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# Once Upon a Time in the Americas

## Land and Immigration Policies in the New World

Stanley L. Engerman and Kenneth L. Sokoloff

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### 1.1 European Migrations

Once upon a time, more than five hundred years ago, Europeans began a grand, long-term campaign to extract material and other advantages from underpopulated or underdefended territories by establishing permanent settlements around the world.<sup>1</sup> There had been extensive migration within Europe, both eastward and westward, including settlements of areas within Europe conquered by both Europeans and non-Europeans.<sup>2</sup> In the eighteenth and nineteenth centuries there was also a large movement of contracted labor from east and central Europe to Russia, and to Siberia.<sup>3</sup> The radically novel and diverse environments they encountered offered great economic opportunities, but also posed formidable problems of organization. Such circumstances made adaptation and innovation essential, and enormous variety in the economic structures and institutions that evolved over time is evident across colonies, even among those of the same Euro-

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1. See Engerman and Sokoloff (forthcoming, [2011]). For a recent description of the world economy since year 1000, see Findlay and O'Rourke (2007).

2. See the studies in Moch (1992), Emmer and Mörner (1992), Canny (1994) (particularly the essays by Phillips and Sánchez-Albornoz), and Altman and Horn (1991). There had earlier been movements into Europe by the Mongols and the Ottomans, among others.

3. For the earlier period, see Bartlett (1993), and for the later years see Bartlett (1979). Peter Lindert (2011) notes that the eastward movement of peasants in Russia led to a tying down of workers, not an enticement by the availability of small farms.

pean nation.<sup>4</sup> Inspired by the goal of improving understanding of the role of institutions in the processes of economic growth and development, many scholars have recently come to appreciate how the history of European colonization provides a rich supply of quasi-natural experimental evidence that can be analyzed to determine whether there were systematic patterns in how institutions or economies evolved with respect to initial conditions, and what causal mechanisms may be involved.<sup>5</sup> Our chapter is very much in this spirit.

The European movements into Africa and Asia, beginning at about the same time as did the colonization of the Americas, were to areas of high population density that provided more than ample native labor forces and left little need for extensive inflows of settlers or migrants from elsewhere. Few Europeans were to make the trek to these colonies, and their numbers, relative to the aboriginal populations, accordingly remained quite small (see table 1.1 for the population composition of colonies late in the nineteenth century). There were also extensive movements by the British after 1788 to Australia and then to New Zealand, both of which had population and settlement patterns somewhat similar to the Americas and, at the end of the nineteenth century, by Britain and other European nations to Africa and to Oceania.

In the Americas, however, the Europeans confronted very different sorts of environments than in Asia and Africa. Although conditions varied across space, overall low population density (labor scarcity) was the rule, and thus the economic problems of the colonizers (or authorities) centered on how to exploit the abundant land and other natural resources without initially having much labor on hand to do the actual productive work. Two fundamental and closely related issues were central to this challenge. First, how would ownership or use rights in land be allocated among the interested parties, such as the state or the corporate entity behind any particular colony, individual settlers, Native Americans, and the church? Land disposal policy not only affected the rate at which this critical resource was opened to investment and the generation of output, but also influenced the supply and location of labor, by measures such as making it easier for individuals to realize the returns to the land they worked (and might invest in) and subsidies via land granted to potential migrants (international as well as intranational). In some cases, land policies involved making unoccupied or unemployed land available; but not infrequently, ownership or use rights were transferred or seized from previous users—such as Natives or squatters—to other parties.

4. For discussion of institutional changes and their effects see Engerman and Sokoloff (1997, 2002). There had been nine European nations involved in the settlement of the Americas, some of whom were also involved with settlements in Asia and Africa.

5. See, for example, Acemoglu, Johnson, and Robinson (2001), Nugent and Robinson (2010), and Engerman and Sokoloff (2005a, 2006).

**Table 1.1** The composition of populations in European colonial domains

		Non-whites	Whites	Ratio of whites to others
BRITAIN	1850			
Europe		15	347,691	23,179.400
Asia		97,356,000	62,162	0.001
Australasia		155,000	131,800	0.850
Africa		242,800	67,868	0.280
North America		120,000	1,410,400	11.753
South America		99,571	3,958	0.040
West Indies		639,708	71,350	0.112
TOTAL		98,613,094	2,095,229	0.021
FRANCE	1926			
Africa (all)		32,883,000	1,331,400	0.040
Americas (all)		492,500	48,500	0.098
Asia		20,415,000	23,500	0.001
Oceania		71,600	16,400	0.229
TOTAL		53,862,100	1,419,800	0.026
GERMANY	1913			
Africa		12,084,436	22,405	0.002
Pacific/Oceania		961,000	6,454	0.007
ITALY	1931			
Africa		2,380,560	69,441	0.029
BELGIUM	1900			
Africa		30,000,000	1,958	0.00007
NETHERLANDS	1900			
East Indies		36,000,000	75,927	0.002
West Indies		85,571	6,310	0.074
PORTUGAL	1935			
Africa		7,619,258	85,024	0.011

*Sources:* For Britain, Martin (1967); for France, Southworth (1931, 26); for Germany, Townsend (1930, 265–66); for Italy, Clark (1936, 35); for Portugal, Kuczynski (1936, 95); for Netherlands West Indies, Kuczynski (1936, 103); for Netherlands East Indies, *Statesman's Yearbook* (1909, 881–934); and for Belgium, *Statesman's Yearbook* (1901, 505). For a lower Belgian Congo estimate, see Hochschild (1998, 232–33).

*Note:* Given the periodic demographic and political changes, the racial compositions of the Spanish colonies, mainly in the Americas and the Philippines as well as in Africa, varied considerably over time. For estimates for 1570 and 1650, see table 1.4. In 1890, prior to the losses in the Spanish–American War, the colonies of Cuba, Puerto Rico, and the Philippines were 85 percent nonwhite.

Land policy had a major impact on the pace of regional development, but it was influenced by the degree of centralization of authority: whether the national government would have exclusive jurisdiction over land policy, or whether states, provinces, or other subnational districts permitted separate land policies.

Another critical issue that faced the colonial authorities was how to secure or attract enough labor to realize the potential fruits of the abundant land and natural resources. The colonies in the Americas were hardly unique in

their attention to the adequacy of labor supply.<sup>6</sup> Indeed, population had been a longstanding concern of many elites and statesmen, especially those of a mercantilist bent, in many societies around the globe.<sup>7</sup> Some were concerned with underpopulation and introduced restrictions on emigration, although some national policymakers, as in England, believed that there was overpopulation and Malthusian difficulties within parts of Europe and encouraged outmigration.<sup>8</sup> The situation in the New World was quite different, however, because of the extreme scarcity of labor that the European colonizers found in the New World, either on contact, or soon afterward as the diseases they brought with them wrought depopulation of the Native Americans, estimated by some to be a decline of more than 80 percent of the population.<sup>9</sup> Prior to the great decline after 1492, it was possible that the population of the Americas exceeded the total of the twelve major Western European nations.<sup>10</sup> The recognition that labor was essential to extract income from colonies was one major reason (the wealth of the areas settled was another) why the Spanish, the first Europeans to organize colonies in the Americas, chose to focus their efforts on the more densely populated and richer areas we know as Mexico and Peru. There, the Spanish adapted some of the hierarchical institutions utilized by the Aztecs and Incas, and introduced their own systems (such as *encomienda*) involving grants to Spanish settlers of claims to labor or tribute from Native Americans, to obtain much of the desired labor supplies.

Colonies established later, after a period of about one century, whether British, French, Portuguese, Dutch, Swedish, or Danish, had to manage without much in the way of a native labor force, and therefore had to tap outside sources. Unconstrained by law or morality (no colony or country in the New World, for example, maintained more than a temporary prohibition on slavery or on the slave trade before 1777), those with climates and soils well suited for crops such as sugar or cacao obtained the dominant share of their labor forces from the African market in slaves.<sup>11</sup> Although

6. For discussions of settlement issues in British North America see Galenson (1996), Smith (1947), and Baseler (1998). For a description of the related problem in the Spanish colonies, see Elliot (2006). The French situation is described in Boucher (2008) and Prichard (2004).

7. See Heckscher (1935).

8. For England the major problem was seen to be overpopulation, leading to an encouragement of emigration. Elsewhere, as seen in the attempts to restrict outmigration, the problem was quite the opposite. For an examination of emigration restrictions, see Engerman (2002). For a general discussion of European population at this time, see De Vries (1976).

