CHAPTER

3 State and private institutions

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Economic growth depends upon institutions (rules that constrain human behavior and their enforcement mechanisms: North 1981; Greif, 2006). Some of these rules arise bymeans of a public process, while others are privately adopted; some are explicit (written down as laws or contracts) and others implicit. Their enforcement can rely on public coercion, private third parties, or even reputation. We focus here on those institutions that are formal and publicly enforced. This is not because informal institutions waned with modernization, rather because the formal institutions were the ones that underwent the most dramatic transformation during the period we are considering. Many polities adopted written constitutions and formal legislative organizations, and recast their laws. Even Britain, where no formal constitution was set down, saw electoral reform and an explosion of legislative activity.

Economic historians have long emphasized the role of institutions in ensuring prosperity; after a hiatus, development economics has come to similar conclusions (see, e.g., Acemoglu et al., 2001; Engerman and Sokoloff, 1997; Banerjee and Iyer, 2005). Scholars have particularly highlighted the benefits of secure property rights. In this light, England's early economic leadership sprang from the Glorious Revolution's institutional settlement (North and Weingast, 1989). The great variety of political and economic, public and private institutions that prevailed in Europe offers tempting ground for testing this largely inductive argument based on Britain. Although the variation in institutions is extensive, and well documented in the archival record, it raises its own problems: institutions, archaic or modern, are chosen. Furthermore, in the long run all institutions are sub-optimal; only change can allow growth to go forward. Given that Britain was the most successful economy in the period it seems natural to use it as a benchmark. One should bear in mind, however, that the earlier successes of Italian city-states and Dutch provinces and Germany's later catch-up proceeded with institutions that were hardly British. Finally, economists have focused heavily on national output, neglecting regional variation. The British institutions associated with the Industrial Revolution are equally connected to the Irish economy and the potato famine. Thus we tread gingerly.

It is also important to note that, if by 1870 the notions of state and nation had become interchangeable, this was not so in 1700. Sovereign states have long existed, but for most of European history they did not coincide with nations (some were multi-cultural and spatially dispersed, others tiny). The process of competition over territory was extraordinarily prolonged and violent. States faced the perils of external rivals and the resistance of provinces to any attempt at centralization. Moreover, although political boundaries west of the Alps and the Rhine changed relatively little after 1700, that was not the case to the east. The recombination of territories in eastern and central Europe poses obvious problems for us. While we try to consider the whole of Europe, this is not always possible.

While economic historians have often written the economic history of Europe as growth springing from the people's liberation from oppressive rulers, in many places growth arose from the elimination of geographic fragmentation and local privileges and practices (Epstein, 2000). These local privileges endured because they served as bulwarks against rulers' fiscal rapacity. In England, such protections were essentially inoperative because it was a small country that from 1066 enjoyed the costs and benefits of a very centralized and unified set of institutions. This chapter thus explores two questions: (i) how important were problems of sovereign expropriation relative to problems of fragmented authority? and (ii) to what extent did different parts of Europe adopt different institutions to solve similar problems in terms of property rights, infrastructure investment, and business law?

Our analysis puts far greater emphasis on international relations (i.e. war) than has been the case hitherto. Consider Alexander Gerschenkron's (1962) classic, *Economic Backwardness in Historical Perspective*. There, economic innovation pushes public and private institutions to evolve while domestic political struggles may hold them back. That narrative is appealing for central Europe and Russia, where reform and industrialization came late. Even in this region, however, institutional change issued from the crucible of war (from French intervention in Italy in 1857 all the way to the war that raged at the time of the October Revolution in Russia). In the west, institutional change owes more to Napoleon's legions than to industrialization.

An account of institutional change cannot leave aside the exchange of bullets and cannonballs any more than it can ignore the flow of ideas about political and economic institutions. Yet the interconnection of European polities did not bring about institutional convergence. Although in most countries reform led to more representation, higher taxes, legal innovation, and infrastructure investment, the mechanisms used to achieve these goals varied considerably. To some extent this is evidence of path dependence, but it was also the result of the desire of politicians to forge a national identity and thus to preserve differences between their institutions and those of their international rivals. We begin with a very broad issue, namely the evolution of political institutions. We then move through a more focused set of problems: taxation, commercial law, and infrastructure investment. While obviously incomplete, these topics allow us to highlight the key analytical issues in European institutional development between 1700 and 1870.

Political institutions

Between 1700 and 1870 European political units underwent complex, profound, and often locally specific transformations. We focus on three broad trends: (i) absolutism's continued rise from the sixteenth through the eighteenth century; (ii) its complex replacement by constitutional regimes in the nineteenth century; and (iii) the ascendance of the national state over both territorial empires and confederations of small sovereign units.

In empires a ruler or a state deploys its political and military control over multiple territorial entities, imposing different combinations of legal, economic, and cultural uniformity. Between the Roman period and World War I, there was at least one empire in Europe, and most kings aimed at becoming rulers of empires. For millennia empires were the dominant polities around the globe. Yet in Europe they succumbed to a tide of national states, which one could see rising after the Peace of Westphalia in 1648. The Habsburg and Holy Roman empires survived, but their control over territories other than their traditional bases waned. The Ottomans' sway over their European lands also slipped, even though they maintained a stronger grip over their Asian territories. Certainly by the outbreak of the War of the Spanish Succession in 1702, national states were gaining the upper hand in Europe.

Charles Tilly (1992) traces the success of national states to their absorption of the fiscal extraction system and military organizations into administrative units. Early modern European polities had largely relied on indirect (decentralized) rule for their coercion and extraction needs. While centralization was known to be more efficient, it was also much costlier. Gonzalez de Lara, Greif, and Jah (2008) argue that medieval potentates chose indirect rule because it was cheap, and their organizational choice proved persistent. Decentralized administration also constrained the capacity of European rulers to extract resources from their subjects, wage war, and control large territories. By the turn of the eighteenth century the tide was turning. Rulers increasingly brought fiscal and military structures into their administrative structures, thereby shedding the layers of intermediaries on which they had relied to negotiate with the elites. Sitting representative assemblies, quite common in the preceding five centuries, became rare; fiscal operations were wrestled from private control and subjected to central oversight; state finance ministries increasingly substituted for bankers and capitalists to whom kings had often outsourced their borrowing needs; and professional mercenaries were replaced by standing armies, composed almost exclusively of nationals of the states they belonged to (Drelichman and Voth, 2008).

While not doing justice to the wide variety of European polities, this rough characterization illustrates what set the new states apart from the political structures they came to replace. The fate of the countries that did not implement such reforms reveals their importance. The agrarian-based nobility of the Polish-Lithuanian Commonwealth based its power on the *liberum veto*, which allowed any member of parliament to nullify its acts and end the current session. As a result there was not much of a state in Poland by 1700. The reforms begun in 1764 came too late: Poland was divided between Russia, Austria, and Prussia. A similar system in Hungary had resulted in its absorption by the Ottoman Empire in the sixteenth century. As a rule, small states incapable of fielding standing armies and dominated by traditional elites were absorbed by the greater powers, Venice's loss of its 1,000-year independence to Napoleon being the iconic example of the fate that befell commercial and aristocratic city-states across Europe. Slightly larger states like the German principalities were enfolded in the fiscal–military machines of their more powerful neighbors. The Swiss Confederation, a collection of patriciate-ruled cantons, was overrun by the Napoleonic armies, although after the Congress of Vienna it managed to re-emerge in enlarged form and having acquired a government that could call itself central in some measure. Despite its loose organization, the Swiss Confederation managed to remain independent amidst the tug of war of France and Austria, illustrating the diminishing returns to the imperial model in Europe.

