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History, Institutions, and Underdevelopment

1.1

As in much of institutional economics, this book interprets institutions in the very general sense of rules of structured social interaction. In the field of development economics, earlier preoccupations with the forces of capital accumulation or technological progress have been widely replaced by a belief that the institutional framework of an economy is crucial for an understanding of the process of development or lack of it. Institutional explanations, including an analysis of state-society relations, are becoming increasingly common as economists try to understand why South Korea and the Philippines had similar per-capita incomes and human-capital endowments in 1960 but developed so divergently over the next three decades or why the economic transition to capitalism in the 1990s was so different in Poland compared to Russia. Economists are, of course, not fully comfortable with this unless they can somehow quantify the effects of institutional frameworks. In the literature on rural development at the micro level, there have been many attempts to quantify the impact of institutions such as land tenure on productivity or the effect of credit and risk-sharing institutions on consumption and production efficiency. For an overview of some of the major theoretical issues in that literature and empirical references, see Bardhan and Udry (1999). This overview, however, does not consider the macro level, where there has been a flurry of empirical activity in the recent literature, largely on the basis of cross-country regressions, to determine the relative importance of geographical as opposed to institutional factors in explaining differential economic performance in different parts of the world.

I have always been rather skeptical of the value of such cross-national studies in giving good insights into the *mechanisms* of

development or underdevelopment. Apart from questions about the quality and comparability of data for a large set of poor countries, there are the usual econometric problems—like endogeneity (the independent variables may themselves be determined by other factors that may simultaneously influence both dependent and independent variables), selection (the data may have systematic bias, in terms of cases left out or excluded-zero values, or may be chosen by some principle that may be indicative of some relevant information), and particularly omitted variable bias (in this context, when one has to take the lowest common denominator of variables that are available for all the countries in the sample, many obviously important variables are left out, sometimes leading to spurious correlations between the reported variables). There is also a tendency to read too much into the results based on the United Nations principle of “one country, one vote” (which is anomalous in a situation where the large majority of countries are tiny and the substantial numbers of the poor in the world get a much lower weight by virtue of living in a handful of large countries). Finally, institutions and the policies as actually implemented at the local level *within* a country are often quite diverse and heterogeneous, except for a few countrywide macroeconomic institutions governing monetary policy, exchange-rate policy, and so on.

Nevertheless, this section briefly assesses some of the general findings of this macro literature. In the appendix to this chapter, a cross-country empirical exercise of our own focuses on a quantification of the impact of institutional and political variables as an extension of the existing literature. This exercise suggests, among other things, that we should go beyond the narrow focus of the current literature on the undoubtedly important *institutions that protect individual property rights* and that other *institutions like those related to democratic political rights* may also be quite significant, particularly in explaining cross-country variations in human-development indicators (including literacy and longevity and not just per-capita income). In the next section of this chapter the importance of social and political *institutions that may correct some of the pervasive coordination failures* that afflict an economy at early stages of industrial transformation (and remain important even if property rights were to be made fully secure) are discussed. These coordination mechanisms are underemphasized in the institutional economics literature but can sometimes be as indispensable as property-rights institutions. So a major purpose of this chapter is to “unbundle” some of the institutions that are supposed to be important

in development and draw attention to institutions other than those securing property rights. A point that is not pursued here is that even in the protection of property rights different institutions have different consequences for different social groups (for example, the poor may care more for simple land titles or relief from the usual harassments by local goons or government inspectors, whereas the rich investor may care more for protection of their corporate shareholder rights against insider abuses or for banking regulations), and may therefore have different degrees of political sustainability.

Those who emphasize geography as destiny, more than institutions, point to the disease environment of the tropics, types of crops and soil, transportation costs, handicaps of land-locked countries—that afflict many of today's poor countries. These problems make attempts to climb out of poverty more difficult. But as Acemoglu, Johnson, and Robinson (2002) point out, many such geographically handicapped countries that are now relatively poor in the world were relatively rich in 1500 (the Moghal, Aztec, and Inca empires occupied some of the richest territories of the world in 1500; Haiti, Cuba, and Barbados were richer than the United States in early colonial times). These reversals of fortune have more to do with colonial history, extractive policies, and institutions than with geography. Of course, geographical factors are more conducive to some types of institutions than others. For example, Engerman and Sokoloff (2002) emphasize the effects of geographical (and other factor-endowment) preconditions on the evolution of particular institutions in the colonies established in the Caribbean or Brazil. Climate and soil conditions were extremely well suited for growing crops like sugar that were of high value on the market and were produced at low cost on large slave plantations. These conditions led to systematic institutional differences in these colonies compared to those established (later) in the temperate zones of North America. Acemoglu, Johnson, and Robinson (2001) suggest that the mortality rates among early European settlers in a colony (obviously related to its geography and disease patterns) determined whether the Europeans decided to install resource-extractive or -plundering institutions there or to settle and build European institutions, like those protecting property rights.¹

1. Engerman and Sokoloff (2002) raise a doubt for the early colonial period: European settlers in the New World formed communities even in the high-mortality but the then rich colonies, and the areas with low mortality were often unattractive to settlers. There may also be a reverse causality, with settler mortality being lower in areas of better institutions.

The work of both Engerman-Sokoloff and Acemoglu, Johnson, and Robinson correctly shows the importance of institutional overhang in history, so that institutions once established have long-run effects on economic performance, and these effects linger even after the original institutions decay or disappear. This has been also confirmed in a more disaggregative study within a country across districts: Banerjee and Iyer (2002) have traced the significant effects of different land-revenue systems (that were instituted by the British in India during the early nineteenth century and discontinued after Independence) on present-day economic indicators in agriculture.