9. See the summary essay by Ubelaker in Denevan (1976). See also Livi-Bacci (2008).

10. For European population c. 1500, see Maddison (2003). The population of these twelve Western European countries is estimated at forty-eight million. For a survey of estimates made of the native populations of the Americas prior to European arrival see Sánchez-Albornoz (1974), with no firm conclusion presented within a range of 13.3 million to 112 million.

11. In 1777 the state of Vermont became the first locale to end slavery, but this did require a period of apprenticeships and freed, at most, nineteen slaves. Most slave emancipations did not lead to an immediate freeing, but did require a period of apprenticeship of some fifteen to thirty years for those considered to be born free.

their heavy reliance on slaves may have been encouraged somewhat by proximity to Africa, by far the factor most responsible seems to have been the development of the gang and other systems of organizing slave labor that gave large slave plantations a substantial efficiency advantage in producing those highly profitable commodities.<sup>12</sup> Colonies with the appropriate natural endowments soon came to specialize in these crops, and their demand for labor kept slave prices above what employers in areas more fit for grain or mixed agriculture could afford.<sup>13</sup> The result was that the relatively few colonies in the Americas that lacked either a large native population or the conditions conducive to growing sugar and other slave-intensive staples had to exert themselves to mobilize labor forces drawn from Europe and of European descent.

The British colonies on the North American mainland (above the Rio Grande) exemplify this pattern. Having been established in locales with only sparse numbers of Native Americans, especially after the Indians suffered from the introduction of diseases from Europe, and receiving only modest inflows of slaves until well into the eighteenth century (especially the states north of the Mason-Dixon Line), the thirteen colonies (or their ruling authorities) realized that they would have to increase their populations if they were to be successful. They quickly set about devising institutions and policies that would attract migrants from Europe. The basic foundation of their campaign was the institution of indentured servitude, which meant an exchange of the cost of transport for several years of labor, permitting those with inadequate funds to migrate. After a protracted process of passing and implementing laws aimed at improving the enforcement of both sides of the indenture contract (and improving terms to secure an edge over competitors), this was enormously effective and it accounted for more than 75 percent of arrivals from Europe to the thirteen colonies.<sup>14</sup> Other inducements, which were offered in some form for extended periods by all of these colonies, included easy and very low-cost access to owning land, and some forms of tax exemption.

The active pursuit of European migrants by the British colonies on the mainland contrasts sharply with the policies of Spanish America.<sup>15</sup> Although the first waves of settlers in Spain's colonies, particularly those from the mili-

12. Slavery was not an institutional innovation of the American settlers, since slavery had long existed in many places. Nor was the plantation production of sugar by slave labor new, since this had been important in the Mediterranean after the Crusades. See Galloway (1989) and Engerman (2007).

13. The development of slavery and sugar production in the British and French West Indies did take some twenty-five to fifty years, the initial period being based primarily on free white or indentured labor producing tobacco. For the French case see Boucher (2008) and for the British Appleby (1996).

14. See, among others, Smith (1947), and Grubb (1985). For a discussion of French indentured labor, see Boucher (2008).

15. See Elliot (2006), Haring (1947), and Altman and Horn (1991).

tary or from elite backgrounds, were rewarded with grants of land, claims on Native Americans, relief from taxes, and other incentives, the Crown began early in the sixteenth century to regulate and restrict the flow of European migrants to its colonies in the Americas.<sup>16</sup> The stringency of the limits did vary somewhat over time, due to the population changes and movements, such as the migration of expelled Moriscos in the early seventeenth century. There were occasionally interventions designed to effect specific movements of population from Europe as well as of slaves to specific colonies including Mexico and Peru, judged especially worthy or needy of support, but overall there is no doubt that Spanish policies limited, rather than encouraged, the migration of Europeans to the New World.<sup>17</sup> A salient illustration is the conspicuous failure of the Spanish Crown to approve proposals for indentured labor trading free transportation in return for future labor services. The starkly divergent approaches of the Spanish and British mainland colonies toward migration may appear puzzling, especially as their agricultural sectors were similar in consisting largely of grain and animal products, but we argue that the fundamental explanation for this difference is that the most important Spanish colonies (i.e., Mexico, Peru, and Colombia) were relatively abundant in labor as compared to their British mainland counterparts; the population density in 1700 in the three leading Spanish colonies was several times greater than for the British mainland colonies.<sup>18</sup> Their relatively substantial Native American populations kept returns to unskilled labor low, reducing the incentives for Spaniards who might have contemplated migration to the New World, and also meant that the elites in the colonies did not need to lobby the Crown to change its policies. The other important factor behind the maintenance of the strict limitations on immigration, in our view, was the greater centralization or concentration of political authority. Not only did the imposed controls apply to immigration to all of the Spanish colonies in the Americas, but centering the government structures for Spanish America in Mexico City and Lima meant that outlying areas with different conditions and demands for labor (such as Argentina) were largely deprived of autonomy or even influence in policy.

These contrasts in land and labor policies that had emerged early in the colonial period essentially endured into the nineteenth century, by which time most of the societies in the Americas were independent nations and nominal democracies, and at times, had moved beyond this politically.<sup>19</sup> Despite periodic spells of political tension (if not conflict) about immigration, generally coinciding with macroeconomic contractions (or focused on specific ethnic groups), the United States (and Canada) continued to pursue

16. Elliot (2006).

17. Moses ([1898] 1965) and Sánchez-Albornoz (1974). In the seventeenth century Spain also suffered from a population decline. See Parry (1966).

18. See estimates in McEvedy and Jones (1978), Maddison (2003), and Carter et al. (2006).

19. See Rout (1976) for the dates of Latin American independence.

policies that were generally extremely favorable to immigration. Although state (provincial) and local governments on or inside the western frontier of the time may have been the most aggressive in courting migrants, the importance of the consistently liberal stances of the U.S. and Canadian governments in making public land available in small plots at low cost to all who sought to settle should not be underestimated. The usefulness of offering easy access to land in attracting migrants was universally understood, and indeed helps to explain that in an era of labor scarcity, cities and long-settled areas in the East concerned about their labor supplies accounted for the major opposition to the federal government disposing of land out West on generous terms.

Despite most societies having achieved independence, and other radical changes in their political environment, there was much continuity in Latin America. Most notably perhaps, the region remained largely dependent on the population born there—whether of European or Native American descent. Immigration from abroad was not much more than a trickle, except for the experiences of Argentina, Uruguay, Brazil, Chile, and several of the smaller nations beginning late in the nineteenth century.<sup>20</sup> Responsibility for this failure to attract immigrants cannot be laid solely on the policies of the nations of Latin America. With the improving levels of material welfare and economic opportunity that the United States could offer as it industrialized, it was now an increasingly tough competitor for immigrants from Europe, and the United States was the major recipient of migrants from Europe.<sup>21</sup> That being said, however, it is striking that although there were many appeals for programs to entice more immigrants, inspired in part by the evident success of the United States, most of the programs purporting to achieve that goal were either framed very narrowly or flawed in design. Even when public lands were to be made available for purchase, the terms or other details of the laws tended to keep prices high or greatly advantage the wealthy and privileged in access. This evident lack of concern by the authorities with offering incentives to migrants was likely not unrelated to the generally poor record throughout Latin America (though better in Argentina, Uruguay, and Chile, which were relatively labor scarce for the region) in providing for public schooling, as well as to the policies that a number of countries, such as Mexico and Colombia, implemented late in the nineteenth century (when land values had risen) that transferred to large landowners the rights to land traditionally held and worked by Native Americans as community property.

20. See Willcox (1929), and Davie (1936).

21. See Maddison (2003) on the greatly widening gap between the per capita income of the United States and of Latin America during the nineteenth century. The increasing relative backwardness in Latin America seemingly occurs after independence from Spain, and amidst a series of civil and international wars. The changing political structure (or lack of same) requires more attention.