Two polities stood at the vanguard of change. Britain distinguished itself from the European norm with the construct of the Crown-in-Parliament and the other institutional innovations of the Glorious Revolution. The grand bargain of 1689 began a process whereby the kingdom acquired a representative assembly, a strong executive, a professional bureaucracy, and financial institutions designed to cater to the needs of the state; these "sinews of power" proved to be remarkably efficient in the consolidation of the state and the projection of military power (North and Weingast, 1989; Brewer, 1989). Many of these innovations were in fact imported or adapted from the Netherlands, the most successful of the handful of republics that survived in Europe. In the Dutch case, however, the process of change stalled, and fiscal centralization, though long debated, did not become a reality until the French forced changes after 1795.

While representative bodies with actual power survived, most polities shifted to direct absolute rule. One of the main dimensions along which absolute monarchies can be classified is their elimination of alternative political forces – especially the Church, the nobility, tax farmers, local and regional courts, and assemblies consenting to taxes (Finer, 1997). Traditional stakeholders' loss of power varied widely, and was by no means irreversible. The elimination of intermediaries, a part of the Enlightenment program, took root with the most vigor in Prussia, Russia, and Austria. These three countries were still in the early stages of state-building when they became absolute monarchies, and their central governments encountered relatively little resistance. Reforming rulers also prevailed in Spain (Charles III and his minister Campomanes), Portugal (with the reforms pushed forward by chief minister Pombal), and Sweden (Gustav III).

Their reforms, however, were largely reversed by their successors. France made some strides under Louis XIV, who succeeded in co-opting the nobility and reducing the power of the *parlements* to block royal edicts. The venal French system, however, blocked deeper reform. Offices were not only private and, by the eighteenth century, largely hereditary property; they also constituted one of the main forms of government debt. Reform was impossible without an alternative source of finance. In the face of the resistance of the nobility to accept new taxes, France lacked the means to issue new debt. This handicap eventually determined its mounting losses on the battlefields, and prompted the search for more radical reforms (Bordo and White, 1991; Brewer, 1989; Ertman, 1997).

The French *Ancien Régime* was the classic example of what Ertman (1997) has called "patrimonial absolutism," where the different bodies that constitute the state are the private property of individual elites. After Louis XIV's death the elites used their control of state institutions, most notably the *parlements*, to defend their special interests against the several attempts at enlightened reform. The confrontation between the Crown and the elites over the distribution of the tax burden would eventually lead to the French Revolution and radical change in political and fiscal institutions.

History has witnessed few moments of creative destruction so encompassing as the French Revolution. From its very outset the National Assembly sought to eliminate the intermediary bodies of the *Ancien Régime*. *Parlements* were dismissed; local assemblies (Etats) were abolished along with all feudal privilege; the Church was dispossessed of its wealth; and almost all guilds were dissolved. The National Assembly's plan for improving administration focused on central bureaucracies staffed by civil servants. The revolutionaries, however, were soon fighting for their lives, and their reforming zeal waxed and waned with the fortunes of French armies. The forces that had so completely wiped out all vestiges of the patrimonial regime eventually found themselves unable to give France a stable political order, a task that fell to Napoleon and that involved the reemergence of an autocratic empire in Europe.

Napoleon's most lasting institutional innovation was the codification of civil law. Reform was necessary to uphold the Revolution's commitment to centralization and to fill the void created by the elimination of provincial and local legal privileges. Carried by French armies across Europe, codified law was also the Revolution's most significant export (to which we shall return below). While restoration returned most of their power to the absolute monarchs who had been deposed by Napoleon, only the most recalcitrant ones, such as Ferdinand VII of Spain, went to the trouble of completely reversing the legal innovations brought on by the French.

Napoleon was, above all, a brilliant military commander who harnessed the power of citizen armies. These human tidal waves were almost immediately embraced by all the major powers. The diffusion of conscription on a large scale completed the state's integration of the military. As with many military innovations, citizen armies came at a price and eventually forced bureaucracies and administrations to evolve. The new type of conflict also carried a much larger cost in terms of lives. The Napoleonic wars caused almost as many deaths as the Thirty Years War in less than half the time; if the casualties of the French revolutionary war are added to the tally, the dead mount to two and a half million, one third of the lives lost in World War I (Tilly, 1992, pp. 165–166).

Citizens who laid their lives at the feet of the state needed good reason to do so. Pension systems for the maimed and the families of the dead thus had to be set up, and rulers could not turn a completely deaf ear to increasing demands for representation in government. The second and third quarters of the nineteenth century were thus characterized by what Finer (1997) has called the "constitutionalization" of Europe. Constitutions that survived more than a few years were overwhelmingly granted by sovereigns rather than proclaimed by revolutionary assemblies. Sweden led the way in 1809 (although, strictly speaking, it was reviving the 1772 charter of Gustav III), followed by Norway and a handful of German states in 1814–19 and 1830–34. After the fall of Napoleon new restrictive constitutions were enacted in France and the Netherlands. Following the revolutions of 1848, many countries enacted liberal constitutions; most were later revoked or modified to reduce popular representation.

S. E. Finer characterizes four types of constitutions. Neo-absolutist charters left most of the power in the hands of the ruler, although some maintained rump legislatures, often tilted towards the nobility and the landed elites. Spain (with the exception of its liberal periods), Holland under William I, Naples, Greece between 1843 and 1848, and a number of German states all fall under this category. The two other important types were constitutional monarchies, in which power was delegated to ministers answerable to the king (e.g. Austria, Piedmont); and parliamentary monarchies, where ministers responded to elected legislatures (e.g. Britain). The dividing line here is less defined, as most states started as constitutional monarchies and later morphed into parliamentary monarchies. For example, Austria was ruled with an iron hand by Metternich, who answered to the emperor alone; the revolutions of 1848 fatally weakened this system and eventually resulted in the introduction of a parliamentary system in 1867. France oscillated between the two systems, with parliamentary rule between 1830 and 1848, reverting to authoritarianism under the Second Empire, increasing again the role of the legislature towards the end of the 1860s, and finally becoming a parliamentary republic, the fourth type of constitutional state. By 1870 only Russia and the Ottoman Empire maintained absolute governments without constitutions.

