

China and Europe in the Hall of Mirrors

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Why did China decline between 1400 and 1980, only to reestablish a major presence in the global economy? Why did Europe, a region torn by strife and suffering and economic collapse after the fall of the Roman Empire, become the birthplace of modern economic growth? These two questions are at the forefront of research in economic history. Answering them does not merely satisfy an academic curiosity; it also matters for understanding how the world is changing today.

Around the globe the unprecedented growth of economies during the nineteenth and twentieth centuries depended on innovations based on a model of technological change first developed in Europe. Those technologies were both capital and energy intensive. In the early twenty-first century we have become far more concerned about the natural world than we once were. Technological innovation today aims not only to foster growth but also to curb environmental degradation and ecological disasters. Nevertheless, we remain beholden to the approach to technological change that took root 300 years ago in Europe. We continue to expect the technology of the Industrial Revolution to solve our problems.

At the same time, and in part because of the technological change that has occurred since 1700, we confront political challenges. Unlike the consensus over technology, there has been much less agreement in public discussions about the desired path of change in the spatial scale of polities. Nevertheless, in the past five decades the world has been moving away from European-sized polities (populations in the tens of millions of inhabitants and territories in the hundreds of thousands of square kilometers) and toward polities and economic spaces that are Chinese in scale (with population in the hundreds of millions of citizens and territories in the millions of square kilometers).

Whether it be in the sudden relevance of Brazil, India, China, and Russia to the world economy or in the attempts at forging free trade in Latin America, East Asia, Europe, and North America, we are recognizing the importance of geographic scale for economic growth. At the same time, separatist movements from East Timor to Slovenia demonstrate that political scale does not simply reflect economic or technological imperatives. Moreover, the conflicts in Iraq and Afghanistan remind us that there are radical differences between internal peaceful political competition and civil and international strife. Hence at the same time at which we debate economic globalization, we have been rediscovering the importance of international relations. But this is not some brave new world without any precedent in the past. The interactions between economic and political structures are long-standing and well-recognized phenomena in history.

This book argues that there is much to be learned about how our world is changing by taking a longer view that examines hundreds of years of history.

Nowhere are the links between the distant past and the present more relevant than in the comparative economic history of China and Europe. Because the Industrial Revolution (the initial period of accelerated technological change) took place in Europe and in particular in Britain, scholars and pundits have fallen victim to the temptation of induction. Most of their reasoning begins with a known difference and constructs a plausible explanation of how that difference might have made China poor and Europe rich. As we shall see, this approach is shallow and often chronologically untenable. To begin with, China was once rich and is rapidly becoming one of the more prosperous economies in the world. We need an explanation of Europe's economic successes that also accounts for China's earlier achievements and more recent rise.

Our forthcoming book, *Before and Beyond Divergence; the Politics of Economic Change in China and Europe* (HUP 2011), offers a new explanation for the distinctive patterns of economic change in China and Europe. We argue that conventional arguments are either unfounded or can be reduced to the consequences of differences in political scale: although both China and Europe experienced long periods of unification and fragmentation, empire was the norm in China, while division prevailed more often in Europe. For much of Europe's history, it was poor because it was at war. The rise of capital-intensive methods of production in Europe was the unintended consequence of persistent political strife. In contrast, China, which was often peaceful and unified, developed large-scale markets and took advantage of the division of labor. It was only after 1750 that the advantages of machine-based, capital-intensive methods of production became apparent. Before that time the recipes for growth of the Qing emperors were commonsense everywhere: promote the expansion of agriculture, keep taxes low, and do not interfere with internal commerce.

This book also proposes some methodological innovations. Because we are each specialists in one of these two regions of the world, we can make specific comparisons of similar processes. We pose, whenever possible, falsifiable propositions so that our explanations of particular phenomena can be challenged, qualified, or confirmed by future research.

We begin with a review of some conventional arguments offered for both China's failures and Europe's successes. Some of these we reject because of their inability to explain known facts. Others we accept but place within a larger framework of explanation that allies price theory and political economy. We contend that this approach provides a more satisfying discussion of the issues and formulates better answers to the big questions than do the conventional narratives. Our collaboration suggests that the alliance of economic theory with expertise in the history of both China and Europe makes for better economic history.

To make our case, we proceed first with some history in Chapter 1 to highlight both the striking differences in political scale in China and Europe and some disturbing facts for anyone who wants to take these as given. Indeed, we are well aware that China experienced long periods of fragmentation, and that the entity known as the Roman Empire endured for centuries, even if we exclude its Byzantine temporal extension. What, then, are the consequences of political scale?

To answer this question, we develop a sequence of frameworks. Chapter 2 considers the old Malthusian workhorse of household structure and demography as a possible source of significant institutional differences that could help us account for economic divergence. Kinship relations and population dynamics are implausible sources for divergence. Chapter 3 looks at the institutions enabling economic transactions in China and Europe between the mid-fourteenth and the mid-eighteenth centuries. We find that although the two regions were clearly not alike, their dissimilarities stem from political scale and seem unlikely to have caused economic divergence. Chapter 4 takes us to the realm of manufacturing or craft production, where we find that the urban location of much manufacturing in Europe and its more frequent rural location in China are significant, but not exactly in the ways conventionally argued and for reasons that others have not clearly explained. In Chapter 5 we consider how production and trade are financed and in ways similar to those we use in Chapters 2 and 3 discover institutional differences, but not ones we consider causally crucial to have set China and Europe on separate paths. In Chapter 6 we move to public finance, and here we find differences that cannot be accounted for by conventional contrasts of Chinese and European states in the early modern and modern eras. The differences we discover affect economic change in ways contrary to what previous scholarship has suggested, although the impact on overall likelihoods of economic growth is limited. The variation in public finance institutions, clearly tied to the agendas for rule in an empire versus those prevalent among a set of smaller competing polities, completes our analytical revolution of explanation and interpretation: Europe succeeded despite rather than because of political competition.

In Chapter 7 we return to the history introduced in Chapter 1 and offer our interpretation of why the equilibrium size of polities was so different for so long in China and Europe. Having taken political scale as given and having shown its importance in Chapters 2 through 6, we consider in Chapter 7 some reasons for the differences of spatial scale of polities in China and Europe. We show that the politics of economic change in China and in Europe were quite different and, as early as the end of the first millennium B.C., enter into self-reinforcing patterns.

Beyond Divergence to the Hall of Mirrors: Joint History and Economics

Studying the great divergence, is a perilous enterprise: we know the outcome and there are many tempting explanations because there are so many differences between China and

Europe that can be made to account for China's failure. Some of these, like demography or the environment, are both very old and susceptible to return to the forefront of social science at any moment. What they fail to explain are either Europe's long period of economic difficulties following the collapse of the Roman Empire or China's more recent but equally remarkable economic resurgence. Other reasons for divergence have superficial appeal but in fact can be traced back to the difference in political scale that we highlight.

We believe our work offers examples of the gains of trade to be gained from comparative history in which specialists of two world regions exchange information useful to the other. Comparative history has been pursued to great advantage within economics over the past decade; work by Daron Acemoglu, Jim Robinson and their various co-authors exemplify the kinds of findings that economists comparing different historical cases have discovered. Comparative history efforts have also figured within the broader development of world history; Victor Lieberman's two-volume study that compares early modern Southeast Asian history with European history and other Asian history is one of the sustained comparisons of the past that brings in cases from different world regions. But as far we know, ours is the first book in comparative history to be researched by an economist and historian together. It therefore allows a sustained dialogue between an economist and an historian to make certain discoveries that depend on knowledge and tools coming from each.

For this meeting we are offering Chapter Three of *Before and Beyond Divergence* which considers the formal and informal institutional mechanisms that promoted the growth of trade in China and Europe during the early modern era. This chapter, we hope offers a good example of the gains from joining historical and economic sensibilities as well as our different geographic expertise. It is important to note that our choice to sidestep the analysis to the heretofore all consuming question of China and Europe's divergence and instead return to a more prosaic terrain, was critical in allowing our dialogue to go forward. Indeed, the larger the question, the more difficult it is to overcome the prejudices imposed upon any scholar by his or her area of expertise, be it a place (China or Europe), or a discipline (history or economics). More particular issues, such as the connections between family structure and markets or those between political scale and credit markets offered us a more fruitful terrain for a common inquiry and it was from that basis that we could return to the questions of divergence.

In the case of chapter 3 the substantive issue is of equal importance to historical narratives of economic development as it to economic analyses of historical change. Indeed the work of Douglass North and his collaborators, as well as much of the work inspired by his example, give an important account of key aspects of early modern European economic history. They offer an explanation of English (and Dutch) success compared to Spanish, Portuguese and French maritime trade experiences in terms of institutions. More generally, this line of research supports the view that a particular set of institutions found in the Anglophone world promoted economic expansion in this historical era. Certainly the argument finds empirical support as we

consider the European world region in the early modern era. But what happens when we move outside Europe?