In this chapter, we lay out the basis for our view that the record of the evolution of land and immigration institutions in the Americas, since colonization, provides broad support to the idea that the initial factor endowments are of fundamental importance. We highlight, in particular, the significance of labor scarcity or abundance rather than placing exclusive weight on political factors, as in Lindert (2011). Where labor was scarce, even political and economic elites who may have had disproportionate power in shaping institutions were willing to extend privileges, including low-cost access to land, to ordinary people as a means of attracting or mobilizing them. Not only was the influence of labor scarcity direct and immediate, but it may also have had long-lasting effects in fostering greater economic and political equality and the different outcomes that might flow from such conditions. Where labor was relatively abundant, however, elites had less reason to share privileges as a means of attracting more labor, and likely were less constrained in their ability to shape institutions to advantage them. In section 1.2, we develop our argument with a brief sketch of the history of land and immigration institutions during the colonial period. In section 1.3, we discuss how these institutions evolved during the nineteenth century and devote some attention to detailing how variation across countries within Latin America and across the states of the United States is generally consistent with our hypothesis. Section 1.4 deals with several other British colonies, and section 1.5 concludes.

## 1.2 Migrations to the Americas

A central issue, for all of the colonies, was labor supply. This had obvious and substantial implications for the ability to take advantage of the abundant land and other natural resources. The seriousness of this constraint was a major reason why the Spanish, the first Europeans to arrive, chose to focus their efforts on the areas in the Americas with the largest and richest concentrations of native populations (see table 1.2). Another indication of the relative labor scarcity prevailing in the New World is the extensive and unprecedented flow of migrants from Europe and Africa (see table 1.3) that traversed the Atlantic despite high costs of transportation.<sup>22</sup> That about 70 percent of migrants between 1500 and 1760, increasing from roughly 25 percent prior to 1580 and rising to over 75 percent between 1700 and 1760, were Africans brought over involuntarily as slaves is a testament to the high productivity of labor (due to labor scarcity) in the Americas. With their prices set in competitive international markets, slaves ultimately flowed to those locations where their productivity was greatest—and their pro-

22. Table 1.3 is based upon the estimates of David Eltis (1999, 2002). For estimates through 1830, see Eltis (1983). Perhaps the most striking of Eltis's findings concerning settlement patterns is that down to 1830 about three times as many enslaved Africans as free Europeans arrived in the New World.

**Table 1.2**                    **The estimated distribution of the aboriginal American population, c. 1492**

North America (the United States, Canada, Alaska, and Greenland)	4,400,000
Mexico	21,400,000
Central America	5,650,000
Caribbean	5,850,000
Central Andes	11,500,000
Lowland South America	8,500,000

*Source:* William N. Denevan (1976, 291).

ductivity tended to be greatest in areas with climates and soils well suited for the cultivation of sugar and a few other staple crops. There were no serious national or cultural barriers to owning or using them in any colony, since slavery was legal in all colonies, and welcome in the colonies of all the major European powers. The Spanish and British settlements each received between one-half and two-thirds of their pre-1760 immigrants from Africa. In contrast, the colonies of other nations were more dependent on slave labor, over 80 percent of all immigrants to the French and Dutch colonies were slaves, and the figure was about 70 percent for the Portuguese.

The areas in the Caribbean, the northern coast of South America, and Brazil had a comparative advantage in sugar, cacao, and a few other crops, and they relatively soon specialized in producing these commodities on large plantations, obtaining the majority of their labor force from the slave trade. These colonies had relatively little need for large numbers of European immigrants. For different reasons, the same was true for Spanish America. European immigrants (and *creoles*) were initially required to defeat the Native Americans, establish control over and then defend territory, and provide the basic political and economic structures, but the majority of the overall labor force was provided by the Native Americans.

With Spain the pioneer in establishing substantial settlements, over 70 percent of the migrants to the Americas between 1500 and 1580 landed in Spanish colonies. That share plunged over time, to almost 14 percent between 1700 and 1760. Part of this precipitous fall was due to the rise of the colonies of other European nations, but a more important factor was Spain's severe tightening of the restrictions on who was allowed to migrate to its colonies.<sup>23</sup> Unlike the other major European colonizers, Spain, with the support, if not instigation, of the *pensulares* and *creoles* already there, progressively raised more formidable obstacles to those who might have otherwise ventured to the New World to seek their fortunes. The authorities in Spain seem to have been motivated both by a desire to keep costs down by limiting the numbers of population centers to defend, as well as, politically, by the desires of those who had arrived early or descended from those who

23. Spain's relative decline, however, was at a time during which there remained absolute increases in the number of migrants.

**Table 1.3** European directed transatlantic migration, by European nation and continent of origin, 1500–1760

	Africans leaving Africa on ships of each nation (net)	Europeans leaving each nation for Americas	Africans arriving in American regions claimed by each nation
<i>Before 1580</i>			
Spain	10	139	45
Portugal	56	58	13
Britain	2	0	0
Total	68	197	58
<i>1580 to 1640</i>			
Spain	0	188	289
Portugal	594	110	181
France	0	4	2
Netherlands	10	2	8
Britain	3	87	4
Total	607	391	484
<i>1640 to 1700</i>			
Spain	0	158	141
Portugal	259	50	225
France	40	23	75
Netherlands	151	13	49
Britain	379	285	277
Total	829	529	767
<i>1700 to 1760</i>			
Spain	1	193	271
Portugal	958	300	768
France	458	27	414
Netherlands	223	5	123
Britain	1,206	222	1,013
Total	2,846	747	2,589

Source: David Eltis (1999, 2002).

did, to maintain their privileged positions.<sup>24</sup> Early in the sixteenth century, they began to impose strict controls as reflected in requirement for licenses over who could settle in the Americas, with preference shown for relatives of those already there, and permission denied to citizens of European countries other than Spain as well as to non-Catholics. Licenses to emigrate were

24. Large blocks of land and claims on Native American labor were often granted as incentives or rewards to the early waves of settlers, especially military men, missionaries, and others of some prominence. Although smaller holdings could be obtained through sales, generally the more important were governmental land grants, the larger tended to be the holdings, and the more unequal the distributions of wealth and political power would become. The initial land grants were often nontradable by the recipients, but transferable by the Spanish Crown. Hence, later migrants to colonies might indeed have eroded the value of property rights held by earlier cohorts. It is not difficult to comprehend why the already established population of European descent was less than enthusiastic about a liberal immigration policy during the colonial era. On Spanish settlement of the Americas, see Elliott (2006) and Gibson (1966).

initially restricted to single men, but were ultimately extended to married men accompanied by their families; single white women were never allowed, influenced in part on the availability of Native American women.<sup>25</sup> It seems highly unlikely that such a restrictive stance toward immigration would have been retained if there had not already been a substantial supply of Indians to work the land and otherwise produce with the assets owned by the elites and the Spanish Crown. In this sense, at least, the preferred policy must have been ultimately due to the factor endowments.<sup>26</sup> Another mechanism through which the relatively ample local supply of labor provided by the Native Americans could have reduced immigration was through keeping the returns to unskilled labor low, and in so doing reducing the desire of Spanish unskilled labor to migrate.

What stands out from the estimates presented in table 1.4 is how small the percentages of populations composed of those of European descent were in Spanish America and in the economies focused on sugar until well into the nineteenth century. The populations of those colonies suitable for cultivating sugar, such as Barbados, Jamaica, and Brazil, came to be dominated by those of African descent imported to work on the large slave plantations.<sup>27</sup> The populations of the Spanish colonies were composed predominantly of Indians and *mestizos*. This was largely because these colonies had been established and built up in places where there had been substantial populations of Native Americans beforehand, and because flows of Europeans were constrained by the restrictive immigration policies of Spain. If not for these policies, it is probable that the societies in the southern cone of South America, such as Argentina and Chile, might well have attracted many more immigrants from Europe during the colonial period. As a result, less than 20 percent of the population in Spanish America was composed of whites as late as the beginning of the nineteenth century.<sup>28</sup>

25. See Moses ([1898] 1965), Elliott (2006), and Parry (1966).

26. At first it seems somewhat puzzling, or contradictory to the idea that the factor endowment was the crucial determinant of policy, that Spanish authorities did not actively encourage immigration to colonies without a substantial supply of readily available Indian labor, like Argentina. On reflection, however, it seems likely that Spanish policy toward immigration to places like Argentina was simply incidental, with the overall policy as regards immigration to the New World based on the factor endowments and politics in all of Spanish America together. Hence, Spanish policy was probably driven by conditions in Mexico and Peru—the most populous and valued colonies. Since these centers of Spanish America had an abundance of Indian labor, the local elites and the authorities in Spain were able to maintain restrictive policies.