The ideas of reversal of fortune in many of the countries colonized by Europe or of the adverse impact of landlord-based revenue institutions in colonial India have been around for decades. Recent work has made the hypothesis testing more rigorous by trying to take particular care of the problem of endogeneity of institutions. For example, Acemoglu, Johnson, and Robinson (2001) use mortality rates of colonial settlers as an instrument for institutional quality. While this may be an acceptable instrument² for the immediate statistical purpose of avoiding the problem of endogeneity of institutions compared to income because it accounts for a part (though usually a rather small part) of the exogenous (not income-dependent) variations in institutional quality, it is doubtful that this approach captures the major historical forces that affect the social and economic institutional structures of a former colony. Just consider the markedly different historical forces that have shaped the institutions in former colonies (with quite bad disease environments) like Brazil, India, and the Congo. Then consider countries that mostly escaped colonization,³ like China, Thailand, and for most of history, Ethiopia. In such cases, it is improper (and much too Eurocentric an approach) to attribute underdevelopment largely to 'bad' colonial institutions imposed by Europeans.

Furthermore, Przeworski (2004) points out that the institutions, as measured by Acemoglu, Johnson, and Robinson (2001), have changed quite a bit over time in many countries. So an instrument for the initial institutions need not be a valid instrument for the current ones. If good institutions are more likely to survive in more affluent countries, then institutional quality today is still endogenous with respect to income.

2. It is not clear if the settler-mortality variable excludes the effect of some other deeper factors. For example, density of population may be one such deeper factor; a direct effect is that it is easier to settle in more sparsely populated areas, and an indirect effect is that density is conducive to the spread of some diseases.

3. As Rodrik, Subramanian, and Trebbi (2002) point out, the noncolonized group of countries includes some very high-income countries (such as Finland and Luxembourg) as well as very poor countries (like Ethiopia, Yemen, and Mongolia), and these income differences cannot obviously be related to any colonial experience.

In particular, countries with a long history of state structure and bureaucratic culture may have substantial institutional residues, even after the colonial interregnum,⁴ that may be quite different from countries that did not have that history. Bockstette, Chanda, and Putterman (2002) have computed an index of state antiquity for over one hundred countries; it shows that among developing countries state antiquity is much lower for sub-Saharan Africa and Latin America than for Asia, and even in Asia the index for Korea is several times that for the Philippines (a country that lacked an encompassing state before the sixteenth-century colonization by Spain). The appendix to this chapter discusses some of the cross-country effects of this state-antiquity index. Many African countries had a relative lack of state antiquity (in the sense of a continuous territory-wide state structure above the tribal domains) in precolonial times.⁵ They were artificially regrouped (and cartographically carved out in the state rooms of Europe) by the colonial rulers, so that the postcolonial state was often incongruent with precolonial political structures and boundaries. This had a serious adverse effect on the legitimacy⁶ of the state and the efficacy of state institutions.⁷

The recent literature has emphasized (and in some cases over-emphasized, in my judgment) the impact of the colonial legacy on postcolonial institutional performance over the last four to five decades and has also sometimes distinguished between the particular European sources of that legacy in terms of legal systems. For example, La Porta et al. (1998) have called attention to the superior effects, across countries, of the Anglo-Saxon common-law system (based on judicial precedents) over the civil-law system (based on formal codes) on corporate business environments in terms of flexibility toward the changing needs of business and in terms of protection for external suppliers of finance to a company (whether shareholders or creditors). Apart from some doubts about the establishment of causality in these cross-national studies, one can also question the historical evidence in the

4. Even during the colonial period in India, what is described as a British landlord-based revenue system was shaped largely out of the preexisting land-revenue systems of Moghal India.

5. Herbst (2000) argues that in land-abundant Africa in the precolonial period, land rights were not well defined, and political entities with vague borders and no well-defined territory to defend did not invest in bureaucracies or fiscal and military institutions.

6. Most African states are low in the legitimacy scores given by Englebort (2000).

7. In some situations the different ethnic groups were never reconciled to unification under one state even at the beginning of its formation, as in the case of the southerners in Sudan or the Eritreans in Ethiopia.

rich countries themselves. Lamoreaux and Rosenthal (2001) have done a comparative study of the constraints imposed by legal systems on organizational choices of business in the United States (with its common-law system) and France (with its civil-law codes) during the middle of the nineteenth century around the time when both countries were beginning to industrialize. They conclude that nothing inherent in the French legal regime created either a lack of flexibility or a lack of attention to the rights of creditors or small stakeholders. Many of the rules in the United States for minority shareholder rights actually came *after* the insider scandals of the 1930s Great Depression period. Rosenthal and Berglöf (2003) also question the primacy of legal origin in explaining institutions of investor protection; drawing on the legislative history of U.S. bankruptcy laws they show how the United States, with English common-law legal origins, ended up with a bankruptcy regime quite different from that in the United Kingdom and how political and ideological forces shaped financial development.

The French-legal-origin developing countries are often in Africa, and a legal system may be standing as a proxy for other (unmeasured) deficiencies in state capacity in many African countries. In any case, the importance of the legacy of the formal legal system is moot where much too frequently in developing countries the enforcement of whatever laws are in the statute books is quite weak, and the courts are hopelessly clogged and corrupt. It should also be recognized that with weak markets for related transactions, the net benefits from the transplanting of a European legal system to replace the indigenous customary system were in many cases rather limited. In a study of the impact of the introduction of civil courts in British India on the agricultural credit markets of the Bombay Deccan, Kranton and Swamy (1999) show that the courts led to increased competition but reduced lenders' incentives to subsidize farmers' investments in times of crisis, leaving them more vulnerable in bad times with insurance markets largely absent.

As suggested above, much of the recent cross-country regressions literature seems preoccupied with finding clever instruments that help avoid the endogeneity of most determinants of income, but finding an instrument that identifies an exogenous source of variation in the income determinants is quite different from unearthing an adequate and satisfactory causal explanation. In the inevitable absence of detailed and relevant data across a number of countries, researchers often resort to general qualitative comparative-historical analyses of the develop-

ment process to understand the impact of institutional arrangements, and much of the rest of this chapter is in that old-fashioned mode. This is, of course, not to deny that comparative-historical analysis at most gives some general insights into mechanisms and processes, but it does not clinch quantification issues, allow us to control for other factors that may simultaneously impinge on the variable in question, or sort out the endogeneity or reverse-causality issues. For quite a long time to come, both methods will have to be utilized, with their limitations noted, and conflicting issues will not be resolved until much more detailed datasets (particularly datasets involving panels within at least some major countries) become available.

