

## Introduction

### I

This book will be concerned with explaining the patterns of economic growth in the different parts of the New World settled by European nations, and how these patterns were influenced by differences in factor endowments and institutions. The initial economic development of most Latin American nations led to higher income levels for two centuries than those in North America, but then a dramatic shift occurred in relative economic levels leading to the economic dominance of the major nations of mainland North America, the United States and Canada, and the continued falling behind of the nations of Latin America. The roles of the economic and political forces and institutions in answering these questions are the main interests of our study. Our work on comparisons of development began over fifteen years ago with “How Latin American Fell Behind,” a conference organized by Steve Haber.<sup>1</sup>

We focused on several factors long familiar to economists studying these questions and we examined the factors’ evolution over time. Most striking at the start were the marked differences among the natural resources and endowments in the different geographic regions, including climate, waterways, rainfall, and topography, all of which had influenced the pattern of settlement by Native Americans even before the European

<sup>1</sup> The article “Factor Endowments, Institutions, and Differential Paths of Growth Among New World Economies: A View From Economic Historians of the United States” was presented at a conference at Stanford University in January 1992, and published in Stephen Haber (ed.) *How Latin America Fell Behind: Essays in the Economic Histories of Brazil and Mexico, 1800–1914* (Stanford: Stanford University Press, 1997).

arrival and subsequently influenced the pattern of European settlement. Another key factor was the nature of institutions – the rules of economic and political behavior – held by the Native Americans as well as those introduced by the varying European settlers, based initially on the institutions established in their own metropolitan nations. The distinction between New World endowments and European institutions had been noted by many earlier travelers and later by historians and had become important in explaining the range of adjustments in different areas of the Americas over time.

Our initial studies examined the settlement of the Americas, which tended to occur in areas of low population density with, therefore, a need to acquire a productive labor force, which was often acquired elsewhere. Other areas with similar land abundance include Australia, New Zealand, and South Africa, among the areas settled by Europeans, and the same was the case for eastern Russia (Siberia). While these areas did make certain institutional choices, there were other forms of colonial control which posed rather different problems. In most of Asia and parts of Africa, European settlement was in areas of high population density and thus entailed the settlement of very few whites relative to the native population, often on the order of less than one percent. Although these institutions differed dramatically from those of North America, they also reflected the importance of endowments and characteristics at the time of settlement and acquisition of control. These often presented some differences from the arrangements in the metropole. The choice to seek and accept immigrants was also a consideration, as decisions concerning racial and ethnic homogeneity or heterogeneity influenced the initial willingness to import either black slaves or white Europeans – or both of these groups. The issues relating to marked differences in population levels and colonies with high population density will require more attention in future work, but for the present we wished to concentrate mainly on the areas of low population density in the Americas – which seem to present the link between endowments and institutions most sharply – and where the process of obtaining independence differed in timing and nature.

What struck us regarding the Americas, based on the particulars of the British and French settlements, were the differences in economic, political, and other institutions in regions of distinct resource endowments. These differences, we argued, led to distinct patterns of income inequality and abilities to participate in the market sector. These institutions, often formed in response to conditions in the New World, produced

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patterns distinct from those in the European metropolises and the differences in inequality that they generated had a major impact on the future growth rates of different regions. Thus, we pointed out, there was a link of endowments and crops, and subsequent economic growth that, we believed, was an important explanation for differential patterns of economic development.

## II

Our initial argument was based on the comparison of North and South America, admittedly only one part of the larger world and one part of the broader pattern of the overall process of colonization by European and other nations. Looking at the settlement patterns of the New World led to an interest in colonization elsewhere to see if similar patterns had emerged. We looked at settlements outside of the Americas in areas with low population densities that had a need to attract more labor, coerced or free, and at the major colonies in Asia and Africa that tended to be of high population density that did not need to attract large numbers of workers.

It appeared that low population density and a need to attract labor from elsewhere led to settlers creating different forms of institutions than did settlers in areas of high population density. Population density must be considered in relation to the basic endowments, since low-density areas, such as arctic areas, are not suitable for agriculture and have thus received few immigrants. Temperate-zone areas of low population density have been the major locations for successful settlement and economic growth, while neither tropic nor arctic areas, for different reasons related to climate and the technology of crop production, have been successful at development in the long run.