European polities also provided a wide array of political and economic freedoms. While long before 1700 there were many polities where some (male) residents had political rights, nearly everywhere much of the population was not only disenfranchised but also bound in either slavery, serfdom, or other labor arrangements that severely limited its freedom to accumulate wealth or migrate. By 1870 all areas of Europe save the Ottoman Empire had abolished slavery and serfdom, even where the political franchise remained non-existent or very constricted (Bush, 1996). The increase in economic freedom, however, should not be overstated, because for several decades after emancipation workers in many parts of the economy had their mobility restricted by systems of passports that gave much bargaining power to employers. The evolution of individual freedoms resulted from the diverse interactions of constitutional processes, centralized states, and the emergence of citizen armies. Out of the tensions between the individual and the public sphere the phenomenon of nationalism in its myriad forms emerged, to play a defining role in the fortunes of the continent to this day.

Fiscal institutions

In the eighteenth century European states raised revenue to fight wars. Whether they wanted to expand their dominion, or merely defend them, rulers had to pay for their military (Brewer, 1989; Hoffman and Rosenthal, 1997). Europe's most powerful states – France, England, Prussia, and Austria in particular – funded either large standing armies or navies and sometimes both. They did so through a combination of taxation, wartime borrowing, and an ever growing public debt. Poor governments could only ally themselves to the great powers or pursue neutrality instead. Thus Spain and the Dutch Republic had to settle for playing second fiddle in European politics for lack of financial might (van Zanden and van Riel, 2004; Tortella and Comín, 2001).

Rulers knew that international competition was expensive, and that in turn coloured all domestic political processes. In summer 1764 the French foreign minister, the Duke of Praslin, queried his ambassadors for information about the fiscal system in the countries where they were serving (Hartmann, 1979). At the same time Jean-Louis Moreau, Seigneur de Beaumont, Intendant des finances, drafted a report on taxation in France. These reports, combined with data collected by modern historians, reveal the enormous differences in government revenues among mid-eighteenth-century European countries.

Table 3.1 underscores the overwhelming financial strength of the two great powers, England and France, in the middle of the eighteenth century. The incomes of the Habsburg monarchy, Spain, and Prussia were two to four times

Table 3.1 Annual public revenue of European states around 1765, in pounds sterling, and estimated share of direct taxes in total fiscal revenue in 1770

Country	Annual revenue (c. 1765)	% share of direct taxes (c. 1770)
France	12,350,000	49
Great Britain	9,702,172	24
Habsburg monarchy	3,972,749	51
Spain	3,944,000	10
Holland	2,417,807	43
Prussia	2,104,077	32
Sweden	1,734,108	n.a.
Denmark	1,029,918	49
Bavaria	476,667	46
Austrian Netherlands	244,141	0
Hamburg	184,223	30
Dutch Republic	117,700	0

Sources: Hartmann, 1979; Tortella and Comín, 2001, p. 156 (Spain); Coppens, 1992, p. 293 (Austrian Netherlands 1760–1769); Fritschy and Liesker, 2004, (Holland 1760–1769); Dormans, 1991, p. 158 (Dutch Republic 1762–1768). Exchange rates are approximate values for 1766 from McCusker (1978).

smaller. Holland, often lauded for its ability to tax citizens, was a distant fifth. This ranking reflects the political reality of eighteenth-century Europe, with France and England vying for leadership. It also shows that size mattered. For example, tax revenues per capita in the imperial city of Hamburg were as high as in England. But its tiny population prevented it, or any other independent city from playing any role in European politics: total revenue is what mattered for military and political leadership.

Yet, precisely because of the differences in size, the revenues reported in 1765 cannot serve as a measure of fiscal intensity. When measured relative to GDP, England's extractive success shines relative to its major rival France (Mathias and O'Brien, 1976). Between 1665 and 1800 total revenue in England rose from 3.4 percent of GDP to at least 12.9 percent. In France, meanwhile, taxes slipped from 9.4 percent in the early eighteenth century to only 6.8 percent in 1788 (White, 2001). In terms of fiscal institutions, this put France in the lesser set of nations where, as in Sweden for instance, central government revenues came to between 5 and 10 percent of GDP (Fregert and Gustafsson, 2005). The truly exceptional fiscal regime was Holland's: in the early 1740s government revenues amounted to at least 14 percent of provincial income (Fritschy and Liesker, 2004; de Vries and van der Woude, 1997).

The divergent fiscal success of eighteenth-century states is confirmed by their respective per capita tax burden measured in daily wages of unskilled laborers.

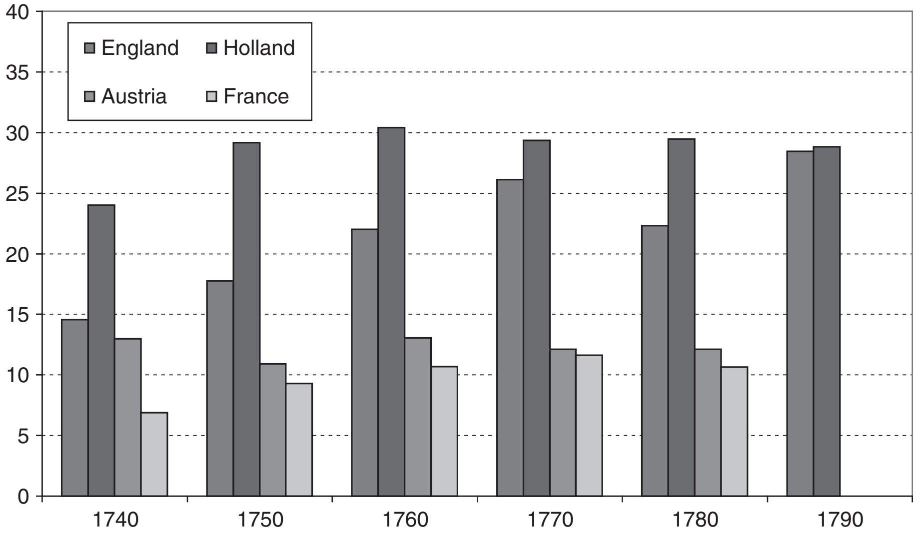

Figure 3.1 Tax pressure in various European countries, expressed as the number of (silver) day wages per capita, 1740–1790

The available data for the period 1740–1790 once again shows Holland as the fiscal champion, with England catching up after 1780 (Figure 3.1). In both countries in the 1790s the average person paid up to the equivalent of one month's daily wages in taxes per year. France's performance improved between 1740 and 1770, but it trailed far behind England and Holland until the Revolution. The same was true for the Habsburg lands of Austria, Hungary, and Bohemia, where inhabitants never paid more than the equivalent of thirteen days' unskilled wages to the central government per year.

One possible explanation for these differences is the substitution of indirect taxes like customs duties and excises for direct taxes on real estate, revenues from royal domains, or the sale of monopoly rights. England is the cherished paragon here: by 1765 land taxes brought in less than a quarter of public income, the rest coming from import and export duties and taxes on consumer goods. Holland is the other obvious example, but here direct taxes on land, real estate, financial assets, and income still represented 43 percent of total revenues. France's direct taxes brought in roughly half of revenues at mid-century (Riley, 1986b, pp. 55–65). Countries like Prussia and the Habsburg monarchy, on the other hand, relied even more heavily on domain revenues, land taxes, and the sales of monopolies. In 1765 the rulers of the Habsburg lands (16 percent), the Austrian Netherlands (16 percent), and Prussia (31 percent) still drew a considerable part of their income from their own possessions (Hartmann, 1979, p. 318). Spain also conforms to this image; over one-third of its revenue came from customs and excise but the remainder stemmed from colonial remittances, monopolies, and land taxes (Tortella and Comín, 2001).