1.2

For Western Europe and North America such a comparative-historical analysis of the institutions that are essential in the development process has been successfully tried by North (1981, 1990) and Greif (1992, 1997). North has pointed to the inevitable tradeoff in the historical growth process between transaction costs and economies of scale and of specialization. In a small, closed, face-to-face peasant community, for example, transaction costs are low, but production costs are high because specialization and division of labor are severely limited by the extent of a market that is defined by the personalized exchange process of a small community. As the network of interdependence widens in a large-scale complex economy, the impersonal exchange process gives considerable scope for all kinds of opportunistic behavior, and the costs of transacting can be high. Greif examined the self-enforcing institutions of collective punishment for malfeasance in long-distance trade in the late medieval period, and in a comparative study of the Maghribi and the Genoese traders explored the institutional foundations of commercial development.

In Western societies complex institutional (legal and corporate) structures have been devised over time to constrain transaction participants, to reduce the uncertainties of social interactions, to prevent transactions from being too costly, and thus to allow the productivity gains of larger-scale and improved technology to be realized. These institutions include elaborately defined and effectively enforced property rights, formal contracts and guarantees, trademarks, limited liability, bankruptcy laws, large corporate organizations with governance structures to limit problems of agency, and what Williamson (1985)

has called “ex post opportunism.” Some of these institutional structures are nonexistent, weak, poorly devised, or poorly implemented in less developed countries. The state in these countries either is too weak to act as a guarantor of these rights and institutions or is much too predatory in its own demands and poses a threat to them.

Beyond the face-to-face village community (when transactions are not self-enforcing), the institutions that a society develops (or fails to develop) for long-distance trade, credit, and other intertemporal and interspatial markets provide an important indicator of that society’s capacity for development. In this context the analysis of North (1990), Milgrom, North, and Weingast (1990), Greif (1992), and Greif, Milgrom, and Weingast (1994) have brought attention to the importance of several institutions—like the merchant guild (for example, those in Italian city-states or intercity guilds like the German Hansa), the law-merchant system (like private judges recording institutionalized public memory at the Champagne fairs, which provided an important nexus of trade between northern and southern Europe), and the Community Responsibility System in Mediterranean and European trade during the late medieval commercial revolution in the eleventh through fourteenth centuries. These institutions facilitated economic growth by reducing opportunism in transactions among people largely unknown to one another and by providing a multilateral reputation mechanism supported by frameworks of credible commitment, enforcement, and coordination.

Greif has suggested that in informal enforcement of mercantile contracts, those who are dependent on bilateral reputation mechanisms (where the cheater is punished only by the party that is cheated) are usually more costly than multilateral reputation mechanisms (where punishment is inflicted by a whole community to which the party that is cheated belongs) or than a community-responsibility system in which a whole community is jointly liable if one of its members cheats. In the case of bilateral reputation mechanisms, simple efficiency-wage considerations suggest that to keep a long-distance trading agent honest the merchant (the principal) has to pay the agent a wage that is higher than the agent’s reservation income, whereas in more “collectivist” forms of enforcement this wage need not be as high because the penalty for cheating is higher or because peer monitoring makes cheating more difficult. But in a world with information asymmetry, slow communication, and plausibly different interpretations of facts in a dispute, an uncoordinated multilateral reputation mechanism may not

always work and may need to be supplemented by a more formal organization to coordinate (the expectations and responses of different members of the collectivity) and enforce. In medieval Europe the merchant guild provided such an organization. In governing relations between merchants and their various towns and the foreign towns with which they traded, the guilds had the ability to coordinate merchants' responses to abuses against any merchant and to force them to participate in trade embargoes. This credible threat of collective action from the guilds enabled medieval rulers to commit to respecting the property rights of alien merchants and thus facilitated exchange and market integration.

Many developing countries in the world have a long history of indigenous mercantile institutions of trust and commitment (based on multilateral reputation mechanisms and informal codes of conduct and enforcement). Examples of such institutions of long-distance trade and credit abound among mercantile families and groups in precolonial and colonial India, Chinese traders in Southeast Asia, Arab "trading diasporas" in West Africa, and so on. For precolonial India, for example, Bayly (1983) cites many cases of caste-based (and sometimes even multicaste) mercantile associations and *panchayats* (or local tribunals or arbitration panels), which acted much like the merchant guilds and the law-merchant system respectively of medieval Europe, over a vigorous and far-flung mercantile economy. Credit instruments like the *hundi* (or bills of exchange), even though their negotiability was not always recognized in formal courts of law (in British India), governed trade across thousands of miles. Firms kept lists of creditable merchants whose credit notes—*sahajog hundis*—could expect a rapid discount in the bazaar. While Bayly writes about community institutions that flourished primarily around the so-called burgher cities of Allahabad and Benares in precolonial north India, Rudner (1994) studies the south Indian caste-based mercantile organization of the Nattukottai Chettiers in the colonial period, whose elaborate system of *hundis* over long distances (with the caste elite firms or *adathis* acting as the clearinghouses), collective decisions on standardization of interest rates, and caste *panchayats* with customary sanctions provided the basis of indigenous banking networks spread out in large parts of south India and British Southeast Asia.

The institutional-economics literature, however, suggests that the traditional institutions of exchange in developing countries often did not evolve into more complex (impersonal, open, legal-rational) rules

or institutions of enforcement as in early modern Europe and emphasizes the need for such an evolution. But the dramatic success story of rapid industrial progress in Southeast Asia in recent decades often under the leadership of Chinese business families suggests that more “collectivist” organizations can be reshaped in particular social-historical contexts to facilitate industrial progress and that clan-based or other particularistic networks can sometimes provide a viable alternative to contract law and impersonal ownership. In a study of seventy-two Chinese entrepreneurs in Hong Kong, Taiwan, Singapore, and Indonesia, Redding (1990) shows how through specific social networks of direct relationship or clan or regional connection the entrepreneurs built a system dependent on patrimonial control by key individuals, personal-obligation bonds, relational contracting, and interlocking directorships.⁸ As Ouchi (1980) noted some years ago, when ambiguity of performance evaluation is high and goal incongruence is low, the clan-based organization may have advantages over market relations or bureaucratic organizations. In clan-based organizations goal congruence (and thus low opportunism) is achieved through various processes of socialization; performance evaluation takes place through the kind of subtle reading of signals that are observable by other clan members but not verifiable by a third-party authority. Punishment for breach of implicit contracts is usually through social sanctions and reputation mechanisms. Another advantage of such clan-based relations is flexibility and ease of renegotiation.⁹