Among the significant factors that we considered were factor endowments: natural resources, indigenous population density, location in relation to waterways, and the area's topography. In a preindustrial age with primitive technology, these forces will have a great impact on the population. We paid particular attention to the importance of climate, as did notable predecessors such as Aristotle, Machiavelli, Montesquieu, and Hume. They noted many different aspects of climate, such as the disease environment, the effect of heat on labor intensity and input and the production and availability of consumer goods. Climate is also a limiting factor in determining what crops could be successfully produced. The difficulties associated with climate could be avoided by shifts in

settlement location and improved knowledge of health measures influencing disease control, as well as by innovations in crop and livestock production and marketing methods. Different temperature and topographical requirements needed for producing sugar cane (in contrast to crops such as wheat and other grains) are central to understanding the settlement of the Americas. Clearly the crops that can be grown in arctic climates remain quite limited. Thus the desire to produce certain crops, such as sugar, in response to relative prices, will determine the areas of settlement, as would concerns about the effect of location on health and life expectation.

The choice of crop has an important impact on income distribution because of the requirements and constraints on the size of units of production and the nature of labor inputs. There might be a broad range of unit sizes over which production could occur, and the optimum scale for different crops can differ significantly. The efficient scale for some crops is larger than for others. Units of different sizes require different scales of production and sizes of labor force and also need different forms of labor controls. Cane-farming as developed in India, and then elsewhere in the world in the late-nineteenth century, was a feasible means of producing sugar, but apparently at a higher cost than the plantation production of sugar. If plantations were possible, as with the use of slave or indentured labor, this would be the preferred choice for landowners. Free workers avoided the intensity of plantation work as well as the tropical climate in which sugar was produced. Generally, also, the labor required for sugar production could be unskilled. Grains, however, could be grown in a (somewhat) more temperate climate, and the required scale of production in this pre-mechanical period was relatively small and could be accomplished on a family-size farm. Given the relative prices and availability of different forms of labor, particularly when slavery was legally and morally acceptable, there would be differences in the nature of labor used and the labor incentives and controls.

It is important to distinguish the size of the units of ownership and control from the size of the actual nature of the production process. This distinction is important when understanding the role of tenantry, wherein small units of production were consistent with large-scale ownership of land (which occurred, for example, in Argentina). It is also characteristic of serfdom, in which production on smallholdings with some coerced labor time existed with ownership of extensive land holdings, the peasants being suppressed by laws, taxes, or compulsion. These possibilities point to an important interaction between political power and economic

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forces, since in much of North America the initial attempts to establish manorial or seigniorial land systems in grain-growing areas were not sustainable and led to small yeoman holdings rather than tenant systems. If the availability of free land came with the appropriate political and cultural conditions, it could lead to a relatively equal income distribution, as Adam Smith (and later Frederick Jackson Turner) argued. This was characteristic of the American North, with free men able to capture the economic surplus, while free land, carrying different circumstances politically, might lead to slavery or serfdom. It is this political variation that also influenced the marked differences in various institutions.

Another aspect of natural resources at the time of settlement concerns the locations of mines that produced, among other metals, gold and silver, which for reasons of labor control and organization, the need for supervision, and the requirement to get workers to the units and to ensure the level of their output, tended to be produced on large units. Such large-scale organization characterized mining when done by Native Americans prior to the Spanish arrival, as well as when it was subsequently undertaken by the Spanish settlers. The labor used was primarily unskilled and did not directly benefit from extensive productivity improvement.

## III

Economic development, particularly in a preindustrial age, reflects the interplay of endowments and institutions, while in technological development the role of endowments might be more limited although the effects of institutions remain. The range of institutions that have been previously discussed by scholars is quite extensive, including the nature of property rights, suffrage, the rule of law, and the existence of trust, whether formal or informal, to institutions based on the specific legislation regarding suffrage, education, banking laws, labor relations, and the appropriate use of specific means of production. Such a broad range of institutions, with so many possible variations in each, leads to some uncertainty in interpreting the relationship between institutions and the economy, since what is at issue is the nature of the mix of institutions and not just the presence or absence of any specific one. We chose to restrict our attention to a limited number of key institutions that would exist in most societies, and then contrasted their levels, rates of change, and variability over time. The principal institutions we discuss are suffrage, education, and land policy, because of their major impacts on the level of production and the distribution of incomes over time. Other institutions

discussed in detail are tax systems and the financial systems (discussed by Steve Haber), and more briefly, patent regulations. We believe that each of these institutions can initiate significant differences between nations.