We might well have the hypothesis that we shouldn't find commercial expansion in other parts of the early modern world unless equivalents or close substitutes for English and Dutch institutions are also found. Indeed, economists argue this point for more recent times to explain the failures of developing economies to grow, even as cases of growth that are not initially enabled by the spread of formal state institutions to enforce contracts tend to be ignored. Let us stay in the early modern era and realize that world history offers us a case of commercial expansion in China on a spatial scale and in volumes at least equal to if not greater than those achieved by Europeans without evidence of English-style institutions dominating the economy. An explanation of this phenomenon in institutional terms can contribute both to the historian's understanding of the Chinese phenomena and the economist's ability to apply institutional analysis to historical cases.

On a second level the dialogue between historian and economist involved a back and forth between the evidence and abstraction. Our first reading of history led us to simple polar views of institutions: the Chinese were informal and Europeans formal. This view produced an abstraction that lay the blame for divergence on China's failure to develop courts and other mechanisms to secure formal property rights. The absence of such formal enforcement made it impossible for the anonymous markets we associated with modern economies to arise in China. Yet when we confronted this 'model' with the historical record we faced problems: most international trade in Europe was informal and a ever increasing body of evidence point the use of formal contract in the transfer of land in China. A new conversation led to a second abstraction. We considered the possibility that both types of arrangements were present in China and Europe but the preponderance of contracts remained informal in China. With this understanding in mind, the richer European historical record led us to think that such institutions might evolve overtime to reflect change in the economy and in political space.

The chapter that you are about to read follows directly from this dialogue.

BEFORE AND BEYOND **DIVERGENCE**

The Politics of Economic Change
in China and Europe



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Chapter 3:

Formal and Informal Mechanisms for Market Development

Introduction

The study of market institutions is a central endeavor of economics. Understanding how one party extends credit to another has sparked an abundant literature. One key lesson from this research is that not all exchanges can be supported by formal contracts. Some market transactions are too trivial to make a contract or a suit after nonperformance worthwhile. Others involve dimensions of performance that third parties cannot observe. In this case informal means and, in particular, reputation and repeated interaction serve to sustain markets and their implicit credit relationships. Because the size, frequency, and complexity of deals vary from one contract to another, both formal and informal contracting takes place, and some transactions are supported by informal means and others by formal ones. Many scholars have argued that in some places most, if not all, exchanges are informal, while in other societies contracts and courts play a central role. It is also commonly argued that differences in early history can have large and persistent effects on the types of transactions that ultimately prevail (e.g., Greif 2006; Hoff and Stiglitz 2004; Tabellini 2008). Scholars thus seek to classify societies as either group oriented (dependent on informal institutions) or individualist (dependent on formal institutions).

But the agreement to classify societies hides some serious tension about what institutions promote growth. Western Europe's success is often attributed to the capacity of commercial elites to wean themselves from reliance on networks, while Islamic and other Middle Eastern societies failed to do so (Greif 2006: 269–301; Kuran 2003, 2004). In contrast, students of Asia have often ascribed the success of these economies in more recent times to the wondrous flexibility and ubiquity of informal networks (Hamilton 2006). Formal institutions are claimed to be crucial in one set of cases and informal ones in a second set.

Most scholars would be willing to concede that individuals in China and Europe have been deeply involved in market transactions for centuries, but many students of comparative economics have seen Qing China as failing to develop the legal infrastructure to sustain formal contracting. In contrast, European states (in particular, the Dutch and the English) developed a law of property and contracts that facilitated exchanges. China did not do so because the state failed to supply these institutions and the extended households and lineages had little demand for them. These conclusions, however, face problems similar to those uncovered in Chapter 2 regarding the argument that differences in household structure were responsible for differences in economic performance. Scholars who extol the value of networks tend to focus on long-distance trade, while those who favor formal enforcement tend to examine real estate transactions or local credit. As we shall see, the selection of evidence is largely responsible for

the arguments that there were large structural differences in contract enforcement between Europe and China.

This chapter shows that the extent to which individuals in China and Europe used either formal or informal means of enforcing contracts depended on the nature of the transaction. The observed differences in the types of enforcement deployed in China and Europe were thus the product of differences in the economic environment, in particular, the scale of long-distance trade. The variation in institutions was largest when the two economies were most different in economic structure and spatial scale, but it shrank as the structures of the economies became more similar.

Our revision of the prevailing contrast between East and West is possible because of significant recent contributions by scholars of China and Europe. For Europe, Avner Greif's work on informal institutions has provided a new perspective on the sources of European growth (Greif 2006). It has spawned renewed interest in informal or private-order mechanisms as alternatives to state-based enforcement. Starting with Shiga Shuzo (2002) and Kishimoto Mio (2007) in Japan, scholars of China are discovering a rich formal contracting sphere. More recently, American scholars such as Madeleine Zelin (Zelin et al. 2004) and Melissa Macauley (1998) and Chinese scholars such as Liang Zhiping (1996) have shown that written contracts underlay the exchange of assets as diverse as land and equity in businesses and that magistrates intervened to resolve disputes. In both the European and Chinese cases recent work reacts in part to a very large historiography whose primary effort has been to document the existence of a formal bias in Europe and an informal bias in China. We can now see that this dichotomy is far too simple to describe the interplay of formal and informal mechanisms in the history of both China and Europe.

In order to reexamine Chinese and European contracting institutions, it is useful to take a moment to clarify what we mean by *formal* and *informal* enforcement mechanisms and to highlight the distinction between the two. Put simply, formal ways of enforcing agreements rely on government officials (e.g., judges) to decide disputed points and impose coercive or financial penalties when contracts are broken. Informal mechanisms, in contrast, require that private parties decide when contracts have been broken and what penalties to exact, whether that means shunning offending parties or other sanctions. It is common to suppose that choosing between these formal and informal mechanisms requires assessing the trade-off between the cost of enforcement and the losses associated with limiting the set of potential partners. Formal enforcement offers a broader set of potential partners, but it is costly, especially when transactions occur at a distance, because one has to be willing to go to court to settle disputes. Meanwhile, informal enforcement limits the set of potential partners to members of a group, but enforcement costs are potentially trivial as long as the duration of the transaction is limited.

This chapter proceeds in a manner slightly different from the one we followed in Chapter 2. We begin by examining the literature on long-distance trade and verifying that once we choose

to compare similar activities, there are fewer differences between China and Europe than one might have supposed. Using this conclusion, we propose a framework for analyzing contract enforcement across types of transactions. This framework allows us to recast a much broader set of evidence and to argue that individuals relied on formal and informal enforcement both in China and in Europe. We then show that part of the differences between China and Europe came from differences in the scale of long-distance trade. The last section of the chapter argues that the extent of reliance on formal and informal enforcement varies over time. Although a society might be locked into informal enforcement, this was certainly not the case for most European polities or for the Chinese empire.

Lessons from Long-Distance Trade

Consider long-distance trade, which for the preindustrial era we define as exchanges of goods where buyers lived 200 kilometers or more from sellers. Such commerce would have included trades between a foreign merchant and local consumers, those among merchants at trade fairs, or those in the early days of interregional exchanges. Initially, through the first millennium A.D. in northern Europe and many other parts of the world, these exchanges were infrequent and time consuming because they involved someone traveling several days, if not weeks, in each direction. Suppose, for instance, that a merchant arrived in a town after a long journey with a load of sugar. He faced two choices: he could sell his sugar for cash, or he could give credit to the buyer. As many have noted, a commercial system based on cash is going to be much smaller than one based on credit because it requires a coincidence of wants on all sides. In our case the sugar merchant must arrive when there is an accumulation of export goods of equivalent value that he is interested in purchasing. Extending credit would allow the merchant to unload his sugar and then seek out the return cargo that might offer him a better prospect for profit in nearby towns, but credit would be extended only if the lender (in some cases the traveling merchant and in others the local producer) could expect to be repaid. If the lender had to appear in court, distance made formal enforcement expensive and, if the distance was great enough, downright unprofitable. Even if one were able to hire a local agent, distance still raised the cost of relying on courts to the extent that few long-distance merchants were prepared to use them. Meanwhile, if the lender wanted to employ informal means to enforce repayment, the best he could do would be to refuse to have any further relationship with a recalcitrant borrower. As long as interactions were infrequent and small scale, such threats would have been as hollow as going to court. It is thus no surprise that the early commercial system was based on cash or barter. Hence we know that itinerant peddlers were typically paid immediately by their clients, merchants who met at European trade fairs early on could not carry balances from one fair to the next, and Europeans traveling to the coast of China brought silver to pay for their purchases. In general, when transactions were both distant and infrequent, buyers were not extended credit. This did not mean that credit was not desired; there simply were no mechanisms to support this kind of lending. As long as this state of affairs persisted, trade remained limited.

