to the eve of the First World War showed clear recovery. From a political standpoint, in both countries, after decades of failed attempts to make a parliamentary system work and of strife between centralists and anti-centralists, between liberals and conservatives, and between church and state, an accommodation was reached by the mid-

nineteenth century whereby a disentailment program (*desamortización*) was achieved and the hold of the church on the main productive asset, land, was eased. This liberal victory was accompanied by a new political arrangement that brought about a semi-authoritarian regime in liberal parliamentary guise (*Porfiriato* in Mexico, *Restauración* in Spain). A period of relative law and order ensued, which was accompanied by substantial economic growth. From the First World War to around 1950 both countries again underwent revolution and civil turmoil. The second half of the twentieth century, in contrast, was a period of political stability and steady economic growth, although in the last decades of the century Spain profited more clearly from association to the European Union than Mexico from intercourse with its North-American neighbors.

The remarkable historical parallels point towards a common institutional legacy, since the physical endowments of the two countries differ considerably. Moreover, of the four key aspects of institutional design and policy orientation we have briefly discussed, none appears to be related in a straightforward way to factor endowments or the distribution of wealth or income at a particular moment or era in time.

The Spanish variant of the west European "civil law tradition" developed over the centuries of the reconquest and subsequent unification of the Iberian kingdoms as ambitious monarchs sought to extend their authority while accommodating as conditions dictated to local interests. The transfer of Castillian legal norms and procedures to the New World did, of course, embed distinctions of "blood" or caste in the fundamental structures of governance similar to the differences between nobility (*hidalguía*), commoner, and outcast (Moors, Jews) on the peninsula, but neither the system as a whole nor the particular differences it institutionalized can be related to any particular (or

particularly unequal) prior distribution of wealth or income. Indeed, the caste system of the New World deliberately weakened the grip of local conquerors and magnates on the underlying indigenous population and placed sharp limits on the growth of inequality in the distribution of wealth by recognizing indigenous property rights and guaranteeing the majority of the indigenous population access to land independent of the colonial elite. The crown's strategy of accommodating indigenous interests also included recognition (though also revision and supervision) of the institutions and procedures of indigenous law and governance at the local level. Both policies helped to make New Spain more governable, but also more equal.

The legal system acted as a brake on economic growth in both Spain and New Spain not because it grew out of or produced higher levels of inequality in wealth or income than elsewhere, but because the caste system constrained the mobility of labor and capital, because the written law failed to define and extend property rights in a clear and coherent way, and because the judicial process involved high costs, interminable delays, and endemic corruption.

The historic problem of chronically high political risk of default, debasement, and confiscation due to war-induced fiscal crisis was due mainly to dynastic ambition and imperial overreach in Spain and the legacy of political divisions that could not be peacefully resolved either in nineteenth-century Spain or in the independent nations of the New World. Perpetually high interest rates on commercial transactions and the delayed development of capital markets were the result. In Mexico, political instability coincided as both cause and effect with economic stagnation and decline in the

independence era when wealth (especially land) and income distribution probably became more equal.

The achievement of widespread (30 percent) literacy may have been helped by the more egalitarian distribution of wealth and income characteristic of the middle and northern English settlement colonies on the North American mainland, as Mariscal and Sokoloff have recently suggested,²² but the parallel (though slightly later) British achievement was not. Whatever lay behind the U.S. headstart in basic literacy at the first threshold level clearly did not facilitate the rapid spread of literacy to the majority of the population. The chronological gap between 30 and 70 percent was greater in the United States and Britain than in countries that started later, because reaching the next threshold came fastest where centralized government agencies (some like Spain operating in the civil law tradition of blue-line rules with limited space for local exceptions) committed themselves to nationwide primary education. The Soviet example makes this point most clearly.