27. See, in particular, Dunn (1972) on the English colonies and Schwartz (1985) on Brazil. In the early period of settlement in Brazil, slaves were also used in mining.

28. See the notes to table 1.4 for estimates of the shares of Indians and *mestizos* in the Spanish American populations. The immigration policies were especially restrictive toward single European women, and this too likely contributed over the long run to the small proportion of the population that was white. The Spanish Antilles did have a relatively large white population, reflecting the limited number of Indians after depopulation, and the long lag between the beginnings of the settlement and the sugar boom that developed there only after the start of the nineteenth century. On the Caribbean in general, and for a discussion of the patterns of Cuban settlement, see Knight (1990). For an ethnic breakdown of Caribbean populations in 1750, 1830, and 1880, see Engerman and Higman (1997).

**Table 1.4** The distribution and composition of population in New World economies

Area	Year	White (%)	Black (%)	Indian (%)	Share in New World population
<i>A.</i>					
Spanish America	1570	1.3	2.5	96.3	83.5
	1650	6.3	9.3	84.4	84.3
	1825	18.0	22.5	59.5	55.2
	1935	35.5	13.3	50.4	30.3
Brazil	1570	2.4	3.5	94.1	7.6
	1650	7.4	13.7	78.9	7.7
	1825	23.4	55.6	21.0	11.6
	1935	41.0	35.5	23.0	17.2
U.S. and Canada	1570	0.2	0.2	99.6	8.9
	1650	12.0	2.2	85.8	8.1
	1825	79.6	16.7	3.7	33.2
	1935	89.4	8.9	1.4	52.6
<i>B.</i>					
Barbados	1801	19.3	80.7		
Mexico	1793	18.0	10.0	72.0	
Peru	1795	12.6	7.3	80.1	
Venezuela	1800–09	25.0	62.0	13.0	
Cuba	1792	49.0	51.0		
Brazil	1798	31.1	61.2	7.8	
Chile	1790	8.3	6.7	85.0	

*Sources:* A. The data for 1570, 1650, and 1825 are from Rosenblat (1954, 88 [1570], 58 [1650], and 35–6 [1825]); the data for 1935 are from Kuczynski (1936, 109–10). The Antilles have been included within Spanish America in all years. B. Line 1: Watts (1987, 311). Lines 2–5: Lockhart and Schwartz (1983, 342). Line 6: Merrick and Graham (1979, 29). Line 7: Mamalakis (1980, 7–9).

*Notes:* In 1825, the category “castas,” which included “mestizajes, mulattos, etc.,” and represented 18.17 percent of the total population in Spanish America, was divided two-thirds Indian, one-third black, except for the Antilles where all were considered to be blacks. In 1935, there were a number counted as “others” (generally Asian), so the distributions may not total to 100 percent.

It was the northern part of North America, the temperate-zone colonies that became the United States and Canada, that was distinctive in its reliance on attracting immigrants from Europe, a reliance forced to some extent later on the southern temperate-zone colonies of Argentina, Chile, and Uruguay. The northern temperate areas had only very small numbers of Native Americans on the eastern rim of the continent, where the most substantial European settlements were located, and thus the composition of their populations soon came to be essentially determined by the groups who immigrated and their respective rates of natural increase. This was of particular significance in New England, where net migration was negative over the colonial period, but the rate of natural increase very high. Although

significant numbers of slaves were employed in the southern colonies, on the whole the factor endowments in the thirteen colonies and Canada were far more hospitable to the cultivation of grains, tobacco, and animal products than sugar (or other crops that were grown on large slave plantations during this era). The colonies in this area accordingly absorbed far more Europeans than they did African slaves, and they stood out in the hemisphere with whites accounting for roughly 85 percent of the population and labor force.

Perhaps because it was the one region in the New World that was dependent on attracting large numbers of voluntary migrants from Europe during the colonial period that the colonies in the northern part of North America distinguished themselves soon after their establishment for institutions supportive of immigration and attractive to immigrants. The willingness of the thirteen colonies to accept convict labor is an aspect of their history that Americans prefer to deemphasize, but a better known and important example of this pattern is indentured servitude, a contractual means of extending credit (primarily the cost of transportation across the Atlantic) whereby the servant promised to work for the recruitment agent (or the agent to which he assigned or sold the contract) in a specified colony and for a specified period of time. This system was first introduced by the Virginia Company, designed explicitly to attract potential migrants from Britain, but the innovation, which was related in legal basis to contracts as servants of husbandry (if not apprentices as well), soon spread to carry migrants from a variety of countries in Europe to British colonies.<sup>29</sup> Over the entire colonial period, upward of 75 percent of European migrants to British America came as indentured servants. Although some may regard the extensive use of indentured servitude in the British colonies as due primarily to a distinctive British heritage, this characterization seems unwarranted. Contractual forms similar to apprenticeships and servants of husbandry and migration of convicts existed in a number of European countries, including Spain, Portugal, France, and earlier in Northern Italy and Sicily. In Spain, however, the Crown chose not to implement a proposal to provide transport to its colonies in return for obligated labor services on arrival.<sup>30</sup> The evidence appears consistent with the view that the urgency of the demand for workers from Europe contributed to the institutional innovation and its diffusion among Europeans.

Another way in which the colonies in the northern part of North America strove to attract immigrants was through making ownership of plots of land rather accessible. Of course, with the enormous abundance of land relative to labor, land was relatively cheap, especially compared to the wage,

29. On convict labor in America see Ekirch (1987). See also Galenson (1981), Smith (1947), and Perry (1990).

30. See, for example, Reynolds (1957), Coates (2001), Boucher (2008), and Altman and Horn (1991).

and easy to obtain (by European standards) through the market. But the experience in the colonies on the North American mainland sometimes went well beyond that, with provincial authorities making obvious use of land grants to attract migrants. In the British colonies, the distribution of land was left to the individual colonies, once the land was transferred from the Crown to proprietors or the government of the crown colonies. Over time, some quite different, but persistent, regional patterns emerged. The New England colonies made grants, generally of small plots, to individuals, but land grants were not directly used to attract indentured servants (as they were elsewhere)—perhaps because of the relatively small number of immigrants who came or were needed to come to the region.<sup>31</sup>

It was in the Southern colonies (states), where staple crops such as tobacco and rice were grown and the demand for European field labor may have been especially high, that land grants were most targeted as attracting indentured servants and other migrants. During the seventeenth century, Virginia introduced the headright system (grants of land to settlers, or to those who enticed others to settle) to stimulate in-migration, with the only requirement a three-year period of settlement. Indentured servant laborers who came to Virginia were generally to be granted fifty acres when their term had expired. Variants of the headright system were adopted in Maryland and the Carolinas. The Middle Atlantic colonies of New Jersey and Pennsylvania also employed variants of the headright system, but, in both, the grants of land were subsidized, rather than free. Late in the eighteenth century, after independence, a number of what were now state governments extended their liberal land policies to include preemption for squatters.<sup>32</sup>

It is perhaps worth highlighting how different the attention to, and prevalence of, land ownership was in the northern part of North America as compared to Europe. Tenancy and farm labor were clearly much more common in Britain and France than in their American colonies on the mainland, with these European arrangements and other means of allocating land achieved over a very long history and in environments with rather different land-labor ratios.<sup>33</sup> The attempts to bring variants of the British manorial system to, for example, Maryland and Pennsylvania, and the French seigneurial system (in Canada), were, however, not successful given the land availability, crops to be grown, and their optimal scale of production. Thus, in the French and British mainland colonies, there was adaptation in land policy to allow for smaller units worked by owner-occupiers and for more flexibility in pro-

31. Bidwell and Falconer (1925), Harris (1953), and, on the Dutch case, Rife (1931).

32. Gray (1933), Gates (1968), and Ford (1910).

33. On England see Allen (1992), and for an examination of France contrasted with England see Heywood (1981). See also Nettels (1963), Barnes (1931), Craven (1970), Ackerman (1977), and Bond (1919).

duction.<sup>34</sup> These adaptations meant that the distribution and allocation of land were more similar across these colonies than they were with those in the metropolis in Europe. Because of the long tradition of property requirements for voting, the wider distribution of land was significant not just for economic purposes, but it also meant a broader base for voting.<sup>35</sup> Thus, not only could voting influence land policy, land policy could also influence voting.