Societies, however, have devised a variety of methods to turn distant and infrequent transactions into either local or frequent ones. The most pervasive was to organize long-distance trade within networks. In that situation credit was extended within groups who shared ties of either family or geographic origin and who interacted frequently. This was true both in China and in Europe. These networks did not rely heavily on courts. Instead, their members respected their obligations because this was required for continued membership in their networks.

Dating back to the sixteenth century, Chinese merchant networks were large and widespread. The most famous consisted of merchants from Huizhou in Anhui Province who were important in the Jiangnan textile trade. These merchants bought cotton cloth produced by rural households at local markets. They then took the cloth to be dyed and finished in nearby market towns by businesses also run by other Huizhou merchants. Still other Huizhou merchants controlled the wharf from which many of the textiles were shipped to other parts of the empire. Huizhou merchants were engaged in a variety of trades and were located in many parts of the empire, but other merchant groups had more limited interregional routes. Merchants from the southeast coastal province of Fujian, for example, established businesses in the Jiangnan region either to export textiles and other products from Jiangnan back to Fujian or to import Fujian goods into Jiangnan. Regardless of the differences in spatial scale or range of goods traded, the same basic principles of trade among merchants sharing some combination of native-place and kinship ties applied (Fan 1998: 185–206).

The European research tends to highlight the diversity of informal institutions and to focus on a comparative analysis of their relative efficiency, but from our perspective, the striking fact is that informal institutions and merchant networks were at the core of most long-distance trade in preindustrial Europe. Whether one considers seventh-century Maghrebi traders in the eastern Mediterranean (Greif 1989) or the family trading firms established in the following centuries throughout Italy (De Roover 1963; Hunt 1994; Braudel 1966; Drelichman and Voth 2009; Muller 1997: pt. 3) and subsequently throughout Europe (Ehrenberg 1922; De Roover 1948; Neal and Quinn 2005; Trivelato 2009; Gelderblom 2010), one finds informal enforcement mechanisms. The same is true for the Protestant and Jewish commercial and banking houses of the early modern period (Lüthy 1959–1961; Trivelato 2009; Moulinas 1981). Finally, informal mechanisms were critical to the success of the family banks that linked cities in Europe in the eighteenth and nineteenth centuries, the most famous of which was the Rothschild banking family (Ferguson 1998).

The European literature has tended to make much of the importance of political boundaries. In the Middle Ages at least, European political fragmentation meant that long-distance trade was always, in effect, international trade. For many subjects the next polity was no more than a couple days' walk. Rulers and urban elites were suspected of discriminating against foreign merchants, but discerning where jurisdiction lay for a contract between two parties, both of whom were foreign to the place in which they made an agreement, was not always clear. For instance, jurisdiction for a debt contracted in Antwerp by a Parisian with a Lisbon merchant was

very uncertain. Here China holds a lesson for Europe: political boundaries may be less important than sheer distance. Most Chinese merchants carried out the entirety of their business within the confines of their empire, and they could nominally have relied on imperial administrators to settle disputes. But they, like their European and overseas Chinese counterparts, preferred to remain in the informal realm. The reason is not that the empire failed to provide an appropriate institutional structure; rather, courts are just not very efficient at enforcing contracts over long distances.

Clearly, long-distance trade had an abiding affinity for informal networks, and financial capital (that most modern of enterprises) continued this tradition into the modern age. What is important for us is that this affinity seems to have little to do with any particular culture because we observe it nearly everywhere and, in particular, both in China and in Europe. This observation alone raises serious questions about the usefulness of recent analyses that emphasize differences across societies in the level of formality. If Europeans were so formal, why did they rely so extensively on networks and reputation in trade?

A Model of Competition between Enforcement Mechanisms

The next step in our analysis is to develop a framework for examining how contract enforcement is sensitive to the type of transaction at stake. We build on the simple but powerful insight from long-distance trade: individuals choose their enforcement mechanisms depending on what is available. Unlike the proponents of one mechanism or another, our approach presumes that there are advantages to both formal and informal mechanisms. To develop the model, we must return to why individuals want to engage in credit or to embed credit in other transactions.

Trade allows an individual to sell a good or service that he has in relative abundance for something he desires more. This process leads to an increase in aggregate welfare. At the same time, each party is well aware that his counterpart will seek to discharge his obligations at the least possible cost. Many individuals will be tempted to deliver goods of low quality, slouch in the delivery of services, delay payment, or, better yet, refuse it completely. In each such instance the value of the transaction to the individual's counterpart falls: exchange is beset by transaction losses. If these losses are not brought under control, trade may cease entirely. Henceforth, and for simplicity, when a party misbehaves, we will say that he cheats; if not, that he performs. Although issues of performance are far more extensive than just in credit transactions, these will serve as our guiding example. There, default, in particular, default that occurs as a result of actions or inactions of the borrower, is what the lender wishes to minimize. Once the loan has been made, the lender's profits fall directly as the default rate increases.

To reduce losses from default, individuals invest in information and expertise to determine the quality of the items being exchanged. Time transactions also require further institutions because although the buyer/borrower can observe what he receives today, the lender/seller does not know exactly what he will get in return. For such contracts, institutions

that provide punishments for individuals who fail to perform are critical. Why should a lender bother to determine why a borrower fails to repay unless he has the means to punish the debtor who has engaged in fraud? Information and enforcement are thus complementary for time transactions because investment in information makes sense only if that information can be acted on. Effective action requires both institutions to detect miscreants and institutions to punish their misbehavior.

How do formal and informal institutions deter cheating? Informal institutions rely on reputation and other private sanctions. The parties to the exchange have incentives to perform because good past performance is a precondition to being able to engage in future transactions with members of a reputational coalition. The coalition contains all the individuals who restrict interaction (exchange) to members in good standing of the coalition. The coalition can involve an ethnic minority, as in Greif (1989), or a lineage group or individuals of a given place of origin, as was common in China (Faure 2006). As game theorists have shown, cheating is most easily deterred when information flows are good, when alternative occupations are unrewarding, and when individuals are patient.

These conditions are highly intuitive. If information is poor, then one party cannot decide whether the other has cheated or not, and this dampens the effectiveness of exclusion. If individuals who misbehave can find other ways to secure income, then the threat of exclusion has little bite. This condition suggests that coalitions that govern exchange not just of one but of a large number of commodities and include many people are more powerful than those that involve just one type of transaction across a small group. Enlarging the coalition, however, increases information costs, and nearly all examples that we have of groups that engage in reputational behavior are subsets of the general population. Thus coalitions have costs because trade must be restricted, and hence a member may not obtain the best possible price for an item because the individual with the greatest willingness to pay may not belong to the same coalition. These costs will be highest when groups are small and goods are highly heterogeneous. Finally, if individuals are very impatient, they will want to enjoy the ill-gotten gains from cheating rather than wait for the more virtuous return of future transactions that follow good performance. Impatience is not simply a characteristic of the individual but is also a characteristic of transactions. If one engages in a particular kind of transaction (say, real estate purchases) sufficiently infrequently, the cost of exclusion from a future transaction will be outweighed by the immediate gain from cheating.

In the case of formal enforcement, the incentive not to cheat comes from avoiding a punishment that would be meted out coercively by an agent of the state. Again, would-be cheaters are deterred by the fear of prison, fines, or the damages the courts will force them to pay if they misbehave. There are costs and benefits to formal enforcement as well. Perhaps the biggest of these involve the setting up of courts and a legal system. There are also costs associated with the adjudication of specific disputes. These costs will depend on a variety of factors, notably, where the case will be tried. If the amount lost is sufficiently small, a cheater

may not fear a suit simply because the costs of litigation outweigh whatever can be recovered. Moreover, pursuing redress in a court will depend on where a litigant has standing to sue someone who has cheated him. This could be where the contract was signed, where the cheater lives, or in some third location specified in the contract. The farther away the cheater and his assets are from the plaintiff, the more expensive the case is likely to be. The benefits of using a formal mechanism are that it does not depend on the identities of the parties to a transaction. This does not imply that transactions are anonymous: the parties to a given trade must still know a lot about each other, but their capacity to sanction a defaulter does not depend on the particulars of an ongoing relationship.