As may be expected, the arrangements in these business families and groups are somewhat constrained by too much reliance on centralized decision making and control, internal finance, a small pool of managerial talent to draw on, a relatively small scale of operations, and in the

8. As Redding (1990, p. 213) points out: “Many transactions which in other countries would require contracts, lawyers, guarantees, investigators, wide opinion-seeking, and delays are among the overseas Chinese dealt with reliably and quickly by telephone, by a handshake, over a cup of tea. Some of the most massive property deals in Hong Kong are concluded with a small note locked in the top drawer of a chief executive’s desk, after a two-man meeting.” One hears similar stories about the Hasidic diamond traders of New York and about firms in industrial districts in Northern Italy.

9. What Holmstrom and Roberts (1998, p. 81) note for Japanese contracts between automakers and their suppliers is far more generally true in family- and clan-based implicit contracts: “the contracts between the Japanese automakers and their suppliers are short and remarkably imprecise, essentially committing the parties only to work together to resolve difficulties as they emerge. Indeed, they do not even specify prices, which instead are renegotiated on a regular basis. . . . The key to making this system work is obviously the long-term repeated nature of the interactions.”

case of large organizations a tendency to subdivide into more or less separate units, each with its own products and markets. A major problem of such collectivist systems of enforcement is that the boundaries of the collectivity within which rewards and punishment are practiced may not be the most efficient ones and therefore may inhibit potentially profitable transactions with people outside the collectivity. So as the scale of economic activity expands, as the need for external finance and managerial talent becomes imperative, and as large sunk investments increase the temptation of one party to renege, relational implicit contracts and reputational incentives become weaker.¹⁰ As Li (2003) has pointed out, relation-based systems of governance may have low fixed costs (given the preexisting social relationships among the parties and the avoidance of the elaborate legal-judicial costs, public-information costs, and verification costs of more rule-based systems) but may have high and rising marginal costs (particularly of private monitoring) as business expansion involves successively weaker relational links.

In general, in the history of most developing countries, even when the indigenous institutions of a mercantile economy thrived, the development of sequentially more complex organizations suited for industrial investment and innovations (as is familiar from the history of the West) did not take place or was slow to come. Nationalist historiography in these countries has blamed this failure on colonial or neocolonial policies. While not denying the importance of the effects of these policies and the lasting wounds of colonialism, I largely confine myself in this chapter (and the next) to a discussion of indigenous institutional impediments to development, which may be just as valid and significant for those poor countries that do not share a colonial history.

A major institutional deficiency¹¹ that has blocked the progress of a mercantile economy into an industrial economy in many poor countries relates to the financial markets. Even when caste-based or clan-based mercantile firms thrive in their network of multilateral reputation and enforcement mechanisms, the latter are often not adequate for supporting the much larger risks of longer-gestation, large sunk-cost industrial investment. These firms, by and large, have limited

10. Some of the pros and cons of relational contracting are empirically studied in the case of Vietnam's emerging private sector by McMillan and Woodruff (1999).

11. Another equally important institutional deficiency in this context relates to agrarian institutions (which are commented on in the next chapter) that can provide a sustainable rural base for industrialization programs.

capacity (either in finance or specialized skills) to pool risks and mobilize the capital of the society at large in high-risk high-return industrial ventures (their own reinvested profits and trade credit from suppliers are not enough). Diversified business groups, which are ubiquitous in developing countries, are sometimes regarded as active players in risk sharing. With a new dataset on business groups in fifteen emerging markets, Khanna and Yafeh (2000) examine this, and find that while there is some corroborative evidence for this risk sharing in Brazil, Korea, Taiwan, and Thailand, this kind of coinsurance is not generally significant or adequate in the larger set of countries.¹²

The usual imperfections of the credit and equity markets emphasized in the literature on imperfect information are severe in the early stages of industrial development. First of all, the investment in learning by doing is not easily collateralizable and is therefore particularly subject to the high costs of information imperfections. Aoki (2001) points to the importance of close relations between banks and firms,¹³ based on tacit, uncodified knowledge, at a stage when firms are not yet ready for the securities market with its demands for codifiable and court-verifiable information.¹⁴ Very often such close relations between banks and firms require some support and underwriting of risks by a more centralized authority in situations of undeveloped capital markets, as well as tight centralized monitoring to prevent collusion and malfeasance.

In addition, the technological and pecuniary externalities in investment between firms (and industries)—emphasized analytically (though difficult to pin down empirically) in early as well as more recent development literature—give rise to “strategic complementarities” and positive feedback effects resulting in multiple equilibria.¹⁵ This is

12. With the existing data it is also difficult to distinguish empirically between risk sharing and minority shareholder appropriation or “tunneling.”

13. A study in Mexico (see La Porta et al., 2003) associates such related lending with “looting” of banks by related companies. One would like to see more empirical evidence on this question. In Menkhoff and Suwanaporn (2003) an in-depth study of the lending decisions of banks from 1992 to 1996 (the prefinancial-crisis period) from 560 credit files from the majority of Thai commercial banks comes to a conclusion about related lending that is quite different from that in La Porta et al. (2003).

14. Aoki (2001) points out that even in the United States venture-capital financing of start-up firms shares characteristics with relational finance (as opposed to arm’s-length finance).

15. This has a long history in the postwar development literature from Rosenstein-Rodan (1943) to Murphy, Shleifer, and Vishny (1989). The recent economic-geography literature has emphasized similar kinds of strategic complementarities and agglomeration economies.

particularly important when externalities of information and the need for a network of proximate suppliers of components, services, and infrastructural facilities with economies of scale make investment decisions highly interdependent. Private financiers who are willing and able to internalize the externalities of complementary projects and raise capital from the market for the whole complex of activities are often absent in the early stage of industrialization. Motivated by some historical examples from nineteenth-century continental Europe, Da Rin and Hellmann (1996) show in a model with complementarities of investments of different firms that private banks can act as catalysts for industrialization, provided that they are sufficiently large to mobilize a critical mass of firms and that they possess sufficient market power to make profits from costly coordination. These necessary conditions were not met, for example, in the case of unsuccessful industrial banks in Spain and Russia in the nineteenth century. This is where government-mediated coordination may be potentially useful (though at the possible cost of dampening private incentives to discover or experiment with superior coordination tactics).