But if indirect taxation was so much better, why did other countries fail to emulate England or Holland? Surely it was not for lack of trying. European rulers knew their competitors' financial policies well, and they strove to ameliorate their own fiscal systems (Bonney, 1995, pp. 428–430). By 1720 most rulers accepted the detrimental effects of currency debasement. At the same time the major players, and many of the minor ones, instituted central bodies to monitor tax revenues, improved the registration of wealth holdings, and appointed specialists to consider tax reforms (Fritschy and Liesker, 2004; Capra, 1995; Irigoin and Grafe 2006). In the seventeenth century, most states had levied excise duties on some scale, and in the eighteenth century experiments with income taxation were widespread (O'Brien, 1988a; White, 2001; Tortella and Comín, 2001; de Vries and van der Woude, 1997, p. 112).

The actual collection of taxes may not have been the problem, either. The vast majority of European rulers farmed out the collection of a large part of their taxes. Tax farming offered both short-term credit and a steady stream of income. The downside to tax farming was its overhead cost. In seventeenth-century Spain some 40 percent of revenues may have stuck to the fingers of the farmers (Tortella and Comín, 2001). Tax collection by government officials could be much cheaper. In Holland, for example, direct collection after 1750 cost between 8 and 9 percent of total revenue (Fritschy and Liesker, 2004, pp. 57–62). Yet it would seem unlikely that rulers settled for too high a deadweight loss. Indeed, the cost of tax collection in late-eighteenth-century France may have been as low as that of England (Norberg, 1994; Lindert, 2004).

Following Peter Dickson's seminal work on England's public finance, many economic historians today stress the value of representative government. The Glorious Revolution of 1688 consolidated Parliament's right to control the Crown's purse; in return it voted ever higher taxes. Parliament's ascendancy ran counter to the general gutting of representative assemblies that occurred in Spain and France and eastern Europe. Here the Dutch Republic would seem to be the odd one out, for despite its representative government and high levels of indirect taxation, it could not raise enough money to continue the struggle for military primacy after 1715.

But the financially less successful states did not just lack parliamentary control of taxation and expenditure. These were also composite monarchies, amalgamates of numerous territories with their own traditional liberties, political structures, and fiscal systems. In France, Spain, and the Habsburg lands the central government tried to, but could not, overhaul history's legacy of institutional barriers (Dickson, 1987; Irigoin and Grafe, 2006). For instance, the inhabitants of the *généralités* of Paris, Lyon, and Rouen always contributed far more money per capita than the population of Brittany, Burgundy, or Provence (White, 2001). Even the most successful fiscal regimes suffered from this kind of fragmentation. Britain had to settle for very low revenues from remote Scotland (O'Brien, 1988a). The central government of the Dutch Republic was engaged in perpetual negotiation about tax transfers from its seven provinces.

A related problem was that of local particularism. Traditional liberties allowed towns and provinces to administer taxation and keep much of the income (O'Brien, 2001; Dincecco, 2007). In France, for example, provincial authorities made it difficult to change land tax rates and raise total revenue. Besides, there were fixed tax quotas between towns and regions. The loss of income to the central government was particularly important when local economies were thriving, such as the towns of Flanders and Brabant in the Austrian Netherlands, the urban republics of the Swiss Confederation, or the ports of Catalunya. Urban autonomy added another irreducible constraint on monarchies. In Holland a major political crisis (imminent defeat in the face of Spanish troops in the early 1580) was required before towns would hand over two-thirds of local revenues to the central government. Finally, in many regions noblemen, clergy, and sometimes even larger sections of the population, benefited from tax exemptions. On the whole old privileges sapped the tax base of *ancien régime* governments. In order to maintain their standing in Europe, the rulers of France and Austria reverted to ad hoc fiscal policies which complicated rather than simplified the management of public finance (Dickson, 1987; Bonney, 1999). This was not just costly in terms of administration; the arbitrary nature of many emergency measures also reduced tax compliance.

Fiscal centralization would have solved these problems, but achieving it required a major redistribution of political power in all European states except England (Dincecco, 2007). This is why the French Revolution and the subsequent Napoleonic wars were so important. France had to raise taxes and loans to finance its conquest of Europe. Then it relied on contributions from dependent territories. England, as the only remaining opposition, had to fund an unprecedented military campaign. The first reaction of rulers was to levy additional taxes on wealth and income. In England, Pitt the Younger introduced the first income taxes. The Dutch Republic also reverted to income taxation to cover expenses in the late eighteenth century (Fritschy, 1988). Napoleon's conquests also forced the governments of Prussia, Spain, and the Dutch Republic to centralize their fiscal systems (Poell, 2008).

As we saw earlier, the political reconfiguration brought about by the Congress of Vienna after Napoleon's defeat in 1815 reversed part of these changes. Fiscal centralization failed in the Netherlands before the liberal 'revolution' of 1848 because the absolutist constitution of William I sidestepped parliamentary control over public finance (van Zanden and van Riel, 2004). In Spain, several decades of internal strife between absolutists, reactionaries, and liberals preceded the unification of the fiscal system in 1845 (Tortella and Comín, 2001). The English stopped income taxes and reverted to excises and customs – where they managed to bring collection costs below 5 percent (Lindert, 2004). The problems with fiscal centralization in most countries are reflected in the share of indirect taxes in total revenues. In 1870 central government typically raised only between 20 and 40 percent of their revenue through taxes on wealth or income. The remainder came from customs and, especially after the liberalization of trade in the 1850s and 1860s, excise duties (Flora, 1983; Mitchell, 2003).

Thus it comes as no surprise that central government revenues grew modestly at best. In most countries the tax burden was often no higher in 1870 than it had been a century earlier. Most central governments' taxes still amounted to less than 10 percent of GDP. In France taxes actually fell from 10.4 percent in 1820 to 6.9 percent of GDP in 1870. In the Dutch Republic central government expenditure dropped from 14 percent in 1840 to less than 8 percent in 1870 (van Zanden and van Riel, 2004). This decline is partly explained by the expansion of these economies – absolute revenues were increasing because GDP was growing faster after 1815 than it had before 1789. Hence in northwestern Europe state coffers were relatively flush. To be sure, in southern and central Europe the picture was not so rosy, with GDP growth being slower there.

The moderation of the tax burden also reflected the reduction in European warfare. England, France, and Spain continued their struggle for empire beyond Europe, but these colonial wars were much less costly – or were lost early on, as in the case of Spain. At the same time governments were unable, or unwilling, to offer anything beyond armies in exchange for the taxes they levied. In that sense really very little changed in Europe between 1700 and 1870. Central governments were perfectly capable of designing fiscal institutions to raise money, but they used these revenues only to fight wars, or service the resulting debts. They did not consider tax increases for a more generous provision of public goods. In this respect it is telling that most nineteenth-century governments preferred to pass on the burden or benefits of infrastructural works to local governments or the private sector.