There was, of course, no such liberality regarding land policy in Spanish America. Without any significant interest in attracting more immigration to its colonies, but with concern for maintaining control and a stream of revenue from the labor of the Native American labor force, the initial policy in nearly all of the colonies with substantial populations was the *encomienda* system, which consisted of Crown-awarded claims to tribute (in goods, service, time, and cash) from a specified body of natives working on the land where they had previously resided. Relatively small numbers, never many more than 500 in the first half of the sixteenth century, of these often enormous grants were awarded in any single colony. Cortes was assigned 115,000 natives in Mexico, and Pizarro 20,000 in Peru. In Peru, for example, only 5 percent of the Spanish population in the mid-sixteenth century held *encomiendas*.<sup>36</sup> These *encomenderos* and their families became, in effect, the aristocracy of Spanish America. When pressure from depopulation and movement toward a cash economy, as well as Church concern about treatment of Native Americans, began to alter the *encomienda* system, they were well positioned to assemble large private holdings of much of the best located and most fertile land. The high concentration of land holding that developed over time in Spanish America paralleled the extreme inequality that prevailed in wealth, human capital, political influence, and other dimensions.

### 1.3 Land and Immigration Policy in the Americas

As the United States became a sovereign nation and most of Spanish America gained independence from Spain over the late eighteenth and early nineteenth centuries, there were many important changes across the Americas in institutions and in the economic environment of great relevance to immigration and land policy. First, if not foremost, the structures of government institutions were radically altered. Although Canada remained a colony with limited autonomy until the 1860s, and Brazil was, after 1822, an

34. On the seigniorial system in French Canada, see Trudel (1967) and the literature cited there.

35. See Keyssar (2000) and Rusk (2001). See also Engerman and Sokoloff (2005b).

36. Burkholder and Johnson (2001). For discussions of the *encomienda*, see, among other sources, Simpson (1982) and Himmerich y Valencia (1991), and on the *mita* system see Cole (1985).

independent monarchy, most of the major societies were both independent and at least nominally democratic and, if not free of slavery, with severe restrictions on slave imports.<sup>37</sup> The new national governments, and their ability to design policies targeted to the interests (as felt and expressed by various domestic groups) of their own individual countries and to implement them, were crucial and novel elements. Among those interests, of course, was the means of settling unoccupied territories within the national boundaries, if not expanding those boundaries, which led to costly wars in the nineteenth century.<sup>38</sup> This interest in new settlements gave impetus to both liberal immigration (and also intracountry migration as well) and land policies, particularly in countries where labor was especially scarce.

Also of great consequence for the formulation of immigration and land policy was the onset of industrialization in the United States and Western Europe and the acceleration of technological change. Economic growth and the decrease in the cost of transoceanic transportation increased the propensity of Europeans to migrate to the New World (without having to indenture themselves), but also increased the relative desirability of the United States as their destination as compared to other countries in the hemisphere.<sup>39</sup> These advances also spurred the growth of international trade, and increased the returns to the exploitation of the abundant land and natural resources in the New World. In so doing, they contributed to an increase in the value of land, a development that not only likely influenced the behavior of immigrants in countries where land was accessible, but also that of elites in countries where they exercised disproportionate political power.

Although there were frequent changes in the precise details, overall there was remarkable continuity in the basic orientation of U.S. policies in favor of immigration and relatively easy access to land in small plots. At the national level, there were periodic calls for restrictions, but except for ending the international slave trade in 1808, those measures imposed in the name of public health, and those (after 1880) on Japanese and Chinese immigration, serious obstacles were not introduced until the 1920s.<sup>40</sup> State policies differed substantially, however. Over the nineteenth century, those states new to the Union often sent abroad delegations or placed advertisements to attract immigrants to their environs, and highlighted liberal qualifications for residence and participation in local elections and commitments to public schools and other infrastructure of particular interest to poten-

37. On Latin American slavery see Rout (1976) and Klein (1986), and on the independence movement see Lynch (1986).

38. Gates (1968). On Latin American wars in the nineteenth century and data on wars with Indians in the United States, see Clodfelter (2008). For a survey of Indian-White relations in the United States and their impact on land changes see Washburn (1975).

39. See the data in Willcox (1929) and Davie (1936).

40. See Hutchinson (1981), Risch (1937), and Farnam (1938). See also Engerman (2002).

tial migrants.<sup>41</sup> Later in the nineteenth century, however, concentrations of immigrants in industrial cities led some states (mostly in the Northeast) to raise difficulties by introducing literacy tests for voting. Again, there seems a relation between labor scarcity and public policies toward immigrants.<sup>42</sup>

With the establishment of the United States, many of the original states gave up their claims to land in the West, and ceded principal authority in public land policy to the federal government. This may well have proved fortuitous for the maintenance of liberal land policies—which generally evolved over time through new legislations (see table 1.5) to make the terms for individuals seeking to acquire and settle on land progressively easier.<sup>43</sup> These changes were the basis of debate among the representatives of the different regions in Congress and elsewhere, often intertwined with other aspects of political disagreement. This reflected the broad range of issues that the controversies over land dealt with. For example, because of the government's budget constraint, there was a tradeoff between revenues from land sales and revenues from the protective tariffs favored by Northeastern manufacturers. Given that land policy could influence the distribution of population across regions (and thus wage rates), commodity prices, land value, and the location and structure of output, political disagreement should not have been surprising. What is most striking, perhaps, is that despite such political disagreements, a commitment to broad and easy access to those seeking to settle on public lands was generally sustained and deepened.<sup>44</sup>

What may have begun as an intended set policy, however, shifted numerous times over the antebellum period, and later, generally in more liberal directions.<sup>45</sup> From 1796 to 1820 the government provided credit to purchasers; this ended following the panic of 1819 and numerous defaults, but the growth of the banking system did minimize its impact. Other dimensions, however, went into a liberalized direction. The pace at which land was surveyed and made available increased. The Preemption Act of 1841, following a decade of more individualized legislation in which title was not specified beforehand, permitted settlers (squatters) to purchase settled lands before they would be auctioned, allowing them to keep the value of improvements made before title was legalized. The minimum size of purchases fell from 640 acres in 1796 to 40 acres as of 1832, before postbellum adjustments were made due to requirements for larger holdings for desert lands, timber culture, and related matters. With the minimum price per acre cut from \$2 in 1796 to \$1.25 after 1820, the minimum purchase price for a plot fell from

41. See discussions in, among other sources, Hibbard (1924), Robbins (1942), and Stephenson (1917).

42. See sources cited in footnote 35.

43. See Atack, Bateman, and Parker (2000) and Gates (1968).

44. See, among other sources, Wellington (1914) and Feller (1984).

45. Gates (1968).

**Table 1.5 Significant public land laws, United States, 1785–1916**

Year	Law	Min price/acre (\$)	Minimum acreage	Maximum acreage	Conditions and terms
1785	Land Ordinance of 1785	1	640	none	Cash
1787	Northwest Ordinance of 1787	1	640	none	1/2 cash, balance in 3 months
1796	Land Act of 1796	2	640	none	1/2 in 30 days, balance in 1 yr
1800	Harrison Land Act	2	320	none	1/4 in 30 days, balance in 3 yrs at 6%
1804	Land Act of 1804	2	160	none	\$1.64/acre for cash; credit terms as per Land Act of 1800
1812	General Land Office established				
1820	Land Act of 1820	1.25	80	none	Cash only
1830	Preemption Act of 1830	1.25	40	160	Permits squatters to purchase
1832	Land Act of 1832	1.25	40	none	Cash
1841	General Preemption Act of 1841	1.25	40	160	Pre-emption only, Cash.
1854	Graduation Act	0.125	40	none	Price progressively reduced on unsold lands to 12.5 cents/acre after 30 yrs
1862	Homestead Act	free	40	160	\$10 registration fee. 5 yrs continuous residence on land for full title
1873	Timber Culture Act	free	160	160	Cultivation of trees on 1/4 of lot for title. Amended in 1878 to 1/16th of lot.
1877	Desert Land Act	1.25		640	Irrigation within 3 yrs; \$0.25 per acre on entry, balance due upon compliance
1878	Timber and Stone Act	2.50	40	160	Stipulation that timber and stone for personal use only and not for speculation or other parties.
1909	Enlarged Homestead Act	Free		320	Five years residence with continuous cultivation
1912	Three-Year Homestead Act	Free		160	Seven months residence a yr for 3 yrs
1916	Stock Raising Homestead Act	Free		640	On land only suitable for grazing

Source: Atack, Bateman, and Parker (2000).