To build our simple model, we reduce the set of factors that affect the relative efficacy of formal and informal mechanisms to two: frequency and distance. As in Chapter 2, the interested reader can follow the mathematical analysis in Box 3.1. Given that the incentives to remain honest decline as transactions are geographically more spread out, while the incentive to cheat is immediate, the argument comes down to one simple rule: if the interval between transactions is too long, then these types of transactions cannot be sustained by an informal mechanism. Denote by T^* the largest time interval between transactions such that reputation sustains performance. When the expected interval between transactions rises beyond T^* , informal enforcement will fail. This stark result echoes much of the diaspora and social capital literature that argues that social networks play a critical role in supporting trade, and that they are also dependent on dense interactions. Similarly, the cost of punishing a defaulting borrower by taking him to court increases with distance even though what the lender can recover does not. Again, this leads to a simple argument: if the borrower lives too far from the lender, then formal contracts cannot sustain trade. Denote by D^* the largest distance between two parties such that it is worthwhile to sue in court if someone cheats. We further assume that D and T are not systematically related—that is, there are infrequent transactions among neighbors, such as real estate sales, as well as frequent transactions among neighbors (as in the market for occasional labor).

[Box 3.1 about here]

If we suppose for now that individuals decide to use only one type of mechanism to enforce one type of transaction (e.g., the market for livestock) and that they can select whatever mechanism they want for any particular type of transaction, which will they choose? Given the foregoing formulation of issues, there are four possible cases, as shown by the four regions in Table 3.1.

1. *Distant and rare transactions* (the upper-right-hand quadrant in Table 3.1): Because $D > D^*$ and $T > T^*$, neither mechanism will work, and trade in such conditions will be in cash.

2. *Distant but frequent transactions* (the lower-right-hand quadrant in Table 3.1):

Because $D > D^*$, formal enforcement is not feasible, but because $T < T^*$, informal enforcement is feasible.

3. *Local but rare transactions* (the upper-left-hand quadrant in Table 3.1): Because $T >$

T^* , informal enforcement is not feasible, but because $D < D^*$, formal enforcement is feasible.

4. *Local and frequent transactions* (the lower-left-hand quadrant in Table 3.1): Because

$D < D^*$ and $T < T^*$, both formal and informal enforcement are feasible; hence our theory does not decide the issue. For the moment we will leave this case aside.

[Table 3.1 about here]

This framework has some immediate implications for thinking about the historical record:

- Societies that are wealthy should have both formal and informal institutions. Indeed, prosperous societies will enforce contracts for infrequently traded assets, such as land, and they will engage in long-distance trade. Because both China and Europe have been economically prosperous at various points in their histories, we would expect both formal and informal institutions to flourish in both places.
- Comparable transactions should be enforced with similar mechanisms, both in China and in Europe. It is unlikely that one will find one society where the market for land rests on reputation while commercial finance relies on state enforcement and another where the reverse is true.
- If, as is commonly assumed, Chinese informal networks work better than European ones but European courts work better than Chinese ones, then some transactions enforced informally in China will be enforced formally in Europe, but that range will be small. The dominant effects will be that the geographic reach of courts in Europe will be larger than in China (so

more low-frequency transactions might occur with credit in Europe than in China). At the same time, European networks will fail to sustain some distant transactions because the frequency of such interaction will be too low (see Table 3.2).

- Finally, if one economy has more long-distance trade and consequently evolves more efficient informal mechanisms, then it may well appear at a particular time that this economy is more informal relative to another that has less long-distance trade and uses formal mechanisms more. The relative prevalence of different mechanisms in any given society should evolve along with changes in economic structure. Thus finding informal enforcement in China and formal enforcement in Europe is not sufficient to tell us how the regions evolved. To maintain that the two regions had important differences in the evolution of their economies, one would need to find that similar activities relied on different mechanisms in the two regions.

[Table 3.2 about here]

The foregoing conclusions depend on the critical assumption that rulers supply an adequate level of formal enforcement and do not intervene to make courts inefficient or to disrupt trade networks. Although cultural and social differences are unlikely to alter the preceding arguments, political constraints can be important. This consideration clearly requires great care at two levels. First, we must ascertain that China's informality was not simply the result of imperial neglect or oppression (as has been suggested by E.°L. Jones 1988: 135–136). Second, the foregoing argument probably cannot be exported to any and all settings or to all populations. The mere fact that there is a functional logic to develop formal mechanisms does not mean that rulers have the requisite capacity or proclivities to act accordingly. For example, as we saw in Chapter 1, during the eleventh and twelfth centuries European rulers more often than not failed to provide formal institutions (Bisson 2009).

Our interest here involves China and Europe after 1400. We must now ask, what were the political constraints on institutional choices? Political constraints take a variety of forms. At its simplest the Chinese empire's very size encouraged the formation of networks of long-distance traders whose volume of activity was, for centuries, far larger than what occurred in war-torn and fragmented Europe. Looking not at the fifteenth but at the eighteenth century, one might believe that the empire failed to put in place a court system capable of providing formal enforcement to

all comers. Conversely, European countries' tiny medieval size may have created segmented markets whose transactions were comparatively easy for courts to enforce. Moreover, war may well have made it difficult to sustain reputational networks on a large scale. Thus Europe may have been politically pushed into a more formal equilibrium than was efficient. The rest of this chapter is devoted to presenting evidence that both formal and informal mechanisms mattered in China and Europe; that their distribution in the economy can be explained by a common logic; and finally, that political factors were important in shaping the boundaries between formal and informal enforcement. Moreover, it is likely that the distribution of labor between formal and informal institutions that prevailed in one place at one time (say, medieval Europe) would not have been as practical in other places and at other times (say, Qing China or nineteenth-century Europe).

China and Europe: Similarities and Differences

Our earlier discussion of long-distance trade emphasized that both in Europe and China such commerce was carried out either in cash, in the case of distant and infrequent transactions (the upper-right-hand cell in Table 3.1), or with credit through informal networks, in the case of distant but frequent interactions (the lower-right-hand corner). Beyond a certain distance, which we put at 200 kilometers simply for illustrative purposes, courts could not effectively enforce contracts. It is not that courts did not perceive international trade as an attractive venue for the sale of legal services. On the contrary, they made every effort to attract business. By 1600 Low Country courts, for instance, promised to judge disputes among foreigners according to the law of the place where the contract had been signed (Gelderblom 2010: chaps. 7–8). But this provision benefited two merchants from Venice who happened to be in Amsterdam, not a merchant in Venice who wanted to recover from a Dutch counterparty. Indeed, in disputes between a local and a foreign merchant, one would expect courts to lean in favor of their own.

What then of interregional trade? In the case of very long-distance trade, the need to settle accounts voyage by voyage explains the fact that every ship that left Europe was laden with silver to settle its accounts on foreign shores. It would have been no different were the ships Chinese ones going to Europe with goods. In either case cash relationships were required irrespective of the location at which two parties of such different identities transacted their business. Nevertheless, the evidence of institutional change is clear. On the European side, both the Dutch and the English East India trade evolved from clubs of investors who funded a given ship's voyage to joint-stock companies that regularly sent out ships and established permanent bases in the East (Gelderblom and Jonker 2004; Harris 2005). During the eighteenth century, as transactions became more frequent between the same parties, credit arrangements became more common. As in the other forms of long-distance trade, interregional trade moved into the lower-right-hand box of our table. Various forms of credit were extended in Canton between Chinese and foreign merchants, as well as among foreign merchants. Brokers and agents in Canton and Macao rented space on ships, purchased goods, and arranged for their sale (van Dyke 2005: 150–

159). The China trade does tell us that we should develop flexible notions of distance and frequency that accommodate changing institutional forms that were far from fixed over time and space. Among new commercial ventures, those that were profitable tended to become more frequent simply because it paid for merchants to invest more in such voyages. As these markets expanded in scale, they allowed the establishment of informal mechanisms for time contracts where none had been feasible before.

We turn now to the third category of exchanges, identified in the upper-left-hand corner of Table 3.1. These are infrequent transactions for which formal enforcement is possible. Contracts that involve real estate are the prime example of this situation.

In Europe, as is well known, enforcement of local long-term contracts was a key element of local justice. This was true in the Roman law prevalent in the south, as well as in the common or customary law of the northern areas of the region. It was true in the countryside, where at first local lords and later royal officials provided judicial services. It was also true in urban areas, where political authorities often delegated the tasks of resolving disputes to merchant groups (guilds). Nevertheless, the enforcement of the decisions of guild officials relied on public officials (Epstein 2001; Ogilvie). Over time, practices across the many discrete local jurisdictions were harmonized through the processes of centralizing state formation, but the principle of a judicial system that was close at hand persisted. Moreover, the bulk of the activities of local courts involved the adjudication of economic disputes (Duby 1973, 1979). It is not possible to estimate the value to the private economy of formal contract enforcement, but it is clear that recourse to the courts was widespread from an early date in the medieval economy, in particular, when disputes concerned land, long-term credit, or labor arrangements. In fact, when European economic historians want to trace the rise of formal institutions, they often turn to contracts about land and describe the evolution of tenure from a feudal system, in which individual claims were known only locally and were largely enforced by a local lord's thugs, to one in which a national justice system enforced titles to real assets (North and Thomas 1971; B. Campbell 2006). In many places titles and rental contracts were secured by registration in public information systems (Hoffman et al. 2001; Gelderblom 2010: chap. 8). Moreover, parallel registration systems allowed lenders to learn what liens had been placed on a particular piece of property. Thus formality and publicity were central to European conceptions of the organization of the land market and its attendant credit market. They are also central to the standard narrative of Europe's success.