Whereas Da Rin and Hellmann suggest that centralized financing may assist in resolving coordination problems rooted in the borrower's side of the market, Dewatripont and Maskin (1995) focus on the manner in which centralized financing may help to resolve coordination problems rooted in the lender's side of the market. In a model of a decentralized banking system where capital ownership is diffuse, they show that banks tend to underinvest in long-term projects that involve large sunk costs requiring cofinancing by several banks. This is because such cofinancing leads to a free-rider problem in monitoring by each bank.¹⁶

Historically, in some countries (for example, in postwar East Asia) the state has played an important role in resolving this kind of "coordination failure" by facilitating and complementing private-sector coordination. In this context one may note that Gerschenkron (1962) emphasized the role of state-supported development banks for the late industrializers of Europe in the nineteenth century. Government-supported development banks (like the *Crédit Mobilier* in nineteenth-century France; after the first World War, *Crédit National* in France

16. There is actually a tradeoff here. Decentralized financing may lead to failure to fund some socially worthwhile projects (what is sometimes called type 1 error); centralized financing, on the other hand, may lead to failure to terminate socially inefficient projects (type 2 error).

and Soci t  National de Cr dit   l'Industrie in Belgium after the second World War, Kredintaltantl f r Weidarufban in Germany, Japan Development Bank, and the Korea Development Bank and recently, the China Development Bank) have played a crucial role in long-term industrial finance and acquisition and dissemination of financial expertise in new industrial sectors in periods of large-scale reconstruction and acute scarcity of capital and skills in both past and recent history.

But the experiences of government-supported development banks in other developing countries (say, in India or Mexico in recent decades) has been mixed at best. Armend riz de Aghion (1999) points out that unlike government-supported development banks in France, Germany, and Japan, the development banks in other countries have often been controlled by the government in an exclusive and heavy-handed way, without cofinancing (or coownership) arrangements with private financial intermediaries (which help risk diversification and dissemination of expertise) and without sector specialization (which helps with the acquisition of specialized expertise in financing projects in targeted sectors). This is even apart from the usual moral-hazard problem in subsidizing the sometimes necessary losses that the pioneering development banks will have and the ever-present dangers of loan operations getting involved in the political patronage-distribution process.

Thus in the crucial leap between the mercantile economy and the industrial economy, the ability of the state to act as a catalyst and a coordinator in the financial market can sometimes be important. In much of the literature on the new institutional economics, the importance of the state is recognized but only in the narrow contexts of how to use its power to enforce contracts and property rights on the one hand and how to establish its credibility in not making confiscatory demands on the private owners of those rights on the other. This dilemma is implicit in the standard recommendation in this literature for a "strong but limited" government.

It is, however, possible to argue that in the successful cases of East Asian development (including that of Japan) the state has played a much more active role—intervening in the capital market sometimes in subtle but decisive ways, using regulated entry of firms and credit allocation (sometimes threatening withdrawal of credit in not so subtle ways) to promote and channel industrial investment, underwriting risks and guaranteeing loans, establishing public-development banks and other financial institutions, encouraging the development of the

nascent parts of financial markets, and nudging existing firms to upgrade their technology and to move into sectors that fall in line with an overall vision of strategic developmental goals.¹⁷ In this process, as Aoki, Murdock, and Okuno-Fujiwara (1997) have emphasized, the state has enhanced the market instead of supplanting it; it has induced private coordination by providing various kinds of cooperation-contingent rents. In the early stages of industrialization, when private financial and other related institutions were underdeveloped and coordination was not self-enforcing, the East Asian states created opportunities for rents that were conditional on performance or outcome (in mobilization of savings, commercialization of inventions, export “contests,” and so on) and facilitated institutional development by influencing the strategic incentives that were facing private agents through an alteration of the relative returns to cooperation in comparison with the adversarial equilibrium. (Such contingent transfers are akin to the patent system, where the monopoly rent is contingent on successful innovation.) The performance criteria in East Asia often included export success, which in a world of international competition kept the subsidized firms on their toes and encouraged cost and quality consciousness. The government commitment to maintain rents for banks, contingent on performance, also gives banks more of a stake in long-run relations with firms and a stronger incentive to rescue investment projects that are suffering from temporary financial distress. This is particularly important when in the absence of a vigorous and reliable stock market the risk-averse savers put much of their money in banks, which lend it to firms, which thereby acquire a high debt-equity ratio, making them particularly vulnerable to temporary shocks.

One should not, of course, underestimate the administrative difficulties of such aggregate coordination and the issues of micromanagement of capital may be much too intricate for the institutional capacity and information-processing abilities of many a state in Africa, Latin America, or South Asia. There is also the problem of how credible the commitment of the state is (for a more general discussion of the issues of credible commitment, see chapters 2 and 4) in implementing the contingent transfer and actually carrying out the threat of withdrawing the transfer when performance does not measure up. In this the states in Africa, Latin America, or South Asia have often been rather lax

17. For a recent account of the role of the state in facilitating and engendering coordination, networking, and technology upgrading in the electronics and information technology industry in Taiwan, see Lin (2003).

compared to East Asia, and the contingent transfers have soon degenerated into unconditional subsidies or entitlements for favorite interest groups. As the more recent East Asian experience of financial crisis warns us, there are moral-hazard problems in too cozy a relationship between public banks and private business and in the political pressures for bailout that a state-supported financial system inevitably faces.