Governments are responsible for a wide variety of policies that influence individuals in society, including policies that can determine both the level and distribution of income. Some of these are explicitly economic, and others, while they are intended for more general purposes, will influence economic circumstances. Voting is significant in determining the choices made among different policies within a society. The greater the numbers of people voting, the more representative the policies should be and the wider the distribution of benefits of government policy across society.

Rules limiting voting within society have included a variety of constraints: gender, age, literacy, property ownership, income, tax payments, and citizenship; voting can be by secret ballot or by open ballot. The fewer the restrictions, the broader the base of voters, the larger the percentage of possible voters, and the greater the percentage of the population able to participate in the nation's social and economic life. The rights to suffrage can be self-reinforcing, because the greater the electorate at any moment of time, the easier it can be to extend the suffrage rights in the future. A key question is how the initial stages of voting with a highly restricted electorate can permit a widening of the franchise over time. Whether this widening of suffrage results from a changing balance in political power, an actual or potential uprising from nonvoters, a desire to attract migrants who might wish the right to vote, or reflected reasons of social cohesion are not clear, but, as we shall see, the broader the suffrage, the wider the benefits of government are likely to be distributed.

Another one of the more important governmental decisions is the nature and magnitude of education provided to individuals. Schooling tends to make individuals more productive and permits more income for themselves, as well as generating a higher level of national output. The education can be provided or financed by the government or paid for by private individuals. Individuals would wish to obtain education, and the opportunity to obtain education might encourage immigration, but limits on voting imposed by elites could lead to holding down the general level of education. Elites concerned with the effects of education could influence policy to have limited amounts of education for lower classes than would occur with a broadened suffrage. Thus there could be a positive relationship between voting and literacy. Reflecting these nonelite preferences, and the expected positive relation between suffrage

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and education, there should be an important contribution of broadened suffrage to increased education and economic improvement.

In primarily agricultural societies the key asset owned by individuals is land. In some cases land ownership was a requirement for voting, so the wider the distribution of land ownership the broader the suffrage. A wider distribution of land ownership will also mean a more equal distribution of income and wealth. There are several key influences on the size of landholdings and on the number of landowners, as opposed to laborers and tenants working on the land. The initial size of land-grants by the settling metropolis, the specifics of making land available to settlers, the laws controlling the nature of the labor supply, the optimum production size for specific crops and forms of agriculture, the willingness of landowners to obtain less than the maximum possible income from their landholdings, and, correspondingly, the willingness of small-scale planters to forego some income in their desire for independence, would each influence the nature of the outcome of land policy. Many of the initial land settlements were intended to be on manors or plantations, which were maintained only where there was large-scale production such as sugar or mining. In areas where the optimum scale for planters was smaller, as with the production of grains and mixed agriculture, manors gave way to ownership of smaller farms by landowners. Thus there was an adjustment in farm size based on the importance of the output of certain crops produced and this led to a distribution of ownership sizes in different parts of the Americas, with large units in much of Latin America and smaller ones in North America. Furthermore, in those areas that developed small landholdings and had available land to settle and a political desire to encourage settlement of this type, subsequent land policies did more to encourage higher settlement rates than was the case where elites intended to limit or slow-down movement. Thus, with a broad distribution of land ownership, the preferred land policy in much of North America was meant to encourage a continuation of small-scale settlement, while areas with landholders who controlled voting maintained a pattern of large holdings with limited sales to smaller units, maintaining the existing inequality, although the results might differ when based on the size of real wages in manufacturing and in agriculture.

The central government also plays a key role in establishing governmental expenditure and tax policy – at what level taxation and expenditures will take place, what the main forms of taxation will be and at what level they will be set, and what is the accepted mix of public versus private expenditures. The important aspects of the banking and financial

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system are heavily influenced by the government's policies. These will influence the number and size of banks, the ability to issue certain liabilities such as deposits and paper money, and also the alternative means of financing economic activity. The discussions below demonstrate the impact of endowments and institutions on the policies that exist and persist in different parts of the Americas.