Although most students of Chinese history already know that land was sold and rented in much of early modern Europe, many students of European history may not realize that agricultural land in late imperial China was also typically held as private property. There were regions where the imperial government interfered with the market for land in order to better control its supply of troops for duty on the frontier (Lee and Campbell 1997), but such cases seem more an exception than the rule. In the past two decades historians have unearthed a vast documentation trove of private contracts. These contracts show that in general, title to land was a

matter of written record and that transfers of land involved written documents (G. Yang 1988). In fact, by far the most common forms of contracts that survive from imperial China concern land transactions. Although writing down transactions is a first step in creating some formality in the market, one might well do so even if the ultimate enforcement mechanism involves reputation. Indeed, a written agreement detailing the transaction and witnessed by multiple parties might reduce the likelihood of disputes compared with purely oral or private arrangements. But the documents often are also stamped by the local magistrate, suggesting that individuals were doing more than simply writing things down.

The crux of the matter involves the enforcement of these contracts. The earliest abundant local archival materials in China are from the eighteenth century, and they include legal cases heard by county magistrates. These show that one of the four most frequent categories of disputes brought before these magistrates concerned land transactions (the others involved debts, marriage disputes, and inheritance). These were typically between neighbors or kin. In some instances these disputes could continue for generations. Both the duration of some disputes and the more general indications of how long a given piece of land had been in the possession of a household and its ancestors suggest that public authorities were centrally involved in securing land assets. Further, they show that private property rights in land were well established in many parts of late imperial China.

The enforcement of local property rights by formal mechanisms and the reliance of long-distance trade on informal mechanisms are common to both China and Europe. It is important for us to stress this baseline of similarities because scholars have been all too eager to point out the differences. In transactions where one kind of mechanism is clearly better than the other (distant but frequent and close but infrequent), China and Europe look alike. What about transactions where one could rely on either formal or informal mechanisms to sustain trade?

High-Frequency Local Transactions

Transactions that can be sustained by either formal or informal types of enforcement are high-frequency local transactions that occupy the lower-left-hand cell of Table 3.1. These include transactions between local producers and resident merchants, between resident merchants and local consumers, and between local creditors and local borrowers when credit is short term. Our simple model is agnostic about what type of mechanisms will be chosen. The conventional approach is to phrase the question as if the two mechanisms were mutually exclusive. Scholars have provided both logical and cultural grounds for this either/or approach. On the logical side, some have argued that when a contract is broken, the injured party will try to get redress at the lowest possible cost. Hence, the logic goes, if in China reputation is cheaper than courts, then individuals will cease to use courts. The cultural argument has been taken by others as equally powerful in supporting a strict separation between formal and informal mechanisms: in some societies where reputation is important, someone who tries to have recourse to courts will be tarred, while in places where courts are broadly available, reputation is of little value. Certainly

these approaches are appealing because they provide the fuel for theories of divergence between a dynamic Europe creating anonymous formal markets and a static China mired in its informality. In fact, some have gone so far as to suggest that the introduction of Western institutions for economic transactions in the late nineteenth and early twentieth centuries was necessary for modern economic growth in China. Seen this way, the historical divergence between the Chinese and European economies was the result of a cultural-institutional lock-in (Ma 2006; Mu Li 2002).

But although these arguments are seductive, they do not stand up to the evidence. Simply put, rather than being mutually exclusive, reputation and formal enforcement were deployed in conjunction. For Europe, where the research on local markets has been abundant, the evidence is compelling. It shows that although the role of reputation was more important in some transactions than in others (say, commercial credit rather than mortgages), it was never irrelevant. Similarly, although individuals were more likely to engage in litigation over land than over a basket of fruit or some small debt, willingness to sue over minor matters was remarkably high (e.g., for Burgundy, see Brennan 1997; Hayhoe 1988). That is why we have records of millions of court cases and registered contracts. One could conceive of these issues in many ways; the simplest is detailed in Box 3.2. Each actual transaction is either an informal or a formal transaction depending on the relative value of interacting within a network or with strangers. Within a network enforcement is informal and free, but counterparties are few in number. Outside the network there are more counterparties; thus one can expect a better match, but enforcement is costly. Because conditions vary by type of transaction, by types of individuals, and by the circumstances when the transaction is contemplated, individuals interact regularly with both types of partners and rely on both types of enforcement. Although from the outset a transaction is either informal or formal, transactions that look identical can be enforced in different ways, depending on the identities of the buyer and the seller.

[Box 3.2 about here]

This kind of logic applied in the past. Since the medieval period a central feature of European society has been a judiciary that early on made its services available to nearly everyone (although slaves did not have the right to sue, manorial courts settled disputes involving serfs). Initially these very local courts were under the authority of local lords who either dispensed justice themselves or appointed whomever they pleased. In western Europe, at least, the combination of the decline of serfdom and the growth of the power of regional lords, cities, or even kings led to a professionalization of the judicial system and its progressive centralization. In economic matters centralization was limited in many places because rulers found it expedient to give people of commerce (merchants and manufacturers) a fair amount of autonomy in resolving their conflicts. But the royal justice system was always available to enforce commercial courts' verdicts.

Despite the deployment of a ubiquitous judicial infrastructure more than 500 years before the Industrial Revolution, merchants and private persons were all wary of ending up in court. It was universally agreed that procedures were long, expensive, and rarely rewarding. Instead, the general advice was to develop networks of relationships within which one could interact with trustworthy people. The mass of qualitative information that extols these strategies would not be understandable had informal mechanisms been unavailable to enforce time contracts. Thus Europeans relied on both formal and informal sanctions without hesitation.

For China, in contrast, we have so little evidence of formal mechanisms and such considerable material on informal ones that we have come to expect that a cultural preference for informal mechanisms can explain the persistence of informal mechanisms amid a general reluctance to use formal mechanisms such as courts. From our point of view, however, the case that has been made for China's informality is weak. It rests on two kinds of evidence, neither of which is conclusive. First, the fact that informal institutions have been important to the Chinese economy from long before the Qing dynasty to the present has led scholars to assume that formal institutions did not matter. Although it is useful to recognize this long-standing reliance on informal institutions, it is only necessary but not sufficient to support the standard argument. The second kind of evidence comes from the first half of the twentieth century. It should surprise no one that in an era of weak government, official capacity to provide formal enforcement of property rights declined. To be more specific, can we really trust the detailed survey evidence collected during this time, a period that includes the Japanese occupation, to reveal the fundamentals of Chinese village society? To answer "yes" assumes such institutional rigidities that one wonders how such a society could have survived for millennia. A less distorted picture emerges if we return to the eighteenth century. In this earlier period the state's involvement in local society was both extensive and valuable. We know, for example, that the imperial administration kept detailed records of grain harvests and prices. It also deployed a variety of institutions to limit the impact of ecological variation (granaries and water control). And, as we shall see later, it had the capacity to provide a legal infrastructure for commerce and industry.

Some careful research has cast doubt on the idea that local dealings were transacted only on an informal basis. Among English-language scholars, Kenneth Pomeranz (1997) has shown the durability of a pickle-making firm in northern China that did not rely on kinship ties or other informal mechanisms for financing and management, but instead sold shares and selected its management according to performance-based criteria. In a larger and more recent work Madeleine Zelin (2005) has reconstructed the operations of both large and small salt-producing firms in one part of Sichuan Province. She shows that firms were able to obtain initial finance for their operations by selling shares, that small and potentially bankrupt firms could gain much-needed capital by offering additional shares, and that large firms were capable of vertically integrating production and distribution operations—all of this with little or no reliance on the kinship and native-place ties that we conventionally assume to be the basis of Chinese entrepreneurial activities

Because their convictions about cultural differences have been so strong, scholars have easily adopted stark conclusions about the institutional bases of economic change, given the contrasting visibility of informal institutions in China and formal institutions in Europe. In their view, China and Europe embarked on two alternative path-dependent patterns of change, and consequently their economies reached different institutional equilibria, with the European becoming more efficient than the Chinese. In this way of thinking, the absence of a judicial system in late imperial China on the scale of Europe's would mean that the Chinese never ended up expecting to use courts for most economic matters. Conversely, the European penchant for setting up courts to hear commercial disputes, beginning in the late medieval period, would prepare for the eventual emergence of the contracts and courts at the center of much of the new institutional economics story of European economic growth. Such a contrast can even be seen to affirm the idea expressed long ago by Adam Smith in his observations on China. Smith argued that economies grow to the point that their institutions permit and that these points will be different (A. Smith [1776] 1976: 106). It further echoes the belief of Karl Marx that Asian modes of production were incapable of growth and could be brought into the present only by the forceful transformation imposed by European powers.