As economic stagnation has been prolonged in Japan in the last decade or so, the East Asian model has faded from public approbation. As pointed out by Aoki, Murdock, and Okuno-Fujiwara (1997), when technologies become more complex, the exploration of new technological opportunities become highly uncertain in a world of intense global competition, and when demands for more flexibility in decision-making become more insistent in the face of rapid changes, then the state loses some of its efficacy in guiding private-sector coordination, and relation-based systems may delay active restructuring.¹⁸ It should be stressed, however, that this is not the major problem facing poor countries at their early stages of industrial transformation, when they are still struggling to reach the largely known production-possibility frontier (though subject to problems of technology adaptation).¹⁹ I think in general that the lessons of the East Asian model for early stages of industrial transformation in poor countries are being dismissed much too easily (with reference to the recent problems of Japan and South Korea), but given the choice many poor countries would rather be in their shoes now. In fact, one arguable position is that the East Asian financial crisis has been due less to the failure of the devel-

18. It may also be the case that the entry barriers that gave rise to the cooperation-contingent rent for the initial producers made it more difficult over time for new entrepreneurs to challenge incumbents and that this has slowed adoption of new technology. For a theoretical model of this, see Acemoglu (2003).

19. In a widely noted book, Parente and Prescott (2000) identify the main reason for low total factor productivity in developing countries as the barriers imposed by their governments to adopting internationally available technology and the opposition from influential special-interest groups like labor unions. These are, of course, important obstacles. But as Pack (2003) points out in a review of this book, much of the effective use of technology is not codified but is implicit or tacit and cannot be purchased from abroad. Domestic efforts to adapt and assimilate are critical, and government investment in market-supporting infrastructure, research, training, and extension are quite important. He compares the total factor productivity (TFP) in Chile after economic liberalization with that in Korea and Taiwan. Chile's was much more thorough, and Korea and Taiwan in the initial decades of industrial growth had much more protective regimes and gave more monopoly rights to domestic firms, and yet the productivity performance in the latter was better than in Chile.

opmental state and more to its partial and haphazard dismantling—giving up some of its traditional functions of coordinating investments (creating large-scale excess capacity in industries) and the financial regulations, allowing lax monitoring, particularly of the growth of short-term debt denominated in foreign currency. This dismantling *preceded* the onset of the financial crisis (such as the case of South Korea in the mid-1990s, when it was in a hurry to be accepted into the OECD fold). And even through the years of crisis in neighboring countries, the state-owned China Development Bank has been playing a dynamic role in lending to infrastructure projects and basic industries and in catalyzing growth. The standard complaint that East Asian growth has been more in capital accumulation and less in total (multifactor) productivity is also of limited relevance for poor countries. Almost all countries, including the United States throughout much of the nineteenth century (Eichengreen, 2002), show a similar pattern in the early stages of industrialization.

In this section we have emphasized the role of the state in the necessary coordination functions in the early stages of industrial development. This is meant partly to shift the current preoccupation of the institutional economics literature with the institutions for protecting property rights.²⁰ Economies at early stages of development are beset with coordination failures of various kinds and alternative coordination mechanisms—the state, the market, the community organizations²¹—all play different roles, sometimes conflicting and sometimes complementary, in overcoming these coordination failures, and these roles change in various stages of development in highly context-specific and path-dependent ways. To proclaim the universal superiority of one coordination mechanism over another is naive, futile, and ahistorical.

Markets are superb coordination mechanisms in harmonizing numerous noncooperative interactions, in disciplining inefficiency, and in rewarding high-valued performance. But when residual claimancy and control rights are misaligned (say, on account of initial asset-ownership differences that constrain contractual opportunities) and there are

20. As Rodrik, Subramanian, and Trebbi (2002) point out, the primacy of property rights in their institutional-quality variable does not necessarily imply the superiority of a private-property-rights regime over other forms of property rights. Russia, for example, scores considerably lower in its institutional-quality indicator than China, despite having a formal legal regime that is much more in line with European norms than China's.

21. For a good overview of the strengths and weaknesses of these three types of coordination mechanisms, see the last chapter of Bowles (2003).

important strategic complementarities in long-term investment decisions, markets fail to coordinate efficiently. The implications of “imperfections” in (and sometimes the nonexistence of) credit and insurance markets are severe for the poor, sharply reducing a society’s potential for productive investment, innovation, and human-resource development. The state can provide leadership in (and offer selective incentives and disincentives to) individuals interacting cooperatively in situations where noncooperative interactions are inefficient. But the state officials may have neither the information nor the motivation to carry out this role. They may be inept or corrupt, and the political accountability mechanisms are often much too weak to discipline them. In the context of these pervasive market and government failures, it is often pointed out that a local community organization that has stable membership and well-developed mechanisms for transmitting private information and enforcing social norms among its members has the potential to provide sometimes more efficient coordination than either the state or the market. But as is pointed out in chapters 2 and 6, community organizations “fail” too when they are “captured” by elite (or sectarian) interests or are hamstrung by the secession of the rich and the talented from local communities, and they may face covariate risks and costs of small scale.

Thus all three types of coordination mechanisms have their strengths and weaknesses, and they sometimes work in mutually conflicting ways (state versus market is, of course, the staple of traditional left-right debates; for the community organizations many will point out how bureaucratic as well as market processes encroach upon traditional community management, say, of environmental resources, and so on). But it is also important to keep in mind that their relationships need not be adversarial, that these three types may have institutional complementarities in many situations. There are many cases of public-private partnerships (for example, joint-venture industrial and trading firms and research in crops, vaccines, and drugs), of community organizations using market processes (for example, business-nongovernment-organization partnerships in Bangladesh that improve access to telecommunications in rural areas), and of community organizations linking up with the government (for example, joint forest management between the Indian forest department and local communities, and the Self-Employed Women’s Association, SEWA, which covers the health-related risks of its members through the government-owned insurance companies, utilizing the larger risk-pooling advan-

tages of the state—or increasingly of the market, as the insurance sector in India has been partially denationalized). Institutional economics will be much richer if the horizon of the discussion is widened to admit a variety of institutional arrangements for coping with pressing development problems.