## IV

This book will be divided into three sections. Chapters 1 through 3 describe the overall patterns of economic development in the New World countries. Chapters 4 through 9 detail the role of colonization and institutions and discusses several of the major institutions – suffrage, education, taxation, banking and finances, and land policy. Chapters 10 and 11 detail the importance of institutions and several of the ongoing debates about their roles in influencing economic development.

## I

## Paths of Development: An Overview

## I

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As Europeans established colonies in the New World of North and South America during the sixteenth, seventeenth, and eighteenth centuries, some knowledgeable observers regarded the North American mainland to be of relatively marginal economic interest, when compared with the extraordinary opportunities available in the Caribbean and Latin America. Early in the eighteenth century the French finance minister argued against settling Canada, arguing, in effect, that no area north of 40 degrees latitude ever produced wealth. Voltaire considered the conflict in North America between the French and the British during the Seven Years' War (1756–63) to be madness and characterized the two countries as “fighting over a few acres of snow.” The victorious British were later to engage in a lively public debate over which territory should be taken from the French as reparations after the war of 1756–63 – the Caribbean island of Guadeloupe (1705 square km.) or Canada.<sup>1</sup> Several centuries later, however, the U.S. and Canadian economies ultimately proved far more successful than the other economies of the hemisphere. The puzzle, therefore, is how and why the areas that were favored by the forecasters of that era, and the destinations of the vast majority of migrants to the Americas through 1800, fell behind economically.

<sup>1</sup> W. J. Eccles, *France in America* (New York: Harper & Row, 1972); Carl Ludwig Lokke, *France and the Colonial Question* (New York: Columbia University Press, 1932). Despite the great difference in area, the population of Canada was only about five times larger than that of Guadeloupe.

TABLE 1.1. *Gross Domestic Product Per Capita in Selected New World Economies, 1700–1997*

|   | GDP per capita relative to the United States |      |       |        |
|---|--|------|-------|--------|
|   | 1700   | 1800 | 1900  | 1997   |
| Argentina                               | –  | 102  | 52    | 35     |
| Barbados                                | 150  | –    | –     | 51     |
| Brazil                                  | –  | 50   | 10    | 22     |
| Chile                                   | –  | 46   | 38    | 42     |
| Cuba                                    | 167  | 112  | –     | –      |
| Mexico                                  | 89   | 50   | 35    | 28     |
| Peru                                    | –  | 41   | 20    | 15     |
| Canada                                  | –  | –    | 67    | 76     |
| United States (GDP per capita in 1985D) | 550  | 807  | 3,859 | 20,230 |

*Sources and Notes:* The relative GDP per capita figures for Latin American countries come primarily from Coatsworth (1998). Coatsworth relied extensively on Maddison (1994), and we draw our estimates for Canada and the United States in 1800 and 1900 from the same source (using linear interpolation to obtain the 1900 figures from 1890 and 1913 estimates). The GDP per capita estimates for Barbados in 1700 are from Eltis (1995). The 1997 figures are based on the estimates of GDP with purchasing power parity adjustments in World Bank (1999). Since there was no adjustment factor reported for Barbados in that year, we used that for Jamaica in our calculations. The 1700 figure for the United States was obtained from Gallman (2000), by projecting backward the same rate of growth that Gallman estimated between 1774 and 1800. Maddison (1991) has published alternative sets of estimates, which yield somewhat different growth paths (especially for Argentina) during the late nineteenth and early twentieth centuries, and he has a more positive assessment of Brazilian economic performance during the early nineteenth century than does Coatsworth, but the qualitative implications of the different estimates are essentially the same for our purposes.

Systematic estimates of per capita income over time have not yet been constructed for many economies, and those that exist are rough estimates. Table 1.1 and Figure 1.1 convey a sense of the current state of knowledge for a selected group of New World countries relative to the United States. The figures suggest that the economic leadership of the United States and Canada did not emerge until several centuries after the Europeans arrived and began establishing colonies. In 1700, there seems to have been virtual parity in per capita income between Mexico and the British colonies that were to become the United States, and the most prosperous economies of the New World were in the Caribbean.<sup>2</sup> Barbados and

<sup>2</sup> For general discussions of the diversity among British colonies in the New World, as well as its sources, see Jack P. Greene, *Pursuits of Happiness* (Chapel Hill: University of North Carolina Press, 1988).