Although we take issue with the arguments about institutional lock-in or path dependence, there were, of course, differences between China and Europe in the salience of formal and informal institutions. Our analysis of the use of formal and informal institutions depending on the kinds of economic transactions in fact implies that there should be substantial differences between Europe and China, but our framework explains these differences without recourse to an assumption about institutional lock-in; relative costs are enough. This approach is more attractive than one that assumes lock-in because, as we discuss later, the evidence supports the thesis that institutional change occurred in both regions.

The next section examines the persistence and even expansion of informal institutions for economic transactions in China. We argue that "informality" in China did not result from any cultural preferences that prevented the emergence of formal institutions. Rather, informal institutions were heavily used in the empire because China's spatial scale made long-distance trade both feasible and profitable. Formal institutions, like courts, were not very useful for commerce over hundreds of miles. In contrast, Europeans came to formalize their contracts as a consequence of political authority exercised on very limited spatial scales. Such strategies worked only because most exchange occurred on a local scale. Europe's political fragmentation and violent conflicts surely reduced the volume of long-distance trade. Thus historical narratives concentrate on how merchants overcame these barriers. It is less straightforward, however, to conclude that the same factors had any implication for how contracts were enforced in such long-distance interactions. Indeed, in China, such trade developed within the empire and was unfettered by transit taxes, but as we have seen, relationships were overwhelmingly informal.

The combination of European evidence of informal mechanisms complementing formal ones and Chinese evidence showing alternatives to the conventional informal mechanisms

playing important roles shows us that the cases in the lower-left-hand corner of Table 3.1 are truly mixed, not simply between Chinese and European cases, but among cases in each region as well. Thus the contrast in the use of formal versus informal institutions is neither absolute nor fixed. Evidence of formal contracting in Chinese firms is quite limited at the moment. Nevertheless, existing evidence suggests that when Chinese entrepreneurs were presented with opportunities for which formal institutions were clearly desirable, they were able to develop such mechanisms, and they did so well before the examples of Western formal practices became known in China in the closing decades of the nineteenth century. The native development of enterprise forms warns us against the easy assumption that the Chinese learned about the superior virtues of formal institutions only from Europeans and after the latter had arrived on the scene. This assumption is twice flawed. First, the Chinese development of formal institutions before exposure to Western formal institutions means that they could adopt and adapt foreign models on the basis, in part, of their own previous practices. They could equally decide to forgo such adoption when they felt that their own mix of formal and informal institutions worked at least as well as, if not better than, the alternatives offered by Western institutions. Second, as we have already seen in this chapter, formal institutions are not unconditionally superior to informal ones, as the story line of the spread of European formal institutions typically implies. Indeed, informal institutions may well be clearly superior under certain circumstances. We now explain why this was the case for late imperial China.

Trade Institutions and the Long Shadow of Empire

This chapter has so far argued that formal and informal institutions were used both in China and in Europe. This stands in stark contrast to earlier scholarship that invokes cultural preferences as autonomous forces to explain the institutional choices made in China and in Europe (Landes 1998). One reason for exploring alternative hypotheses is that such explanations are difficult to evaluate: there are certainly cultural differences, as well as differences in commercial institutions, between China and Europe, but it is not clear how one can go from correlation (culture and institutions exist together in each place) to causation (specific cultural traits determine institutional forms) when we have only two cases to compare. Here we develop a thesis and offer a word of caution. The thesis is that divergent political processes over the long run led to different roles for formal and informal institutions in China and in Europe. The caution is that these contrasting historical processes did not lead to particular kinds of institutional lock-in. Rather, the relative roles of formal and informal institutions evolved over time and continue to do so to this day. It is this evolution over time that offers possibilities for confirming or disproving our argument.

Indeed, in our framework the relative importance of formal and informal institutions will depend on the distribution of transactions across our four quadrants. Political, technological, and environmental changes that lead to more long-distance trade will increase the role of informal institutions in the economy. Conversely, events that lead to an increased use of fixed capital

assets will push the economy back toward formal institutions. To be sure, the distribution of transactions according to their frequency and the distance between parties cannot be evaluated with even a semblance of accuracy for any premodern economy (let alone over a millennium, as we would desire). Nevertheless, we can be confident from evidence for the tenth through the fourteenth centuries that the fraction of transactions occurring over long distances was larger in China than in Europe. We can also begin to chart the changing role of different institutions.

At the end of the first millennium A.D., China's lead in long-distance trade was a direct consequence of its more settled politics. China was more often than not an empire, while Europe was persistently fragmented. During the decline of the Roman Empire, some of the most important trade routes for bulk commodities were simply abandoned, and they took centuries to reestablish. Europe's commercial revolution was to some extent a recovery of trade patterns dating back to the Roman era. In China, political unification preceded commercial expansion. Chinese rulers did not view trade over distances of hundreds of kilometers as international trade but rather as domestic trade within their empire. Emperors had little reason to interfere with such commercial activities. That internal peace was the norm for many centuries over much of the empire was a key element that facilitated the flow of trade across the empire. Moreover, the fiscal need to intervene in trade within the empire was generally reduced after the mid-fourteenth century when the state returned to an earlier reliance on agricultural taxes as the main source of revenues and made only episodic use of commercial taxes before the mid-nineteenth century. For these political reasons, there was little state interference in the development of trade. Indeed, the central government generally worked successfully to keep lower levels of government from imposing their own levies or obstructing commodity flows in other ways (Wong 1999: 222–225).

As Chinese and Japanese scholars have documented, high volumes of trade in basic commodities (cotton, rice, sugar) covered vast distances in China by 1500 and especially in the eighteenth century (Xu and Wu 2000). Some of the organizational structures, including distinct wholesale, retail, and transport merchant functions, began to emerge in the Song dynasty (Shiba 1970). During the Ming dynasty major networks of merchants, each linked by multiple strands of native place and kinship, expanded the scale and scope of trade. The most famous were the Shanxi merchants and the Huizhou merchants. The former made their initial fortunes by taking grain to the northwest frontier to feed troops in return for licenses to sell government-regulated salt, while the latter also made fortunes controlling salt distribution in other parts of the interior of the empire. Both groups also engaged in other trade, such as timber and craft goods (Fuji 1953–1954; Fu 1956; Terada 1972). Additional groups of merchants developed trade with Southeast Asia from ports in southeastern and southern China. Some of their operations began in the eleventh and twelfth centuries, and their expansion continued up to the early seventeenth century.

China's early forays into long-distance trade, we argue, privileged the elaboration of a commercial regime based on networks and informal mechanisms. Even the best local courts in the world would have proved unable to adjudicate disputes between merchants who resided

hundreds of kilometers apart. Hence networks developed early and intensely. Furthermore, these networks succeeded precisely because they became efficient at acquiring information about the activities of their members and about market conditions. In some cases, as noted earlier, these merchants went directly into local markets to purchase commodities. In others there was an interface between merchants transporting goods over long distances and local producers or consumers; these brokers (*yahang*) were the agents who either bought the merchants' goods or purchased goods from local producers for subsequent sale to long-distance traders. Merchant manuals counseled traders to be very careful about choosing a broker and suggested means to gauge the trustworthiness of a broker, as well as the demeanor desired to demonstrate one's own credibility (Lufrano 1997). For their part, officials worried about the asymmetry of knowledge regarding local market conditions that might allow brokers to take advantage of long-distance traders. Official involvement could go so far as to set rules to establish permissible behavior (Ch'iu 2008). These government efforts to influence the norms governing transactions complemented more informal strategies to enhance trust in transactions that lacked the advantages of large merchant networks. County magistrates also adjudicated disputes between brokers and traveling merchants as one of several kinds of commercial disputes that were heard during the eighteenth and nineteenth centuries (Fan 2007). Chinese merchants had recourse to formal dispute resolution, but the costs in time and money were considerable. As a result, informal methods prevailed as complements to formal ones. Given the size of the empire and the many other duties that local magistrates had, monitoring local markets was given over to local elites and merchants for the most part (Mann 1987). In sum, merchant networks using informal mechanisms to make long-distance trade possible proved to be the most salient and significant institutional context for commercial expansion. Trade beyond these networks under the sometimes-watchful and anxious eye of officials also took place, but formal mechanisms were not the major instruments for commercial exchange.