Business law

The political and fiscal changes discussed above coincided with legal reform. For economic historians, in advanced economies technological rather than political change drove the law. In more "backward" economies, growth was held hostage to legal conservatism – in particular restrictions on incorporation (Landes, 1969, Freedeman, 1979). More recently economists have argued that common law countries' institutions (in Europe, Ireland and the United Kingdom) are the most responsive to economic forces (La Porta et al., 1997). Countries that derive their law from Roman and later French codes have institutions that are the least responsive (these include all the countries on the Mediterranean and most of those carved out of the Ottoman Empire). Germanic and Scandinavian traditions fall somewhere in between.

Neither argument is very satisfactory. Indeed, the first business corporations were formed around 1600, while general incorporation laws were passed mostly after 1850, *after* industrialization had begun. The second argument takes as fixed the existence of institutions (law) that evolved ceaselessly. Although codes may have mattered they were short, and much was left to the interpretation of judges and revisions by legislators. Judges in common law countries had an obligation to follow both precedent and statute. On the Continent, it seems that the same was true in practice. Everywhere, European commercial law depended on accumulated legal expertise that reached back centuries (Hilaire, 1986). We thus turn to the legacy of the past before confronting the breaks of the French Revolution and general incorporation laws.

Although canon law was not initially friendly to credit, the legal problems of debts had been solved before 1700. Individuals in commerce could issue and endorse letters of exchange and commercial notes everywhere, including the Christian and Jewish communities of the Ottoman Empire. More generally, private individuals could borrow by mortgaging land and other assets or just signing private obligations. The matter of equity was more complex. Before 1800 multi-owner firms were typically partnerships. There were exceptions, such as in shipping and mining, where joint stock enterprise forms had arisen early on (Harris, 2000). In these firms, equity could be traded and investors had limited liability, but in other ways they resembled partnerships because the 'market' for the equity was extremely restricted – either to individuals engaged in the venture or to residents of the same town. In the case of partnerships, liability was unlimited and equity could not be traded. Business law in this sense was quite primitive. Even in silent partnership contracts (legal only in parts of Europe) equity was personal and very difficult to trade. As late as 1700 the few corporations that existed were intimately involved with the business of the state.

During the eighteenth century change was limited by the legacy of the financial crises of 1720–21. In Britain, though the crisis was successfully resolved and a consolidated tradable public debt emerged, the Bubble Act of 1720 severely constrained the development of new forms of equity claims. The French and Dutch governments adopted an equally restrictive stance towards privileged corporations, but they failed to consolidate the public debt into publicly traded instruments. Nevertheless, reform started under the old regime, most famously with the French *Code de Commerce* in 1673 (Hilaire, 1986, ch. 2).

In law, as elsewhere, the French Revolution was a watershed. Reforms were extensive and culminated in a series of codes (most famously civil, penal, and commercial). French battlefield successes ensured that laws enacted in Paris were diffused widely across Europe. But the push for reform had local origins. Before 1789 many of France's provinces had charters recognizing their specific legal heritage and fiscal autonomy.[1] Most provinces had a special appeals court (*parlement*) which vetted new royal laws for conformity with local custom and precedents. In 1789 there remained considerable variation in property, credit, inheritance, and, to a lesser extent, in business laws. The Revolution could not accept such a mess. The unifying codes were enacted under Napoleon and have often been portrayed as giving too much power to the executive. The codes also reflect the desire to break with the past. Because the *Ancien Régime* was aristocratic, with male primogeniture and privileges based on birthright, residence, occupation, or even wealth, the civil code attempted to provide family and property law that was blind to these distinctions.

Legislators strove to limit the reach of powerful individuals, and their provisions protected those that were perceived as weak. The civil code's rules for the division of estates limited testators' capacity to favor any particular heir. There were also quite specific rules for the administration of the property of minors and incompetents, and for protecting women's dowries against their husbands' creditors and the rights of debtors over creditors.[2] The code mandated simple rules for the rental and sale of property. At the same time the reforms provided essential elements of a property rights regime that was designed to secure both real property and private debt claims through title and lien registries. In a move that was perhaps less modern, notaries retained their role as mediators of family affairs. Although rarely required, the intervention of notaries in civil matters was pervasive (Hoffman et al., 2000). The Revolution had tried to make them strictly civil servants, but that attempt failed and the Consulate quietly sanctioned a return to a regulated market for notarial positions. Notarized contracts retained a critical advantage over purely private transactions: anyone who contested the execution of a notarized contract bore the burden of proof (Woloch, 1994).

The codes were short and perforce incomplete. The nineteenth century thus saw a steady stream of legislative action and a torrent of appellate decisions, both of which served to complete the French codes (even though they were not

[1] The regional specificity of law was an attribute of nearly all but the smallest European sovereignties, including the United Kingdom, as the example of Scottish banking bears out.

[2] In these matters it largely reprised Roman law, but keeping with tradition was as much a choice as was the break that created equal division of estates.

revised). Although appellate decisions were not published in full, as they are in common law countries, they were abundantly referenced in legal manuals that were the key companions to the codes and laws of the nation.

Trade and industry (henceforth commerce) were seen as needing different rules than those of the stolid civil code; these needs brought forth the commercial code of 1807. If the civil code was debtor-friendly and procedurally slow, the commercial code was creditor-friendly and emphasized speedy resolution. Where the civil code limited side contracts, the commercial code left business people considerable leeway to devise rules to govern their interactions. The civil code's reliance on government officials (notaries and judges) gave way to special courts staffed by commercial people who relied heavily on arbitration by experts.

The codes diffused swiftly because Napoleon ruled over much of Europe. They were adopted in Belgium, Italy, the Netherlands, parts of Germany, Spain, and Switzerland. Between 1815 and 1860, most of these countries wrote their own codes, with sometimes substantial alterations. For instance, only France had separate commercial courts, and no other country gave such an extensive role to notaries in private contracts. Even where the codes themselves were not imposed, such as in Prussia, Austria, or Portugal, reforms occurred. In Prussia, the monarchy allied itself with modernists and produced its own set of codes.

Table 3.2 Business law reform in Europe

Country	Codes via French occupation or annexation	Date commercial code adopted	Date general incorporation enacted
Austria-Hungary	No	1811	1899
Belgium	Yes	1851	1873
Ireland	No	None	1857
Italy	Yes	1865	1883
France	n.a.	1807	1867
Germany	Parts	1861	1870
Greece	No	1827	n.a.
Netherlands	Yes	1838	1863
Prussia	No	1807	1870
Portugal	n.a.	1833	1888
Russia	No	n.a.	Not before 1917
Spain	Yes	1830	1869
Serbia	No	n.a.	n.a.
Sweden	No	n.a.	1895
Switzerland	Yes	n.a.	n.a.
United Kingdom	No	None	1857

Note: For the regions that were occupied during the Napoleonic era, the date the commercial code was adopted is the date an 'indigenous' code was enacted.
Source: Lescoeur, 1877; Harris, 2000; Hecksher, 1954; Jonker, 1996; Owen, 1991; Cameron, 1967.

