Chapter 1

History, Institutions and Underdevelopment

I

As in much of institutional economics we are going to interpret institutions in the very general sense of rules of structured social interaction. In the field of development economics in contrast with the earlier preoccupation with the forces of capital accumulation or technological progress, it is now widely agreed that the institutional framework of an economy is crucial in understanding the process of development or lack of it. In trying to understand why South Korea and the Philippines having similar per capita incomes and human capital endowments in 1960 developed so divergently in the next three decades, or why economic transition to capitalism in the 1990's has been so different in Poland compared to Russia, institutional explanations, including an analysis of state-society relations, are becoming increasingly common. Economists are, of course, not fully comfortable with this unless they can somehow quantify the effects of institutional framework. In the literature on rural development at the micro-level there have been many attempts to quantify the impact of institutions like land tenure on productivity or 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, did 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 us 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 (i.e. the independent variables may themselves be determined by other factors which may simultaneously influence both dependent and independent variables), selection (i.e. the data may have systematic bias in terms of cases left out or excluded zero values or chosen by some principle, which 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 live in a handful of large countries), and 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, etc. .

Be that as it may, let us in this section briefly assess some of the general findings of this macro literature. In the Appendix to this chapter, we carry out a cross-country empirical exercise ourselves to focus on a quantification of the impact of institutional and political variables as an extension of the existing literature. Our exercise suggests, among other things, that we should go beyond the narrow focus of the current literature on the undoubtedly important *institutions protecting individual property rights,* and that other *institutions like those related to democratic political rights* may also be quite significant, particularly when one tries to explain cross-country variations in human development indicators (including literacy and longevity, and not just per capita income). In the next section of this chapter we shall discuss 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); these coordination mechanisms underemphasized in the institutional economics literature 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. A point that we do not pursue here is that even in 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, etc. which afflict many of today's poor countries. There is no doubt that these problems make attempts to climb out of poverty more difficult. But as Acemoglu, Johnson, and Robinson--AJR (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 richer territories of the world in 1500, Haiti, Cuba and Barbados were richer than the US in early colonial times, and so on). This ‘reversal of fortune’ obviously has more to do with colonial history, extractive policies and institutions. 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 extremely well-suited for growing crops like sugar that were of high value on the market and produced at low cost on large slave plantations led to systematic institutional differences in these colonies compared to those established (later) in the temperate zones of North America. AJR (2001) suggest that the mortality rates among early European settlers in a colony (obviously related to its geography and disease patterns) determined if the Europeans mainly concentrated on installing resource extractive or plundering institutions there or decided to settle and build European institutions like those protecting property rights.[1] The work of both Engerman-Sokoloff and AJR correctly shows the importance of institutional overhang in

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[1] Engerman and Sokoloff (2002) raise a doubt for the early colonial period: European settler communities in the New World formed 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 in settler mortality being lower in areas of better institutions.

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 effect of different land revenue systems instituted by the British in India during the early 19th 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 the adverse impact of landlord-based revenue institutions in colonial India have been around for many decades. Recent work has made the hypothesis testing more rigorous in trying to take particular care of the problem of endogeneity of institutions. For example, AJR (2001) use mortality rates of colonial settlers as an instrument for institutional quality. While this may be an acceptable instrument[2] for the immediate statistical purpose of avoiding the problem of endogeneity of institutions vis-a-vis income by accounting for a part (though usually a rather small part) of the exogenous (i.e. not income-dependent) variations in institutional quality, I doubt if in many cases this captures the major historical forces that have an impact on the social and economic institutional structure of an ex-colony. Just consider the markedly different historical forces shaping the institutions in ex-colonies (with quite bad disease environments) like Brazil, India or the Congo. Then there are those countries that mostly

[2] Of course, 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; it has the direct effect that it is easier to settle in more sparsely populated areas, and the indirect effect that density is conducive to spread of some diseases.

escaped colonization,[3] like China or Thailand, or for most of history, Ethiopia, and in such cases it will be improper (and much too Euro-centric an approach) to attribute underdevelopment largely to 'bad' colonial institutions imposed by Europeans.