\$1,280 in 1796 to \$50 in 1832. Other policies that made land more available followed. The Graduation Act of 1854 established that land not yet sold could be sold at a price below \$1.25, with the price prorated based on the length of time before sale (12.5 cents per acre after thirty years). And, in 1862, the Homestead Act (which was extended or liberalized several times more before 1920) provided 160 acres for each family head who either resided on land for five years or who paid \$1.25 per acre after six months' residence. That the westward movement accelerated over the nineteenth century, and that more individuals from lower income groups were able to acquire land, was to no small degree attributable to the liberal land policies.

The government's choice between a high price and a low price land policy had a number of implications. Low prices or free land would make it easy for more people to acquire land, attracting more people to the West, either initially as landowners, or else as tenants with the hopes of becoming landowners in the future. Low prices would mean, in general, low revenues, leading to more reliance on alternative sources of income such as tariffs, which the Northeast would like. The encouragement to westward movement of workers would reduce the available labor supply and raise wage rates in the areas of outflow (which manufacturing interest in the Northeast would not like). The maintenance of liberal land policies was certainly not predestined in a complex political environment, but ultimately the highly democratic political institutions and the well-founded belief that such policies would enhance returns to labor generally and the gains from free immigration may have together been decisive.

That not everyone accepted the case for a liberal land policy, and that even in a country with labor scarcity it might not be advocated or adopted, is illustrated by the arguments for a high land price and/or slow settlement policy offered by two renowned economists: the American Henry Charles Carey and the Englishman Edward Gibbon Wakefield.<sup>46</sup>

Carey argued for high land prices to slow the pace of settlement and to benefit from the positive externalities he attributed to higher population density in urban and previously settled areas. A more influential set of policies, both in theory and in its effect upon policymakers, came from Wakefield. Wakefield was interested in British settlement of Australia and New Zealand, and thought that their growth and development would be aided by ensuring a labor force in older areas, while slowing down the pace of settlement by owners of land in the newer areas. This policy entailed a high price ("sufficient price") to limit the movement of labor from the older areas,

46. See Carey (1837–1840), and the discussion in Dorfman (1947, included in the five volume set, years 1946 to 1959). For Wakefield's arguments see his works in 1829 and 1849. Carey was familiar with Wakefield's writings. Wakefield had argued that the Spanish had failed in the Americas because of the absence of sufficient concentration of land. See Burroughs (1965). While Carey apparently had little direct impact on land policy, Wakefield's ideas were implemented in several cases, although of limited success.

with the use of funds collected tied to the payment to help subsidize new immigrants. Thus, Wakefield's proposals would have served to attract immigrants and yet create concentrations of labor with geographically limited settlement. Such a policy was in fact introduced in parts of both Australia and New Zealand, but, given the adaptability of institutions in response to the desires of smallholders, the land size requirements were reduced, and Wakefield's policies did not become a permanent fixture in either place.<sup>47</sup>

Another, and more long-lived, example of where Wakefield's ideas were embraced was in Brazil. In that country, after the grants policy (which also had provision for purchase of land at relatively low prices) of the colonial government had been abolished at independence in 1822, squatting became the dominant means by which individuals of all classes carved land to cultivate or settle in virgin territory. These arrangements were generally not recognized under the law, and came to be viewed as a significant obstacle to the growth of coffee production and development in general. Coffee plantations needed well-defined and secure rights to their land, but also required labor. The land law of 1850, the original draft of which was proposed in 1842, dealt with these issues in the ways prescribed by Wakefield.<sup>48</sup> Public lands were to be offered at high prices, with requirements that all plots purchased be surveyed at the expense of the purchaser. Although early drafts of the law provided for a land tax, which together with revenue from land sales and fees for surveying was intended to pay for the subsidies to immigrants from abroad, the tax was dropped in the final legislation. The impact of the law was to seriously limit access to public lands for ordinary people, including immigrants, and aided elites due to their differential capability of obtaining land and by lowering labor costs. Whether or not the land law of 1850 was a more effective stimulus to immigration than a policy of easy access to land would have been is unclear, but its particulars suggest that its passage and maintenance over time may have been at least partially due to the extreme political and economic inequality that prevailed in Brazil. Here, as in many other countries in Latin America, elites were more capable of shaping policies and institutions to serve their interests than in societies with more democracy and greater equality. The role of political power differences is crucial to understanding decisions made, but, it is argued, the nature of political power is itself influenced by the basic resource endowments.

As we have stressed, virtually all the economies in the Americas had ample supplies of public lands during the nineteenth century, especially when one acknowledges that land traditionally occupied and worked by Native Americans as community property was often viewed as public land—and as such completely unencumbered when depopulation or migration shifted

47. On Australia see Roberts (1968), Macintyre (1999), Wadham, Wilson, and Wood (1964), and Powell and Williams (1975), and for New Zealand see Jourdain (1925), Smith (2005), and McDonald (1952).

48. See Viotti da Costa (1985).

long-time occupants away. Since the respective governments of each colony, province, or nation were regarded as the owners of this resource, they were able to influence the distribution of wealth, as well as the pace of settlement for effective production, by implementing policies to control the availability of land, set land prices, establish minimum or maximum acreages, provide credit for such purposes, and design tax systems on land. Because agriculture was the dominant sector throughout the Americas during the nineteenth century, questions of how best to employ this public resource for the national interest, and how to make the land available for private use, were widely recognized as highly important and often became the subject of protracted political debates and struggles. Land policy was also used as a policy instrument to influence the size of the labor force, either by encouraging immigration through making land readily available or by influencing the regional distribution of labor (or supply of wage labor) through limiting access and raising land prices.

The United States never experienced major obstacles in this regard, and, as noted, the terms of land acquisition became easier over the course of the nineteenth century.<sup>49</sup> The Homestead Act of 1862, which essentially made land free in plots suitable for family farms to all those who settled and worked the land for a specified period, was perhaps the culmination of this policy of promoting broad access to land. Canada pursued similar policies: the Dominion Lands Act of 1872 closely resembled the Homestead Act in both spirit and substance.<sup>50</sup> Argentina and Brazil (as discussed), and also Chile, instituted similar changes as a means to encourage immigration but these efforts were much less directed, and while there were benefits, they were less successful at getting land to smallholders than the programs in the United States and Canada.<sup>51</sup> Thus in Argentina, where a comprehensive land law was passed in 1876 and followed by an extremely restrictive—applying only to Patagonia—Homestead Act in 1884, a number of factors seem to explain the contrast in outcomes. First, the elites of Buenos Aires (the city and province accounted for 40 percent of Argentina's population at the end of the nineteenth century), whose interests favored keeping scarce labor in the province, if not the capital city, were, because of the larger share of the urban population, much more effective at weakening or blocking programs than were their urban counterparts in North America. Second, even those policies nominally intended to broaden access tended to involve large grants to land developers, with the logic that allocative efficiency could best

49. See Gates (1968) for a comprehensive overview of United States land policy. See also Attack, Bateman, and Parker (2000).

50. Discussions of Canadian land policy include Martin (1938), Solberg (1987), Adelman (1994), and Pomfret (1981).

51. On Argentina see Adelman (1994), Amaral (1998), Castro (1991), and Solberg (1987), and on Chile see Solberg (1969) and Collier and Sater (1996). In addition to Viotti da Costa (1985), on Brazilian land policy see also Dean (1971), the excellent discussion in Adelman (1994), as well as Barickman (1998), Schwartz (1985), Summerhill (2003), and Alston, Libecap, and Mueller (1999).

be achieved through exchanges between private agents or transfers to occupants who were already using the land, including those who were grazing livestock. Although the debates over the land laws made frequent reference to the examples provided by the country's North American neighbors, the Argentine laws generally conveyed public lands to private owners in much larger and concentrated holdings than did the policies in the United States and Canada. Third, the processes by which large landholdings might have broken up in the absence of scale economies may have operated very slowly in Argentina: once the land was in private hands, the potential value of land in raising or harvesting livestock may have set too high a floor on land prices for immigrants and other ordinary would-be farmers to manage. Such constraints were exacerbated by the underdevelopment of mortgage and financial institutions more generally.<sup>52</sup> Since these nations maintained policies similar to those by the Spanish regarding education and other matters, they did not greatly benefit from growth after independence.