Conflicts between agrarian East Prussia and the more commercial West may explain some of the variation from the French version. Later, the need to conciliate those parts of Germany not under Prussian rule also dampened the capacity of the German code to set up a simple set of unique institutions.

Scandinavian countries also carried out large-scale legislative reform – but without codes. Russia and the Ottoman Empire escaped the early-nineteenth-century spread of civil and commercial law reform associated with codes. It is important to note, however, that the new central European countries all adopted some form of code. Some wanted to forsake their Ottoman, Russian, or Austrian past. When they did so, it became increasingly unlikely that they would base their codes on the French originals. Indeed, the French codes were never revised in the nineteenth century, and it was better to start from the newer Spanish or Italian ones.

Recently, scholars have emphasized the executive's capacity on the Continent to intrude in judicial proceedings relative to common law countries. Codes indubitably massively increased centralization and uniformity, but critics of this change should bear in mind the lack of regional institutional diversity within England. Evidence that the codes' inefficiencies slowed the Continent's industrialization is thin, not to say nonexistent. It is also true that another hypothesis needs greater investigation, namely that the codes and the failure to separate the judiciary from the executive branch of government laid the ground work for institutional change in the twentieth century that was less favorable to market-based economic change.

The corporation is the emblem of public–private institutional collaborations during early industrialization, and success or failure at deploying corporations has been a frequent explanatory trope in economic history (Landes, 1969; Chandler, 1977; Freedeman, 1979). Before 1850, each corporation was created as a specific grant by the sovereign or the legislature to a group of individuals (Mousnier, 1974; Epstein, 2000). A corporation's purpose could include local administration (municipalities or provincial governments) or the provision of public services (royal administrators were often grouped in corporations as were penitent societies). It could also include collecting the crown's taxes, as in the famous corporation of general farms in France. These organizations provided valuable antecedents to business corporations, because they created impersonal associations with secular purposes. From our perspective corporations have three important attributes: legal personhood (they could sue and be sued in court), a lifespan independent of that of its initial membership, and delegated management; but they rarely if ever had limited liability. From the Middle Ages corporations and material gain had often been linked, but that gain had come as reward for providing some public service. The great discoveries changed all that, because in many cases Europe's pursuit of empire and treasure depended on corporations (Harris, 2000).

Two obstacles prevented the expansion of corporations after 1700. Most rulers could not afford to liberalize rules about the creation of corporations without a serious drain on their treasury – they collected handsome fees for authorizing new ones or taxing their monopoly profits. The other obstacle was the foul reputation of equity claims after the collapse of the financial bubbles of 1719–21 in Amsterdam, London, and Paris. Nevertheless, by the 1770s corporations were making a comeback. That movement had its roots in two completely different set of endeavors: public utilities (canals and other improvements) and financial enterprises (insurance companies and investment funds). In both cases the corporation was a desirable organization relative to the alternatives because it allowed the spreading of risk (relative to a sole proprietorship), the earning of a return by principals (relative to a trust), and protection from dissolution in case of the death of a principal (relative to a partnership). Purely industrial enterprises, however, did not gain easy access to the corporation's advantages.

The French writers of the commercial code followed common practice by requiring state permission before a corporation could be formed. Facing demands for a joint stock enterprise form they allowed the free creation of limited partnerships with shares (*commandites par actions*). Silent partners enjoyed limited liability and tradable equity but managing partners had to take on full liability. While meetings of the shareholders (silent and general) could wield considerable authority, between meetings the general partner had the run of the firm. This form of enterprise was popular in France, the Netherlands, and Germany. It must have reduced the demand for corporations, but the history of its take-up in Europe has yet to be written.

Between 1800 and 1850 the general rule was that some corporations were formed in every country but not very many, except in Belgium (where nearly as many were formed as in France). In the 1840s and 1850s the rules for creating corporations were liberalized. Britain acted first. In part because common law did not allow silent partnerships, it faced a greater demand for a new joint stock form of enterprise than the Continent. Britain allowed for corporations with full liability in 1825, then double liability in 1844, and finally without liability in 1855. The Continent followed in dispersed order (see Table 3.2). The next century would face the difficult problem of regulating and governing corporations.

The state and the infrastructure sector

Infrastructure is the most specific area of our exposition, and serves as a crucible where political, fiscal, and legal change come together. Political and fiscal structures dictated the extent of public or private provision of infrastructure, while legal institutions shaped whether and how local entities or private investors stepped in when the central state declined to do so. Thus this sector is fertile ground for the study of the ways in which institutions influenced economic development. We provide a brief overview of policies towards roads, waterways, and railroads across Europe. One key theme is that restraints on sovereign expropriation and the degree of political fragmentation help to explain the patterns of state intervention and infrastructure development. Countries were also spurred to reform their infrastructure policies in response to their neighbors' efforts.

Roads

In 1700, most European road networks were maintained by local authorities (e.g. villages, cities, manors, churches). Some local authorities conscripted labor (known as the *corvée* in France and statute labor in England), while others collected tolls. Local authorities faced little oversight and had few fiscal devices, thus roads were not maintained and new investment was rare.

Many European states took steps to improve their road network. One of the unique aspects of English road policies was the mixture of local initiative and parliamentary oversight. A local group would petition Parliament for permission to form a "turnpike trust," levy tolls, and improve a stretch of road. By 1840 there were over 30,000 km of turnpike roads in England and Wales. Most were well maintained, permitting the use of large wagons and fast coaches (see Bogart, 2005a).

The Southern Netherlands also had an extensive turnpike network. It operated similarly to the English system, by combining local initiative with oversight from the Austrian government. The tolls were abolished by French authorities during the early 1800s but they were reinstated in 1814 (Milward and Saul, 1973, p. 441). Over the next few decades, the network grew to comprise 3,000 km of roads in Flanders, Brabant, and Hainaut (Ville, 1990, p. 16).

Spain and France had a different approach. In the eighteenth century, the crown designated some highways as royal roads and left others as local. The royal government funded its roads and established an administration (in France the Ponts-et-Chaussées) to build and maintain them. Secondary roads were the responsibility of municipalities, often through *corvée* labor. By 1800 France had 43,000 km of roads, over half of which were royal routes (Price, 1983, p. 37).

Napoleon accomplished little in the way of roads. After 1814, however, the French government increased its funding of national routes, and the primary network increased from 25,700 km to 34,000 by 1840. There were also changes in the funding and organization of secondary roads. An 1836 law expanded

Table 3.3 Road policies, 1700–1840

Country	Summary of road policy	Road km per capita (000s) c. 1840	Road km per sq km c. 1840
England and Wales	Mixture of local and turnpike network	1.98 turnpike 7.54 local	0.13 turnpike 0.49 local
Southern Netherlands/Belgium	Mixture of local and turnpike network	1.22 turnpike local n.a.	0.17 turnpike local n.a.
France	Mixture of local and state financing	1.0 royal 0.88 local	0.05 royal 0.05 local
Spain	Mixture of local and state financing	0.6 royal local n.a.	0.015 royal local n.a.