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 which did not have that history. Bockstette, Chanda, and Putterman (2002) have computed an index of state antiquity for a large number of countries; it shows that among developing countries this index 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 16th-century colonization by Spain). In the Appendix we discuss some of the cross-country effects of this state antiquity index. In the case of many African countries not merely there is a relative lack of state antiquity (in the sense of a continuous territory-wide state structure above the tribal domains) in pre-colonial times[5], they were artificially regrouped (and cartographically carved out in the state rooms of Europe) by the colonial rulers, so that the post-colonial state was

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[3] As Rodrik, Subramanian and Trebbi--RST (2002) point out, the non-colonized 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.

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

often incongruent with pre-colonial political structures and boundaries. This had a serious adverse effect on the legitimacy[6] of the state and the efficacy of state institutions.[7]

Not merely has the recent literature emphasized (and in some cases over-emphasized, in my judgment) the impact of colonial legacy on post-colonial institutional performance over the last four to five decades, it has also sometimes made a distinction between the particular European sources of that legacy in terms of legal systems. For example, La Porta et al (1997, 1999) 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 environment both in terms of more flexibility with changing needs of business and in terms of better 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 rich countries themselves. Lamoreaux and Rosenthal (2002) have done a comparative study of the constraints imposed by their respective legal system on organizational choices of business in the US (with its common law system) and France (with its civil-law codes) during the middle of the 19th century around the time when both

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[5] Herbst (2000) argues that in land-abundant Africa in the pre-colonial period, land rights were not well-defined, and political entitities 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 Englebert (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.

countries were beginning to industrialize. They conclude that there was nothing inherent in the French legal regime that 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 US for minority shareholder rights actually came *after* the insider scandals of the Great Depression period. Rosenthal and Berglof (2003) also question the primacy of legal origin in explaining institutions of investor protection; drawing upon the legislative history of US bankruptcy law they show how the US, with an English common-law legal origin, ended up with a bankruptcy regime quite different from that in the UK, and how political and ideological forces shaped financial development.

For developing countries the French legal origin countries are mainly in Africa and it may be standing as a proxy for other (unmeasured) deficiencies in state capacity in many African countries. In any case how important the legacy of the formal legal system is rather moot where much too frequently in developing countries the enforcement of whatever the 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 benefit from the transplanting of a European legal system replacing the indigenous customary system was in many cases rather limited. Kranton and Swamy (1999) show in a study of the impact of the introduction of civil courts in British India on the agricultural credit markets of the Bombay Deccan that while it led to increased competition, it reduced lenders' incentives to subsidize farmers' investments in times of crisis, leaving them more vulnerable in bad times with insurance markets largely absent).

As we have suggested above, much of the recent cross-country regressions literature seems preoccupied with finding clever instruments so that the endogeneity of most determinants of income is avoided, 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, we may have to often resort to general qualitative comparative-historical analysis of the development process in order 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 us some general insights into the mechanisms and processes involved, but does not clinch issues in terms of quantification or allow us to control for other factors that may be simultaneously impinging 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 full consciousness of the limitations of either, and the conflicting issues will not be resolved until much more detailed datasets particularly involving panels within at least some major countries become available.

II

For Western Europe and North America such a comparative historical analysis of institutions 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 economies of scale and specialization on the one hand, and transaction costs on the other. In a small, closed, face-to-face peasant community, for example, transaction costs are low, but the production costs are high, because specialization and division of labor are severely limited by the extent of market defined by the personalized exchange process of the small community. In a large-scale complex economy, as the network of interdependence widens 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 over time complex institutional (legal and corporate) structures have been devised to constrain the participants, to reduce the uncertainty of social interaction, in general to prevent the 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 non-existent or weak or poorly devised and implemented in less developed countries. The state in these countries is either too weak to act as a guarantor of these rights and institutions and/or much too predatory in its own demands, posing a threat to them.