Appendix: Empirical Determinants

This appendix looks into the cross-country determinants of development with a particular focus on the role of institutions, ignoring some of the methodological doubts about such exercises expressed earlier in this chapter and following much of the recent empirical literature, particularly papers by Acemoglu, Johnson, and Robinson (2001) and Rodrik, Subramanian, and Trebbi (2002). The exercise presented here is a small extension of the latter literature in the following ways:

- Two types of institutional variables are considered: one is a proxy for the rule of law in the sense of protection of property rights, and the other is a proxy for democratic political rights and relates to voice and participation;
- The state antiquity variable as measured by Bockstette, Chanda, and Putterman (2002) is considered as a possible instrumental variable; and
- As a dependent variable, apart from per-capita income of countries, other indices of “human development”—like literacy, longevity, and the composite human development index of the UNDP—are considered.

The two-stage regressions reconfirm the results of Acemoglu, Johnson, and Robinson (2001) in terms of the effectiveness of the colonial settler-mortality variable as an instrument and the significance of the rule-of-law variable in influencing per-capita income across countries (and also longevity and the human-development index, in this case). The state antiquity measure (indicating a continuous history of state structure) can also sometimes act as an alternative good instrument, and the proxy for democratic rights is a more significant determinant when literacy is the dependent variable and is significant along with the rule-of-law variable in influencing other elements of or the composite human-development index. This may suggest that some aspects of human development may be advanced both by the progress of democratic institutions and by the establishment of property-rights protection.

Table 1.1
Descriptive Statistics

Variable	Mean	Std. Dev.	Minimum	Maximum
<i>Larger sample (n = 98):</i>				
Log GDP per capita	8.40	1.16	6.27	10.24
Literacy 2000	78.32	21.46	15.90	99.00
Life expectancy at birth 2000	64.88	12.83	39.30	81.00
HDI .10	6.88	1.96	2.77	9.42
Rule of law (RULE)	0.13	0.98	-1.49	1.91
Weak political rights (WPR)	3.10	2.05	1.00	7.00
State antiquity (STATEHIST)	0.41	0.25	0.07	1.00
Ethnolinguistic fragmentation (ELF)	0.35	0.30	0.00	0.86
Land-locked (LLCK)	0.16	0.37	0.00	1.00
<i>Medium sample (n = 69):</i>				
Log GDP per capita	8.04	1.07	6.27	10.24
Literacy 2000	73.53	21.56	15.90	99.00
Life expectancy at birth 2000	61.47	12.68	39.30	81.00
HDI .10	6.31	1.84	2.77	9.40
Rule of law (RULE)	-0.18	0.84	-1.49	1.85
Weak political rights (WPR)	3.59	1.97	1.00	7.00
State antiquity (STATEHIST)	0.34	0.22	0.07	1.00
Ethnolinguistic fragmentation (ELF)	0.39	0.31	0.00	0.86
Population density in 1500 (DENS)	6.08	14.15	0.00	100.46
<i>Smaller sample (n = 57):</i>				
Log GDP per capita	8.09	1.04	6.27	10.24
Literacy 2000	73.22	21.61	15.90	99.00
Life expectancy at birth 2000	63.70	11.59	40.20	79.50
HDI .10	6.40	1.77	2.77	9.40
Rule of law (RULE)	-0.21	0.86	-1.49	1.85
Weak political rights (WPR)	3.67	1.99	1.00	7.00
State antiquity (STATEHIST)	0.32	0.18	0.07	0.93
Ethnolinguistic fragmentation (ELF)	0.39	0.31	0.00	0.86
Population density in 1500 (DENS)	5.36	14.20	0.00	100.46
European settler mortality (ESM)	4.67	1.29	2.15	7.99

Table 1.2
Correlation Matrix ($n = 133$)

	Log GDP per Capita	Literacy 2000	Life Expec- tancy at Birth 2000	HDI .10	Rule of Law (RULE)	Weak Political Rights (WPR)
Log GDP per capita	1.00					
Literacy 2000	0.75	1.00				
Life expectancy at birth 2000	0.84	0.75	1.00			
HDI .10	0.93	0.89	0.93	1.00		
Rule of law (RULE)	0.82	0.55	0.64	0.73	1.00	
Weak political rights (WPR)	-0.58	-0.44	-0.51	-0.55	-0.65	1.00

Table 1.1 presents the descriptive statistics for different variables for three alternative sample size of countries (since data on some variables are not available for some countries). Tables 1.2 and 1.3 presents the corresponding pair-wise correlation matrix. Table 1.4 provides the results of an ordinary-least-squares (OLS) regression, suggesting that both the institutional variables considered—rule of law (RULE) and weak political rights (WPR)—are highly significant in explaining variations in per capita income across countries. But both of these institutional variables are endogenous and may be simultaneously affected by forces that govern per-capita income. So we have recourse to the standard technique of instrumental-variables (IV) regression.

In table 1.5, for a sample of ninety-eight countries, panel B shows the first-stage regression results where the measure of state antiquity (STATHIST) has a highly significant positive association with the rule-of-law variable (RULE), and ethnolinguistic fragmentation (ELF) has a highly significant negative association with it. This may suggest that continuity over a long period of some kind of supralocal bureaucratic structure over a particular territory may help the preservation of rule of law, whereas the collective-action problems arising from social fragmentation may undermine it. For the corresponding second-stage equation for explaining both per capita GDP in 1995 and the life expectation at birth in 2000 and the composite human-development index, the IV estimate of the coefficient on the institutional variable RULE is positive and significant. But when the literacy level in 2000 is the dependent variable, the IV estimate of the coefficient on RULE

Table 1.3
Correlation Matrix ($n = 57$)

	Log GDP per Capita	Literacy 2000	Life Expec- tancy at Birth 2000	HDI .10	RULE	WPR	STATE- HIST	ELF	DENS	LJCK	ESM
Log GDP per capita	1										
Literacy 2000	0.74	1									
Life expectancy at birth 2000	0.85	0.75	1								
HDI .10	0.93	0.89	0.94	1							
Rule of law (RULE)	0.77	0.51	0.66	0.72	1						
Weak political rights (WPR)	-0.46	-0.58	-0.59	-0.60	-0.43	1					
State antiquity (STATEHIST)	0.08	-0.16	0.16	0.01	0.09	0.23	1				
Ethnolinguistic fragmentation (ELF)	-0.44	-0.43	-0.65	-0.56	-0.33	0.38	0.04	1			
Population density in 1500 (DENS)	-0.12	-0.26	-0.05	-0.13	-0.01	0.26	0.34	-0.14	1		
Land-locked (LJCK)	-0.35	-0.25	-0.37	-0.37	-0.26	0.12	-0.15	0.24	-0.01	1	
European settler mortality (ESM)	-0.73	-0.56	-0.67	-0.72	-0.63	0.36	-0.27	0.43	-0.02	0.28	1