Sources: England and Wales (31,500 km turnpike roads and 120,000 km parish roads), British Parliamentary Papers, *Report on Roads*, 1841, XXVII, p. 79; Southern Netherlands (3,000–5,000 km, mostly turnpike roads), Ville, 1990, p. 16; France (34,200 km royal roads and about 30,000 km secondary roads), Price, 1983; Spain (5000–7500 km royal roads), Ville 1990, p. 17. Population data from Mitchell (1975).

municipalities' fiscal authority and allowed departmental councils to raise taxes for regional roads. The law appears to have been quite successful, in that spending on local French roads increased by nearly 50 percent between 1837 and 1850 (Price, 1983, pp. 37–41).

How did state policies affect road infrastructure? Performance can be measured according to several dimensions, including network size, quality, and cost of travel. Here we focus on network size, because it stands in for investment. Table 3.3 shows the number of kilometers of road per capita and per square kilometer in four countries. England and the Southern Netherlands had significantly higher road kilometers per capita and per square kilometer than did France or Spain. The data raise the question of whether France and Spain would have had a larger road network with turnpikes rather than royal roads. It is not possible to address such a counterfactual here; however, the adoption of turnpikes in France or Spain would probably have had a smaller impact than elsewhere. English turnpike trusts made road investments in a context where property rights to levy tolls were relatively secure. It is not clear that the French or Spanish crown could ensure such security, and thus private investors may have been hesitant about making such investments.

Political fragmentation also stifled investments in road networks. It was difficult for a turnpike road to pass through multiple jurisdictions, because each governing authority would be tempted to set a higher toll than the others. A large absolutist state, like France or Spain, could conceivably solve this problem, but in many cases the crown did not have the political will or the resources to control all of its sub-units. It is no surprise that transcontinental or transnational highways were rare before 1800.

Waterways

Waterway improvements included widening or diverting the path of rivers and the building of canals. Some areas were fortunate in having many navigable rivers before 1700. The Dutch Republic led the way. The network of navigable waterways was financed and owned by municipalities such as Utrecht, Amsterdam, and Harlem, which received rights from provincial estates, like Holland. Provincial estates issued *octrooi*, which specified rights of way and what fees municipalities could charge. The canal network expanded rapidly in the seventeenth century along with commerce and urbanization. By 1700 the Dutch had the most extensive waterway network in Europe, including over 650 km of canals (de Vries, 1978).

England tried to emulate the Dutch Republic in the early seventeenth century, but was hampered by competition between king and parliament over who could issue rights to improve river navigation. Both king and parliament repudiated the rights issued by the other as power shifted in their favor. Only after the end of political strife in the late 1690s did companies and cities began making major investments in river navigation and later in canals. By 1840, England had over 7,000 km of navigable waterways, rivalling the Dutch as having the most extensive waterway network in Europe (Willan, 1964).

Canals were built in France during the seventeenth and eighteenth centuries, but the waterway network was not as dense. Many early canals were begun by private parties through privileges granted by the king or provincial assemblies. However, few projects were completed and the state began financing some canals in the second half of the eighteenth century. The French Revolution slowed improvement and by 1814 little progress had been made. In the 1820s, François Becquay proposed a network of waterways, to be built through concession contracts. Becquay clearly had the English model in mind when he devised his scheme, but investors were scarce (Geiger, 1994).

The French government wanted the waterways to be built and so it devised 'public–private partnerships' to implement Becquay's plan. The state borrowed from private investors, mostly Parisian financiers, and agreed to split the profits once the debt was repaid. Relations with investors were often confrontational, especially regarding the tolls and the return paid on the bonds. The French state eventually, in the 1870s, bought out the companies' interests and began financing many of its own canals (Geiger, 1994). By 1880, the French waterway network was largely government-owned (Ville, 1990, p. 38).

Belgian waterway policies were heavily influenced by the Dutch and the French. There was substantial investment in the 1820s when Belgium was under Dutch rule. Provincial authorities owned and financed half of all waterway projects, and another substantial portion was owned by private

Table 3.4 Waterway policies, 1700–1870

Country	Summary	Waterway km per capita (000s) c. 1850	Waterway km per sq km c. 1850
England and Wales	Private river and canal network	0.40	0.029
Dutch Republic/Netherlands	Municipal financing and ownership	0.53 (1830)	0.04 (1830)
France	Mixture of public and private participation	0.23	0.006
Belgium	Initially mixture of provincial and private ownership, later state-owned	0.36	0.05
Germany	State-owned network	0.07	0.005
Russia	Mostly state-owned network	0.01	0.0001

Sources: Ville, 1990, p. 31: England – 7,200 km; Dutch Republic – 1400 km in 1830); France – 4,170 km; Germany – around 2,500 km; Russia – 500 km. For Belgium the Waterways Association (1913) figure of 1,600 km was used.

concessions (Waterways Association, 1913, p. 47). In the 1860s, the state began purchasing private canals and assumed control over many provincial canals. Maintenance and construction were administered by the Ponts-et-Chaussées, which operated similarly to its French counterpart.

Germany and Russia made relatively few improvements to their waterways before 1870. Principalities initiated and financed most German improvements. For example, in Russia, Peter the Great had financed and built most canals, such as those linking Moscow with St. Petersburg (Fink, 1991). King Ludwig of Bavaria built the Ludwig canal to connect the Rhine and the Danube (Ville, 1990, p. 33). State ownership and financing increased after 1870 as imperial authorities undertook a number of waterway projects.

The comparison of waterway development across countries in Table 3.4 shows that networks were largest in England, the Dutch Republic, and Belgium, where private or municipal authorities had substantial control, and they were smaller in France, Germany, and Russia, where the state dominated. Would waterways have been more extensive if French, German, and Russian authorities had adopted the waterway policies of the English, Dutch, and Belgians? Reid Geiger (1994, p. 250) argues that profits on French canals were too low, because of low levels of urbanization and commercialization, to attract private investors. As a result, the state was left to finance the network. An alternative explanation for the slow development of French waterways was the state's inability to protect the property rights of companies, for instance when the French state reduced canal tolls without regard to the original concession contract (Geiger, 1994, p. 249).

Political fragmentation also stifled waterway development, but for different reasons. Rights of way were especially important for canals because they cut through farmland. In eighteenth-century France, canal promoters had difficulties negotiating with landowners in multiple jurisdictions. In theory, the crown could force landowners to sell their property, but local groups could appeal rights-of-way grants in court (Rosenthal, 1992). Political decentralization could also cause problems in approving projects that crossed boundaries. In the Dutch Republic, estates could not issue an *octrooi* for projects outside their province. Moreover, some projects were delayed because any city in the estates of Holland could veto an *octrooi*, including any which disproportionately benefited their rivals (de Vries 1978, pp. 31–32).

Railroad policies

Railroads were the most important infrastructure investment in many European countries, particularly in the east. Every European state quickly realized the importance of railroads for economic development, military security, and political unification. As before, the state could leave railroad planning, construction, and operation to private companies, but many states decided that subsidies or direct ownership was necessary (or more desirable) for railroad development.