Indeed, as the growing volume and diversity of international trade during the mid- and late nineteenth century increased the value of land, there seems to have been a wave of policy changes throughout Latin America that not only eschewed the evidently successful U.S. example of liberal land policies, but instead worked to increase the concentration of ownership. At the end of the nineteenth century in Brazil, the abolition of slavery brought about an increased demand for European labor from Spain, Portugal, and Italy to produce coffee for export, now on smaller units than the plantations.<sup>53</sup> This demand for labor led to the provision of subsidies of transportation, cash, or land to attract migrants from southern Europe. Another pattern, but with limited subsidized labor from Spain and Italy developed in Argentina and in Chile, where slavery had ended much earlier and plantation crops had not developed to the extent that they did in Brazil.

Argentina, Canada, and the United States each had an extraordinary abundance of virtually uninhabited public lands to transfer to private hands in the interest of bringing this public resource into production and serving other general interests. In societies such as Mexico, however, the issues at stake in land policy were very different. Good land was relatively scarce, and labor was relatively abundant. Here the lands in question had long been controlled by Native Americans, but without individual private property

52. It is generally thought, that the introduction of livestock to Argentina, when the Spanish first arrived in the sixteenth century, was the basis for widespread herds of feral cattle that were present during the nineteenth century and would eventually be harvested. Such production of animal products (hides and beef) was associated with scale economies and did not require much in the way of labor. These conditions may have increased the economic viability of large estates where labor was scarce and land abundant. In contrast, because the major crops produced in the expansion of the northern United States and Canada were grains, whose production was relatively labor intensive and characterized by quite limited scale economies, the policy of encouraging smallholding was effective. See Adelman (1994) and Engerman and Sokoloff (2002), for more discussion.

53. On the post-slave adjustment in Brazil, see Eisenberg (1974).

rights. Mexico was not unique in pursuing policies, especially near the end of the nineteenth and the first decade of the twentieth centuries, that had the effect of conferring ownership of much of this land to large non-Native American landholders.<sup>54</sup> Under the regime of Porfirio Díaz, between 1878 and 1908, Mexico effected a massive transfer of such lands (over 10.7 percent of the national territory) to large holders such as survey and land development companies, either in the form of outright grants for services rendered by the companies or for prices set by decree.

In table 1.6 we present estimates for four countries of the fractions of household heads (or of a near equivalent measure) that owned land in agricultural areas in the late nineteenth and early twentieth centuries. The figures indicate enormous differences across the countries in the prevalence of land ownership among the adult male population in rural areas. On the eve of the Mexican Revolution, the figures from the 1910 census suggest that only 2.4 percent of household heads in rural Mexico owned land. The number is quite low. The dramatic land policy measures in Mexico at the end of the nineteenth century may have succeeded in privatizing most of the public lands, but they left the vast majority of the rural population without any land ownership at all. The evidence obviously conforms well with the idea that in societies that began with extreme inequality, such as Mexico, institutions evolved so as to greatly advantage the elite in access to economic opportunities, and they thus contributed to the persistence of that extreme inequality.

In contrast, the proportion of adult males owning land in rural areas was quite high in the United States, at just below 75 percent in 1900. The prevalence of land ownership was markedly lower in the South, where blacks were disproportionately concentrated, with the share for whites being high. The overall picture for the United States is one of a series of liberal land policies, leading up to the Homestead Act of 1862, providing broad access to this fundamental type of economic opportunity. Canada had an even better record, with nearly 90 percent of household heads owning the agricultural lands they occupied in 1901. The estimates of landholding in these two countries support the notion that land policies made a difference, especially when compared to Argentina. The rural regions of Argentina constitute a set of frontier provinces, where one would expect higher rates of ownership than in Buenos Aires. The numbers, however, suggest a much lower prevalence of land ownership than in the two northernmost North American economies.<sup>55</sup> Nevertheless, all of these countries were far more effective than

54. For discussion of Mexican land policy, see McBride (1923), Tannenbaum (1929), and Holden (1994).

55. Our work with the data from the 1914 Argentina census yields the same qualitative results. It is worth noting that the proportions of families that owned land are exaggerated by the 1895 census figures. A close examination of the manuscripts indicates that double counting, in which both the husband and wife were listed as landowners, was prevalent in many parts of Argentina.

**Table 1.6 Landholding in rural regions of Mexico, the United States, Canada, and Argentina in the early 1900s**

Country, year, and selected regions	Proportion of household heads who own land <sup>a</sup>
Mexico, 1910	
North	3.4
Central	2.0
Gulf	2.1
South Pacific	1.5
Total rural Mexico	2.4
United States, 1900	
North Atlantic	79.2
South Atlantic	55.8
North Central	72.1
South Central	51.4
Western	83.4
Total United States	74.5
Canada, 1901	
Alberta	95.8
Saskatchewan	96.2
Manitoba	88.9
Ontario	80.2
Quebec	90.1
Total Canada	87.1
Argentina, 1895	
Chaco	27.8
Formosa	18.5
Misiones	26.7
La Pampa	9.7
Neuquén	12.3
Rio Negro	15.4
Chubut	35.2
Santa Cruz	20.2
Total for areas covered, Argentina	18.8

*Sources:* For Mexico: computed by the authors from the 1910 census figures reported in McBride (1923, 154); for the United States: U.S. Census Office (1902, part I, lxvi–xxxv); for Canada: Canada Bureau of Statistics (1914, vol. 4, xii, table 6); for Argentina: computed by the authors from 1895 census figures reported in Cárcano (1925) and Comisión Directiva del Censo de la República Argentina (1898, clvii, table IVd).

<sup>a</sup>Landownership is defined as follows: in Mexico, household heads who own land; in the United States, farms that are owner operated; in Canada, total occupiers of farmlands who are owners; and in Argentina, the ratio of landowners to the number of males between the ages of 18 and 50.

Mexico in making land ownership available to the general population. The contrast between the United States and Canada, with their practices of offering easy access to small units of land, and the rest of the Americas, as seen in the contrast with Argentina and Mexico, is consistent with the hypothesis that the initial extent of inequality influenced the way in which institutions evolved and in so doing helped foster persistence in the degree of inequality over time.<sup>56</sup>

#### 1.4 Institutions and Policies

Economic historians and other social scientists have recently returned to the study of the role of institutions in the processes of economic growth and development. Much attention has been focused on where institutions come from, and why some societies seem to have institutions that are conducive to progress, while others seem plagued for extended periods with those that are less supportive, if not destructive. Some scholars argue that institutions are generally exogenous, arising from idiosyncratic events that led to distinctive institutional heritages that were remarkably durable, such as those from metropolitan areas or from major convulsions such as the French Revolution, which are difficult to predict and often have unexpected or unintended consequences. Others, however, suggest that there are powerful systematic patterns in the ways institutions evolve, shaped by how societies try to deal with the challenges and opportunities framed by the specific environment, state of technology, factor endowment, and other circumstances they face. Improving our knowledge of whether institutions are exogenous or endogenous, and of how flexible they are in adapting to changes in conditions, is crucial to gaining a good understanding of their role in economic development.<sup>57</sup>

Australia apparently had a relatively large population of aborigines when British settlement began in 1788, a number not achieved by Europeans until the 1850s, and after the decline with the English arrival, the aboriginal population has not yet reached the earlier total.<sup>58</sup> As in the Americas, the arrival

56. We have omitted here discussion of other Latin American countries for which we have some information on land policy and its changes. See, for example, on Colombia (Bergquist [1998], Bushnell [1993], McGreevey [1971], and Palacios [1980]), Peru (Davies [1984], Ford [1955], and Jacobson [1993]), Costa Rica (Gudmundson [1986]), Bolivia (Klein [1993]), El Salvador (Lindo-Fuentes [1990]), Guatemala (McCreery [1994]), Dominican Republic (Moya Pons [1995]), Central America (Pérez Brignoli [1989] and Roseberry, Gudmundson, and Samper Kutschbach [1995]), Ecuador (Pineo [1996]), and Venezuela (Yarrington [1997]). There is more generally useful material in volumes covering all of Latin America. See the various volumes edited by Bethell, *The Cambridge History of Latin America*, (particularly Bethell 1985 and 1986); Bulmer-Thomas (1994); Bulmer-Thomas, Coatsworth, and Cortés Conde (2006a, 2006b); Glade (1969); and Lockhart and Schwartz, (1983).