Finally, both Spain and Mexico have suffered and benefited from the diverse national policies and external environments that have shaped the extent to which their economies have been able to exploit their comparative advantages in trading with other nations. Protectionism and import-substituting industrialization probably contributed to greater inequality in income distribution in both countries, but neither this strategy (nor the subsequent reversion to more open trade and investment policies) had much to do

²² Elisa Mariscal and Kenneth Sokoloff, "Schooling, Suffrage, and the Persistence of Inequality in the Americas, 1800-1945" in *Political Institutions and Economic Growth in Latin America: Essays in Policy, History, and Political Economy* (Stanford: Stanford University Press, 2000), pp. 159-217.

with distribution *ex ante*. Similarly, Spain's entry into the European Union, which brought compensation funds for job-creating infrastructure projects and for improving education, no doubt helped to improve income distribution in contrast to NAFTA, but these differences arose from the different political and institutional biases of the trading partners rather than the domestic distribution of wealth and income in either of the two countries.

We do not wish to dismiss factor endowments as an important constraint on long term economic growth and would particularly emphasize geography (as it relates to access to tradable natural resources) as well as soil and climate conditions. Nor do we wish to minimize the significance of inequalities associated with slavery, the colonial caste system, gender, ethnicity, and class for public policy in much of Latin America (up to today, in fact). What we do wish to suggest, however, is that the most important institutional constraints on economic growth do not appear to be causally related to the distribution of wealth and income in Spain or Mexico, but instead have their proximate origins in the arena of national and international politics.

In this paper we have tried to show that political, legal, juridical, and educational institutions were quite similar in both countries and that their effects were also comparable. While physical factors have no doubt played a role in the economic history of Spain and Mexico, the Roman-Iberian legacy which Spain transmitted to Mexico was a potent factor in determining the roads the two countries took on their path towards economic modernization. Furthermore, a series of fateful decisions were made by the Hapsburg rulers in the sixteenth and seventeenth centuries, especially in the fields of war,

finance, and monetary policies, which also weighed heavily in the later history of both countries.

Table 1

Mexico and Spain: Levels of GDP per capita in 1990 Geary-Khamis Dollars

Year/Country	Mexico	Spain	Ratio Spain/Mexico
1820	760	1063	1.4
1850	668	1147	1.72
1870	710	1376	1.94
1890	990	1847	1.87
1900	1157	2040	1.76
1910	1435	2096	1.46
1920	*1555	2309	1.48
1930	1371	2802	2.04
1940	1556	2288	1.47
1950	2085	2397	1.15
1960	2781	3437	1.24
1970	3774	7291	1.93
1980	5254	9539	1.81
1990	4997	12170	2.43
1994	5098	12544	2.46

Source: Angus Maddison, *Monitoring the World Economy 1820-1992* (Paris: OECD, 1995), chap. 1 and Appendix D.

* Mexico figure is for 1921.

Table 2**Literacy Thresholds, Selected Countries**

Countries	Dates w 30% Literacy	Dates w 70% Literacy
USA	c1780	c1850
UK	c1820	1870
Spain	1880	1930
Mexico	1920	1970
USSR	1920	1940

PPP adjusted real GDP per capita at benchmark literacy rates

Country	GDP/P @ 30%	GDP/P @70%
USA	1287 (1820)	1819
UK	1756	3263
Spain	1612	2802
Mexico	1467 (1913)	3774
Russia/USSR	1488 (1913)	2144

Sources: For literacy rates, see the data cited in Gabriel Tortella, ed., *Education and Economic Development since the Industrial Revolution* (Valencia: Generalitat Valenciana, 1990), and in Clara Eugenia Nuñez and Gabriel Tortella, eds., *La maldición divina: Ignorancia y atraso económico en perspectiva histórica* (Madrid: Alianza Universidad, 1993). GDP data are from Angus Maddison, "Explaining the Economic Performance of Nations" in *Convergence of Productivity: Cross-National Studies and Historical Evidence* edited by William Baumol, Richard Nelson, and Edward Wolff (Oxford: Oxford University Press, 1994), 22-3, Table 2-1.