Much the same logic explains why European long-distance trade depended largely on informal networks. The absence of empire in Europe did not prevent long-distance trade. In fact, long-distance trade plays an important role in the narrative of the rebirth of the European economy after the Great Invasions, and in the narrative of all subsequent growth spurts culminating in the Industrial Revolution. The rebirth of the European economy was made possible by the demands of local elites for distant goods, including spices, fine cloth, and other manufactured products. Much of this commerce went through informal networks, such as those in the Mediterranean. At first these networks were centered in the East, but by the eleventh century they had come under the control of Italian cities like Genoa or Venice. The further growth of northern Italian cities was premised in part on the sale of manufactured goods all over the region. In the Spanish Netherlands, the growth of Antwerp centered around a Europe-wide textile market, while the rise of Amsterdam was based on its capacity to control trade in the Baltic, then in the Mediterranean, and subsequently beyond Europe. With the shifts in centers of trade and the growth of trade relations, more formal institutions came to be employed for economic transactions—in particular, in credit with the formation of exchange banks

(Wisselbank, the Bank of England)—but informal links continued to be the mainstay of international trade and finance (Neal and Quinn 2003). This remained true all the way to 1912, when J.°P. Morgan made his celebrated remark that the most important trait of a capitalist was his reputation (Carosso 1967). As the Bernard Madoff scandal reminds us, informal relationships remain very important in today’s financial world.

Despite all that informal networks could accomplish, however, it was still true that political fragmentation in Europe interfered with long-distance trade throughout the Middle Ages. Scholars of Byzantium, Genoa, or Venice have focused on the achievements of their cities, but what they have missed is that one key element in the competition between commercial centers was the use of violence, which seriously distorted trade. Had these cities been located in a real empire, they would have been forced to compete on purely economic grounds. Even after Europe’s military capacities had propelled it to become the world leader in commercial exchanges, trade was hindered by politics. Even leaving out dramatic changes to European trade networks associated with war (e.g., Genoa’s decline in the eastern Mediterranean after its loss in the war of Chioggia or Antwerp’s decline during the Dutch revolt), any graph of the volume of trade shows dramatic declines during periods of war (Daudin 2005: 207–216; de Vries and Van der Woude 1997: chap. 9).

Beyond war, trade also suffered from the policies of European states. All governments (absolutist and representative) tried to limit the extent of long-distance trade. The British Navigation Acts were not very different from Spanish commercial policies. The motives behind trade policies were varied, including the protection of local industries and stemming bullion outflows when their commodity trade ran up deficits. The reason for state interference in trade was, of course, the need for revenue for war. Taxing long-distance trade was easy: in each territory most long-distance trade was international trade and went through a few ports. But European rulers did not stop there. Instead, they also taxed trade between their different domains. Trade between European polities, many of which correspond to regions within national states today, was thus limited by tariffs and prohibitions in the Middle Ages (Dincecco 2008). Under the Spanish Crown, for instance, there were significant trade barriers between Catalonia and Castile, areas much smaller than the typical Chinese province (Elliot 1986; Lynch 1989). Despite a long-run process of political unification within European countries, many barriers persisted for half a millennium or more within what are now national entities, such as France or Spain. Trade barriers between national entities were first reduced in the middle of the nineteenth century and then were raised again starting in the 1880s. The process of creating a common market within Europe had to wait until the 1960s. In brief, Europe has certainly had developed long-distance commerce, but its political fragmentation by Chinese standards of political integration meant that the expansion of long-distance trade suffered more challenges than it did in China.

Even with the development of ever more formal institutions for economic transactions after the Industrial Revolution, much long-distance European trade and international finance through the nineteenth century depended heavily on informal networks. These networks

depended on ties of kinship, geographic origin, or religious affiliation. Hence China and Europe are less different from one another than some of the contrasts scholars have drawn would suggest. Transactions in both areas of the world respond to the same logic. In its starkest form, the model we propose suggests that cultural variation has little to do with differences in the demand for formal and informal institutions. Rather, the different kinds of economic opportunities available at either end of Eurasia are what count in explaining the formal and informal mechanisms for contract enforcement that became typical within each.

When late nineteenth-century conditions changed dramatically with the introduction of Western technologies and enterprise forms, the Chinese government began to create a new legal structure. Many of the ideas and institutions developed in late Qing China were selected from Western practices, much as when the Meiji-era Japanese elaborated economic institutions from Western models. The European origins of these formal institutions have conventionally been assigned a crucial role in bringing economic change to China. Certainly it is historically true that many of the concrete practices were first articulated in European contexts, but there is no logical need for these practices to have originated outside China. The very effectiveness of the reforms depended on the Chinese contexts into which they were placed. As we saw earlier, China had indigenous formal contracts of ship shares for overseas trade, as well as for joint-stock firms (Pomeranz 1997; Zelin 2004). Had there been many uses for other formal contracts, one would expect Chinese entrepreneurs to have developed more such forms. At the same time, importing well-developed formal institutional models in the late nineteenth century saved the Chinese much time and experimentation. Transposing these new models was rapid in part because of the earlier native experiences.

Still, foreign institutional models, including those promoted by the Chinese government, did not always fit the Chinese context very well. For example, many Chinese firms declined opportunities to incorporate when new company laws were first promulgated in 1905 (Kirby 1995). The costs of incorporation may well have weighed more heavily than the anticipated benefits, either because the government could not actually enforce the new property rights or because company owners feared that incorporation would expose a firm's financial situation and thus increase its tax burden. As the Tianjin Chamber of Commerce opined, the government promulgated a commercial code at odds with local commercial practices and largely imitated foreign ones instead (Fan 2007: 287). Although Western formal institutions could not be imported wholesale, Chinese institutions proved open and flexible enough to accommodate some new practices from the West. A better way to understand institutional change is to view it as Chinese expansion of practices that included selected Western practices, rather than a simple substitution of Western for Chinese ones. These changes suggest that we cannot take China's onset of industrialization after that in western Europe, and at rates slower than those in Japan, as a sign of institutional lock-in. There were more obvious factors that limited economic growth in the first half of the twentieth century, including a very difficult political situation. Political turmoil overshadowed any institutional change. The political disintegration started with the mid-

nineteenth-century rebellions and then accelerated with international conflicts, resulting in the collapse of centralized political order in the 1900s. On balance, therefore, it seems reasonable to conclude that foreign models of formal institutions accelerated changes that would have occurred in their absence and that unstable domestic conditions slowed Chinese institutional change.

The existence of both formal and informal institutions for economic transactions in late imperial China implies that institutional imports were not necessary for growth to take off. The use of formal institutions would have increased when economic change made formal institutions superior to informal ones. The growing availability of foreign models did, of course, change the choice set available to Chinese policy makers and entrepreneurs. Not surprisingly, some Western practices were adopted. Equally sensibly, though less commonly noted by scholars, new practices were developed that drew on older domestic ones. As a result of both dynamics, a changing mix of formal and informal institutions emerged wherein formal practices grew in relative importance. Expanding our observations to look at the variable use of formal and informal institutions in early twentieth-century China and Europe, we argue that decisions about the relative attractiveness of formal versus informal institutions for similar kinds of transactions no doubt were influenced by earlier choices to use one set of practices rather than another. Thus the optimal mix of formal and informal institutions differed according to the path-dependent contexts of both China and Europe in the early twentieth century.

Conclusion

The rise of modern economic growth in western Europe has led many economic historians to posit the existence of a set of institutions that are optimal for growth, namely, those of eighteenth-century England. Because China's contracting institutions are quite foreign to the English common-law tradition, one might be tempted to conclude that absent major legal reforms, China's economy could not develop successfully. The past three decades of explosive growth question such conclusions, especially because a significant part of the growth in industrial output in the 1980s and early 1990s was achieved without formal courts and contracts.

An alternative argument would have it that although English institutions may work in Britain, they cannot be expected to have similar benefits in China or in other quite different cultural or geographic environments. In particular, different scholars have documented the importance of the conditions Europeans encountered for the kinds of institutions they set up in their colonies (Acemoglu et al. 2001; Engerman and Sokoloff 1997). Among their most startling findings was that within an ecological zone there was little variation among the different colonizing nations in the institutions they chose. This approach, like ours, takes geography quite seriously, but for our comparison it does not lead to strong conclusions. Indeed, the environmental variation across Europe is extremely large and is even greater in China, but the striking institutional differences are more between China and Europe than within each region.