Three types of policy patterns appear before 1870. One group of countries opted for private ownership combined with state subsidies, planning, or construction (France, Spain, Portugal, Austria-Hungary, Russia, and Italy). A second group started with private involvement but shifted to greater state involvement (Netherlands, Denmark, and Norway). The third group had a mixture of state and private participation from the beginning (Germany, Sweden, and Belgium).

Up to 1870 the United Kingdom and France had the highest degree of private ownership. Both, however, followed their policy model for waterways. In the United Kingdom, Parliament passed acts giving companies rights of way and the authority to levy fees. The companies made substantial investments without any subsidies from Parliament. There were complaints, however, about overbuilding, the lack of coordination between companies, and high fees. In France, the Ponts-et-Chaussées did the planning and engineering. The state gave companies leases on their lines for ninety-nine years and guaranteed dividends on securities issued for new construction. Out of this system emerged six large railroad companies that owned most of the French railroad network. The policy was fairly successful; Paris was connected by rail with all the regions of France.

Table 3.5 Railroad policies, 1825–1870

Country	Summary of railroad policies	Railroad km per capita (000s) c. 1870	Railroad km per sq km c. 1870
United Kingdom	Private ownership with no subsidies.	0.80	0.081
France	Private ownership with subsidies.	0.46	0.080
Spain	Private ownership with subsidies.	0.32	0.011
Portugal	Private ownership with subsidies.	0.16	0.008
Austria-Hungary	Private ownership with subsidies.	0.27	0.015
Russia	Mostly private ownership with state subsidies. Companies own 90% of track km.	0.17	0.002
Italy	Mostly private ownership with state subsidies. Companies own 90% of track km.	0.22	0.020
Netherlands	Shift from private to state ownership Companies own 43% of track km.	0.25	0.027
Denmark	Shift from private to state. After 1860 the companies own 36% of track km.	0.42	0.020
Norway	Shift from private to state ownership. Companies own 19% of track km.	0.20	0.001
Germany	Mixture of state and private from the start. Companies own 56% of track km.	0.47	0.035
Sweden	Mixture of state and private from the start. Companies own 61% of track.	0.69	0.006
Belgium	Mixture of state and private from the start. Companies owned 69% of track km.	0.55	0.095

Railroads (UK Board of Trade, 1913): United Kingdom: 25,400 km, Netherlands: 900 km, France: 16,700 km, Belgium: 2,800 km, Germany: 19,100 km, Spain: 5,400 km; Norway 367 km; Italy: 6,000 km; Portugal: 694 km; Austria-Hungary 9,500 km; Russia: 11,200 km; Denmark: 750 km; Sweden: 2,860 km Ownership figures are from Bogart (2009).

Spain, Portugal, Austria-Hungary, Russia, and Italy also guaranteed interest or dividends for private railroad companies. Guarantees became common in Europe after the 1860s and, indeed, throughout the world. They are often viewed as a “give-away” to foreign investors, but they might have provided the necessary profits to compensate for the risks of lower than expected demand or arbitrary changes in regulation.

States could also build their own railroad networks rather than subsidize private companies with guarantees. The Netherlands, Denmark, and Norway began with a greater degree of private ownership, but then turned to direct state-financing and ownership in the 1860s. In several cases, politicians argued that state ownership was preferable to interest guarantees for private companies (Veenendaal, 1995, p. 191).

States also increased their ownership of railroads because they believed that this would increase military effectiveness and solidify their political power (Millward, 2005). The state focused on building the trunk lines connecting capital cities with their provinces and strategic borders. In Belgium, state ownership was part of a broader strategy to maintain independence from the Netherlands (Veenendaal, 1995, p. 191). In Germany, state-owned railroads were intimately linked with the political ambitions of Prussian leaders like Bismarck. The strategy was successful in that state-owned railroads helped Germany to unify and to gain territory from France in the Franco-Prussian war.

The comparisons in Table 3.5 suggest that railroad miles per capita or railroad miles per square mile were similar in countries with more private ownership or and in countries with more state ownership. Therefore it does not appear that greater reliance on either private or state ownership influenced network development, at least by 1870. The impact on other aspects of performance, such as efficiency of operation, has yet to be determined.

As a final note, the years after 1870 witnessed new directions in the ownership and regulation of railroads. Railroads were nationalized in many European countries because they were a key asset in military operations and they offered new sources of government revenue (Bogart, 2008). Many states also increased their regulation of railroad fares and began to impose safety standards. These policies were a harbinger of the state's approach to European industry in the twentieth century.

Conclusion

We set out to evaluate the relative importance of problems of sovereign expropriation to problems of institutional stalemate associated with fragmented authority in Europe between 1700 and 1870. We found a dramatic increase in the involvement of central authorities in social and economic institutions. Provincial autonomy declined everywhere, as did that of local, sectoral, or class organizations. The center's power rose, but, contrary to North and Weingast (1989), in most places centralization did not lead to an increase in expropriation. More power seems to have allowed central governments to promote economic change and market integration, even if specific policies often relied upon local governments or the private sector. In this light, the link between restraints on the executive's power and economic performance, famously argued for England after the Glorious Revolution, seems to have few lessons for the Continent. There the institutional path traveled after 1700 largely consisted of expanding those powers. The reason for this alternative route lies in the oppressive political and economic fragmentation of Europe in 1700. Certainly until 1800, expanding the market (and thus reducing fragmentation) was widely seen as the principal policy for fostering economic growth. The means to achieve this – military operations as well as the implementation of tax reforms, legal changes, and infrastructure investments – all required a strong executive.

Beyond this broad trend, which can be observed in most parts of Europe, there was dramatic variation in the public and private institutions used to meet the challenges of international competition and industrialization. The changes in political structure, taxation, business law, and infrastructure realized by different polities depended on the historical antecedents of individual countries and on the extent to which large political events such as the French Revolution forced change. Evidence that economic logic produced the institutional variation we observe is scant – the public and private institutions in place by 1870 may well have been efficacious, but it would be foolhardy to presume that they were efficient.

The last lesson that emerges from this examination of public and private institutions relates directly to the title of this volume, that juxtaposes unification and European experience. Between 1700 and 1870 Europeans shared many experiences (war in particular). States, however, responded to the challenge of political and economic fragmentation in many different ways. Thus by 1870 institutions were more different across Europe than they had been in 1700. Suffrage where it existed in 1700 was generally quite restricted. By 1870 there were democracies with universal male suffrage, while other polities had no representation whatsoever. In 1700 public finance was an arcane art and taxation an opaque process nearly everywhere. By 1870 the western half of Europe had adopted many modern principles of taxation, while in the east reforms were very slow. In business law some countries had modernized their laws and opened access to incorporation, while others would wait until after World War I. Finally, the extent of infrastructure investment varied dramatically, because it depended on changes in political franchise, fiscal regime, and business law, and because it was facilitated by more general economic growth.

After 1870, public and private institutions would face new challenges; these would be met in a political and legal environment framed by the institutions devised in the nineteenth century. And even though the twentieth century finally ushered in institutions on a European scale, it has also seen the revival of regional politics. The problems of scale and unification faced by European rulers in the eighteenth century are still with us.