57. Engerman and Sokoloff (2008).

58. Vamplew (1987). For a considerably higher estimate of the aboriginal population at the time of contact, see Butlin (1983).

of European diseases led to a dramatic decline in the native population. The British settlement initially began with large numbers of convicts, and while there were attempts to negotiate land purchases with the aborigines, they did not work out and were soon followed by military actions to enable Europeans to acquire land. Each Australian state initially had its own land policies, but these tended to become more similar over time. While Wakefield had proposed his land policy be applied to all Australia, it was only in South Australia and Western Australia that Wakefield's policy was introduced early in settlement, and in both states it ended within several decades.<sup>59</sup> Initially, New South Wales, the most populous of the states, provided large grants to individuals or companies, but over time squatters, whose holdings tended to be small, were able to get permanent title to their land. Later it was policy to permit individuals to select between 40 and 320 acres by paying one quarter of the purchase price, the balance to be paid in three years, usually at a minimal price per acre.<sup>60</sup> There are several ways in which Australia resembled the United States, with a high ratio of land to population leading to the increased ease with which whites acquired land ownership over time. There was also a high percentage of ownership of relatively small farms, although the greater importance of sheep farming in Australia created a demand for larger units to permit pastoral agriculture. And, as in the United States, the original natives were pushed from the path of settlement and often relocated on reserves. Yet another similarity was the development of a sugar industry in the more tropical areas of both countries. This was based at first on some form of coerced labor, slaves in Louisiana before 1860 and indentured Pacific Islanders in Queensland, by the 1870s.<sup>61</sup> As elsewhere, these sugar-producing plantations in both nations were considerably larger than was the typical grain farm.

New Zealand, settled from Australia in the 1840s, also had a native population—the Maoris—although they did not suffer as severe a demographic decline after the Europeans arrived as did the natives in Australia (and the Americas).<sup>62</sup> Nevertheless, with the large immigration of whites, the Maoris represented less than 10 percent of the New Zealand population within several decades of white settlement. The Maoris reached better accommodation with the British, including selling land to whites, than did the Australian aborigines, but New Zealand remained a nation with a high ratio of land to population.

Land distribution in New Zealand was determined at the state level until 1876, and land was often used as a subsidy to immigrants. Homestead provi-

59. In addition to the sources cited in footnote 47, see also Powell (1970), Shaw (1966), Sinclair (1976), and Coghlan (1969).

60. See Powell (1970).

61. On the United States see Gray (1933) and Sitterson (1953). For Australia see Fitzgerald (1982), Shlomowitz (1996), and Graves (1993).

62. McLauchlan (1984).

sions required a set time of residence to acquire title to land and the governments provided credit arrangements, facilitating sales of land. After several decades it was a general policy to aim at establishing smaller units of up to 320 acres. The earlier settlement pattern was influenced by the policies proposed by Wakefield, including use of land revenues to subsidize immigration and the selling of large units at high prices, but, as elsewhere, this policy was modified over time to permit sales of cheap land to immigrants.<sup>63</sup> Thus in New Zealand, as in Australia, the general pattern over time was a liberalization of Wakefield's land policy to make land more easily accessible to smaller landholders.

Another interesting example of British colonialism, this time of adjacent areas of East Africa, demonstrates the variation in British colonial policy. The settlements of Kenya and Uganda at the end of the nineteenth century generated important differences in local institutions.<sup>64</sup> Both areas were populated almost entirely by black Africans. In Kenya, land was made available to white settlers in units from 160 to 640 acres, with five acres allotted to Africans and Asians for one year, with no ownership rights. By 1840 Europeans were about 1 percent of the population, and owned 18 percent of the land, that being regarded as the best land. Uganda, larger in area but with a similar African and European population mix, developed a rather different set of institutions for land distribution. There were few European settlers and landholders since, at the time of establishing the Protectorate in 1894, much of the land was given to local chiefs to be held under freehold. Unlike Kenya, with European-owned production of plantation crops such as coffee for export using African labor, Uganda produced mainly cotton on small-scale peasant farms. In part, these differences between Kenya and Uganda have been attributed to differences in climate and soil type, leading to the quite distinct set of institutions and political controls.

An earlier British African settlement with large amounts of land available, South Africa, finally seized from the Dutch in 1814, had a somewhat different pattern.<sup>65</sup> Slave labor was imported from elsewhere, mainly the Indian Ocean region, but important controls were imposed on the local natives, coerced into labor for whites by a combination of dispossession and limits on land purchases. Slavery ended in 1834, by the British Emancipation Act. Whites represented a higher percentage of the population than in East Africa, about 33 percent in the Cape Colony in 1836 and lower for the overall colony, but as in Kenya, whites took measures to own the land to pro-

63. In addition to the sources cited in footnote 47, see Condliffe (1930), Hawke (1985), and Sinclair (1959).

64. This paragraph draws upon the following books: Harlow, Chiver, and Smith (1965), van Zwanenberg and King (1975), Wa-Githumo (1981), and Ochieng' (1985). We have greatly benefited from the research of Tricia Redeker Hepner on these African colonies.

65. See Feinstein (2005), Elphick and Giliomee (1989), Wilson and Thompson (1969), Duly (1968), Ross (1993), and Hellman (1949).

duce for export.<sup>66</sup> By 1780, landholding was generally regarded as reserved for whites, with coerced labor left for slaves and “free” resident Africans. Later, by 1913, legislation placed the native population on reserves, which accounted for 7 percent of the land, where they remained laborers for white planters and miners.<sup>67</sup>

## 1.5 Institutions and Colonization

This chapter examines the colonization of the Americas as a quasi-natural experiment that can be exploited to learn more about where institutions come from. Its focus has been on the long-term evolution of immigration and land and labor policies or institutions, commonly recognized as important for paths of economic development. Much work remains to be done, but our results seem to accord with the notion that the colonies were powerfully influenced by their factor endowments in how they chose to formulate their policies regarding immigration and land. During the colonial period, Spanish America benefited from being centered on regions with rather large populations of Native Americans, and was accordingly much less dependent on immigration, both voluntary and involuntary, than other areas. Indeed, Spain maintained very severe restrictions on who and how many could come. Brazil and the islands in the Caribbean, specializing in sugar and a few other tropical crops well suited for production on large slave plantations, relied heavily on importing slaves to deal with their labor scarcity problem. It was only the northern part of North America that had to obtain the bulk of its labor force through voluntary migration from Europe. Rather than coincidental, or due exclusively to their British national heritage, the uses of the institution of indentured servitude and the liberal offering of land grants to migrants seems to have been policy instruments designed to solve the problem of labor scarcity and allow the colonies to take better advantage of their abundance of land and other resources.

After the independence movements swept across the Americas, there was a mixture of both continuity and change in the strategic land and immigration institutions. The United States, followed by Canada, continued to actively pursue immigrants from abroad. There was no longer a need or ability to acquire indentured servants, but both countries employed very liberal land policies to attract migrants. Again, it is striking that the regions most supportive of liberal land policies, and other policies that migrants were sensitive to, were the areas in the west of the United States and Canada that were most labor scarce. Of course, these boundaries evolved over time with settlement. The evidence for the endogeneity of these policies appears

66. Martin (1967). Feinstein (2005) provides an estimate of about 10 percent European in all of South Africa c. 1850. The first census, 1904, gave a figure of 21.6 percent white.

67. Feinstein (2005).

formidable. In contrast, the new nations of Spanish heritage (or Portuguese, in the case of Brazil), who were now free to formulate policies to suit their own interests, began to actively seek immigrants. Like their neighbors to the north (the United States and Canada), countries such as Brazil and Argentina were seemingly labor scarce and abundant in land available for agricultural and other purposes from early in settlement.

It is curious, however, that the programs they adopted were far less generous in offering land to immigrants or local residents than was the United States. This parsimony may be related to the general increase throughout Latin America in the value of land suitable for the production of agricultural exports, as was the movement in many other nations with large Native American populations regarding policies that in effect shifted control of land from Indians to elites. It may also be related to the extreme political and economic inequality that prevailed throughout Latin America, and that we have elsewhere attributed in large part to factor endowments broadly conceived.

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