In trying to account for differences in contract enforcement between China and Europe, we have relied on the observation that in some relationships formal enforcement is not very useful, just as in others it is the only way to make sure that parties adhere to contracts. From there we developed a framework of enforcement choice that showed that successful economies deploy a mix of formal and informal enforcement rather than rely solely on one or the other mechanism. The historical record is fully consistent with this view. Although merchant networks (organized around kinship or place-of-origin groups) seem to have been very extensive in China, they did not replace formal contracts. Further, in considering the relative importance of formal or informal contract enforcement, we found that the structure of the economy is likely to be key. Hence it is not surprising that Europe, a region where politics interfered with long-distance trade, saw more transactions that were local and formal than did China. Nor is it surprising that the trade resurgence of the late medieval period in Europe brought about a flowering of informal arrangements among merchants.

In many ways the argument we offer echoes the discussion of the theory of the firm we presented in Chapter 2. That theory says that whether an activity is structured by a firm's hierarchy or by a market mostly depends on the characteristics of that activity. In some cases it is best for these activities to be coordinated with a set of other activities in a firm; in other cases the market is more efficient. The argument in this chapter emphasizes that the division of labor between formal and informal enforcement depends on the nature of the transactions. But time and again the historical record forces us to concede that politics matter more than simple economics. That the Middle Kingdom had a large volume of domestic long-distance trade and a small volume of international trade (while Europe had the reverse) is a direct consequence of the imperial scale of the Chinese state. European governments competed to provide formal enforcement of contracts because they were after the revenues produced by contract registration and dispute resolution. Those revenues, in turn, were spent on military investments.

In this chapter we examined only the demand for formal contract enforcement (how individuals would want to structure their transactions); in effect we assumed that the supply of such enforcement mechanisms would respond to changes in demand both in China and in Europe. In many places in the world, the supply of courts to adjudicate cases is often wanting. Even in our two regions, rulers sometimes failed to provide needed formal institutions. For example, tenth- and eleventh-century Chinese policy makers declared government monopolies on many commodities, and foreign trade restrictions variously imposed, especially during the Ming dynasty, curtailed growth possibilities" (Smith 1981; Wong 1994; J. Li 1990). Informal institutions (smuggling) arose as a result. In Europe, political intervention that wrecked the commercial networks of Antwerp in the late sixteenth century and the failure of the French state to reform its judiciary before the Revolution had even more serious political and economic consequences (Gelderblom 2000; Rosenthal 1992). But in Europe and China for most commercial transactions, governments were willing to provide enforcement services or to delegate those tasks to local authorities. In both regions formal enforcement was imperfect.

There has never been a time when businesspeople have not complained of the cost, uncertainties, and delay associated with courts, but that has not stopped them from litigating. Imperfect formal enforcement does not make it valueless, however. In fact, both in China and in Europe, infrequent transactions like land sales were formalized.

Beyond these regions, however, there are numerous examples of states failing to provide the rule of law and instead structuring economic interactions to favor specific elites. The histories of Latin America and colonial Africa are often told in this light (Nunn 2008; Haber et al. 2004). In such places informal arrangements are the only ways for the disenfranchised to structure interactions. Those with political clout may have access to property rights and the courts, but such benefits are contingent on informal and unstable relationships. Developmental lessons have been drawn from such tragic examples as Zaire under Mobutu or Indonesia under Suharto (North et al. 2009). The histories of China and Europe alert us that these failures are political rather than economic or cultural. Further, differences in the extent of formal enforcement across societies may not be symptoms of pathology but rather the consequences of differences in economic structure.

Much like North, Wallis, and Weingast, we see politics as a critical variable in explaining differences in performance. Since Chapter 1, where we explored the spatial scale of Europe and Chinese politics, the theme of the impact of political structures on economic performance has loomed large in this volume. The burden of Chapters 2 and 3 has been to demonstrate that China and Europe were probably more alike economically than their institutions or cultures would suggest. Chapter 4 turns to the central issue of this book: the role of politics in explaining the great divergence in economic performance that could be observed by 1800.

Box 3.1. Formal and informal contract enforcement

Consider a loan of value L . When the loan comes due, if the borrower defaults, he earns π and the lender earns 0. If the borrower is honest and repays, he earns a return of $h = \pi - (1 + r)L$, and the lender gets $(1 + r)L$. In the absence of any enforcement mechanism the borrower never repays ($h < \pi$), and consequently the lender makes no loans.

Formal enforcement of a loan of value L .: Here the borrower who defaults can be taken to court. If he is sued, he will lose, have to repay the debt with interest, and bear the court costs. Hence the borrower always repays if he thinks that he will be sued after default. Will the lender sue? If he does not sue, he gets nothing back. If he prosecutes, he wins $(1 + r)L$ (gets his money back and some interest forgone). He also bears the costs of litigation (payments to the courts and to legal experts and time spent, including travel to the residence of the borrower/buyer). Those costs increase with the distance between his residence and that of the borrower, and we will denote them by $C(D)$. He will sue if $(1 + r)L > C(D)$. Given a loan of value L , the lender always sues borrowers who live less than D^* away from him. It is easy to show that if courts become more efficient at enforcing judgments then the maximum distance at which judgments get enforced (D^*) increases.

Informal enforcement of a loan of value L .: When the loan comes due and the borrower defaults, he is always found out and is, consequently, excluded by his network from a range of transactions forever, so his best future alternative will earn him b per period, and $b < h$. If he repays, he is not excluded. Technically we are looking at a stationary repeated equilibrium (where no one ever cheats). The conditions under which network members exclude cheaters have been explored at length (see Greif 2006). For now, assume that the buyer interacts with the network once a period (the period can be very short). Let d be the discount rate; the discounted present value of receiving h forever is H . Similarly, the discounted present value of receiving b forever is B . The borrower contemplates the difference between $h + dH$ (being honest today and forever) and $\pi + dB$ (cheating and being branded a bad partner ever after). Then the net returns on being honest if interaction occurs once per period are $R(1) = h - \pi + d(H - B)$. If the interval between interactions is T periods, $R(T) = h - \pi + d^{T+1}(H - B)$. $R(T)$ is declining in T , and there is a unique T^* such that $R(T^* + 1) < 0 < R(T^*)$. It is easy to show that if the network is more valuable, then T^* increases.

Box 3.2. Contract enforcement when both formal and informal enforcement are feasible

To resolve the issue of what occurs for frequent and local transactions, we must introduce some heterogeneity in the borrowers' characteristics. Moreover, unlike prior models, we want both types of arrangements to persist over time. In our initial model there was no default in equilibrium (it was a dominant strategy for the borrower to repay), and hence both mechanisms were equivalent (the seller never goes to court and never has to actually exclude anyone from trade). The argument presented here is illustrative of the kind of conditions under which both types of arrangements can persist in a locality.

Lenders are concerned about two issues: the interest rate and the likelihood of nonperformance. Each lender is a member of a reputational coalition or network and can make loans either to his fellows or to someone outside the coalition. If he transacts in the general population, he can expect the borrower to pay r_F . But in this case the seller faces some adverse selection (there are some borrowers who do not repay), and he has to go to court. He then earns $(1 + r_F)L - pc$, where p is the probability of nonpayment and c is the cost of formally enforcing the contract. If he makes a loan to a member of his network, information is good there, and contracts are always performed because the value of being honest is larger than the value of default for the borrower. However, using the coalition has a cost: the coalition is small (a subset of the general population), and thus the best interest rate offered within the coalition is $r_I \leq r_F$. It follows that all transactions where $(1 + r_F) - pc \leq (1 + r_I)$ occur inside the coalition, while the others use formal enforcement. It also follows that larger transactions are more likely to be formal. Beyond loans, this analysis suggests that goods where the range of willingness to pay is small are likely to be transacted informally, while those in which individual tastes really matter are transacted among strangers and are enforced by courts.

Table 3.1
Contractual arrangements in trade

Interval between interactions	Distance between parties	
	$D < D^*$	$D > D^*$
$T > T^*$	Formal feasible Informal not feasible Prediction: formal	Formal not feasible Informal not feasible Prediction: cash-only transactions
$T < T^*$	Formal feasible Informal feasible Prediction: ?	Formal not feasible Informal feasible Prediction: informal

Table 3.2
Contractual arrangements in trade with differences between societies

Interval between interactions	Distance between parties		
	$D < D_c$	$D_c < D < D_e$	$D > D_e$
$T > T_c$	Europe: formal China: formal	Europe: formal China: cash	Europe: cash China: cash
$T_e > T > T_c$	Europe: formal China: either	Europe: formal China: informal	Europe: cash Europe: informal
$T < T_e$	Europe: either China: either	Europe: formal China: either	Europe: informal China: informal

Note: In the darkest gray areas (I) Chinese and European transactions should be enforced in similar ways. In the lighter gray areas there are differences and one society has an advantage, either because both types of enforcement are available rather than only one (I), or because one type of enforcement is available rather than none (). Only in the unshaded center box can one find the traditional opposition between informal China and formal Europe.