Table 1.4
Ordinary-Least-Squares Regressions

	Larger Sample ($n = 98$)				Medium Sample ($n = 69$)				Smaller Sample ($n = 57$)			
	Log GDP per Capita	Literacy 2000	Life Expectancy at Birth 2000	HDI	Log GDP per Capita	Literacy 2000	Life Expectancy at Birth 2000	HDI	Log GDP per Capita	Literacy 2000	Life Expectancy at Birth 2000	HDI
Rule of law (RULE)	0.91 (0.08)*	10.07 (2.15)*	7.24 (1.16)*	1.30 (0.15)*	0.89 (0.11)*	9.30 (2.78)*	7.05 (1.58)*	1.24 (0.20)*	0.83 (0.11)*	7.93 (2.86)*	6.71 (1.33)*	1.15 (0.19)*
Weak political rights (WPR)	-0.07 (0.04)***	-2.85 (1.03)*	-1.57 (0.56)*	-0.22 (0.07)*	-0.08 (0.05)	-3.96 (1.19)*	-1.85 (0.68)*	-0.27 (0.09)*	-0.09 (0.05)**	-4.81 (1.24)*	-2.21 (0.58)*	-0.32 (0.08)*
F (p-value)	121.43 (.000)	37.61 (.000)	56.16 (.000)	94.91 (.000)	49.28 (.000)	20.25 (.000)	24.17 (.000)	41.44 (.000)	42.42 (.000)	19.46 (.000)	34.28 (.000)	44.54 (.000)
R ²	0.72	0.44	0.54	0.67	0.60	0.38	0.42	0.56	0.61	0.42	0.56	0.62

* represents significance at the 1 percent level, ** at the 5 percent level, and *** at the 10 percent level.

Population density in 1500 (DENS)	-0.62 (0.75)	3.60 (1.75)**	-0.08 (0.71)	3.18 (1.76)**
F (p-value)	14.51 (.000)	5.22 (.002)	8.84 (.000)	6.05 (.000)
R ²	0.32	0.14	0.40	0.32

Notes: STATEHIST: An index of state antiquity constructed by Bockstette, Chanda, and Putterman (2002). The index awards points to any given country based on the following criteria: the length of time over which there has existed a government above the tribal level, the extent (indexed over time) to which that government has been locally rather than foreign-based, and the percentage of the country's territory ruled by that government (again indexed over time). We use the original authors' preferred data series, which they term STATEHIST5.

ELF: An index of ethnolinguistic fractionalization taken from La Porta et al. (1998). The average of several measures of ethnic diversity. RULE: Taken from Kaufmann et al. (2002). A composite index measuring the quality of the rule of law, including the following indicators: perceptions of the incidence of both violent and nonviolent crime, the effectiveness and predictability of the judiciary, and the enforceability of contracts. DENS: Population density in 1500. Computed by dividing population in 1500 (measured in tens of thousands) by arable land area (measured in millions of square kilometers). Data are drawn from McEvedy and Jones (1978).

WPR: Weak political rights on a scale of 1 to 7 (the larger the score, weaker are the political rights) for the year 2000, taken from the UNDP Human Development Report 2002. The political rights include free and fair elections for offices with real power, freedom of political organization, significant opposition, freedom from domination by powerful groups, and autonomy or political inclusion of minority groups. ESM: Logarithm of estimated European settlers' mortality rate taken from Acemoylu, Johnson, and Robinson (2001). LLCK: Dummy variable equal to 1 if country does not adjoin the sea, taken from Parker (1997).

GDP per capita in 1995 in PPP U.S. dollars is taken from Penn World Tables. HDI (Human Development Index, multiplied by 10), life expectation at birth, and the literacy rate all relate to year 2000 and are taken from the UNDP Human Development Report 2002.

* represents significance at the 1 percent level, ** at the 5 percent level, and *** at the 10 percent level.

is not significant. Instead, a different institutional variable—an index of weakness of political rights (WPR)—is significant: the weaker the political rights are, the lower the literacy. This may suggest that democratic voice and participation are conducive to mass literacy campaigns. In the first-stage regression WPR is significantly related to ELF but not to STATEHIST.

Table 1.5 also presents a smaller sample of sixty-nine countries that allows a historical (relating to the year 1500) population-density variable (DENS) to be utilized. The results are similar to those described in the preceding paragraph, with the difference that at the first stage the significance of STATEHIST diminishes somewhat in influencing RULE, and DENS has a positive and significant association with weak political rights. At the second stage, literacy is again significantly and negatively associated with weakness of political rights. My speculation about why in countries with historically high population-density political rights are weaker in general is that in these countries with labor abundance and low market power of workers, equality of political power may have been more difficult to establish. This is consistent with a claim by Engerman and Sokoloff (2002) that areas of labor scarcity in the New World in the early colonial period saw more political equality (particularly in terms of voting rights and independence from large landlords).

In table 1.5, for the smallest sample of fifty-seven countries, the European settler-mortality variable of Acemoglu, Johnson, and Robinson (2001) is introduced, in addition to the other variables. As before, in the second stage the IV estimate of the coefficient on RULE is significant except when the dependent variable is literacy. For the latter, WPR is significant, as before. For the composite human-development index in 2000, the IV estimates of the coefficient on RULE as well as on WPR are significant.

In the first-stage regression, as before, ethnolinguistic fragmentation and population density in 1500 are associated with weak political rights. The European settler-mortality variable is significantly related to both of institutional variables. The state-antiquity variable is now (weakly) associated with weak political rights; this may suggest that countries with a long history of an entrenched bureaucratic-military setup need not be hospitable to democratic rights, even when those countries maintain some rule of law regarding property rights.

All the equations in table 1.5 pass the OID test (from regressing second-stage residual on the instrument set) at the 5 percent level.