Beyond the face-to-face village community the institutions a society develops (or fails to develop) for long-distance trade, credit and other intertemporal and interspatial markets, where the transactions are not self-enforcing, 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 to our attention the importance of several institutions like the Merchant Guild (for example, those in Italian city-states or inter-city 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 the Mediterranean and European trade during the late medieval commercial revolution in the period between the eleventh and the fourteenth century. These institutions facilitated economic growth by reducing opportunism in transactions among people largely unknown to one another and 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 dependent on bilateral reputation mechanisms (i.e. 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 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 in order to keep a long-distance trading agent honest he has to be paid by the merchant (the principal) a wage higher than the agent's reservation income, whereas in more 'collectivist' forms of enforcement this wage need not be as high, as the penalty for cheating is higher or 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 (expectations and response 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 they 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 the 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 pre-colonial and colonial India, Chinese traders in Southeast Asia, Arab 'trading diasporas' in West Africa, and so on. For pre-colonial India, for example, Bayly (1983) cites many cases of caste-based (and sometimes even multi-caste) 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 these community institutions primarily around the so-called burgher cities of Allahabad and Benares in pre-colonial north India, Rudner (1994) studies the south Indian caste-based mercantile organization of the Nattukottai Chettiars 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 south-east 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 clan-based or other particularistic networks can sometimes provide a viable alternative to contract law and impersonal ownership. In a study of 72 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 they build a system dependent on patrimonial control by key individuals, personal obligation bonds, relational contracting, and interlocking directorships.[8] As Ouchi (1980) had noted some years back, 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, 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]

Of course, as may be expected, the arrangements in these business families and groups are somewhat constrained by too much reliance on centralized decision-taking and control, internal finance, small pool of managerial talent to draw upon, relatively small scale of operations, and in case of large organizations a tendency to subdivide into more or less

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8 As Redding (1990) 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) 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,

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 they 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 Lui (2003) has pointed out, relation-based systems of governance may have low fixed costs (given the pre-existing social relationships among the parties and the avoidance of the elaborate legal-juridical and public information and verification costs of more rule-based systems), but 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 process of 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, of course, blamed this on colonial or neo-colonial policies. While not denying the importance of the effects of these policies and the lasting wounds of colonialism, I shall largely confine myself in this chapter (and the next) to a

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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." (p.81).

[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).

discussion of indigenous institutional impediments to development, which may have been just as valid and significant for those poor countries which do not share a colonial history.

A major institutional deficiency[11] that blocked the progress of the mercantile into the industrial economy in many poor countries relates to the financial markets. Even when caste-based or clan-based mercantile firms thrived in their network of multilateral reputation and enforcement mechanisms, the latter were often not adequate for supporting the much larger risks of longer-gestation large sunk-cost industrial investment. These firms, by and large, had limited capacity (either in terms of 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 were not enough). Diversified business groups, that are ubiquitous in developing countries, are sometimes regarded as active players in risk-sharing. With a new data set on business groups in 15 emerging markets, Khanna and Yafeh (2000) examine this, and find that while there is some corroborative evidence for this in Brazil, Korea, Taiwan and Thailand, this kind of co-insurance 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

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11 Another equally important institutional deficiency in this context relates to the agrarian institutions, which we comment upon in the next chapter, that can provide a sustainable rural base for industrialization programs.

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

subject to the high costs of information imperfections. Aoki (2000) 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.

Secondly, 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 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

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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 decision of banks in 1992-96 (the pre-financial crisis period) from 560 credit files from the majority of Thai commercial banks comes to a conclusion about related lending quite different from that in La Porta *et al* (2003).

14 Aoki(2000) points out that even in the US venture capital financing of start-up firms has similar characteristics as in 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.

decisions highly interdependent, and private financiers 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 19th 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 19th 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 decentralized banking system where capital ownership is diffuse they show that banks tend to underinvest in long-term projects which involve large sunk costs requiring co-financing by several banks. This is because such co-financing leads to a free rider problem in monitoring by each bank.[16]

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[16] There is actually a trade-off here. Decentralized financing may lead to not funding 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).

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) had emphasized the role of state-supported development banks for the late industrializers of Europe in the 19th century. Government-supported development banks (like the *Crédit Mobilier* in the 19th century France, or after the first World War*, Crédit National* in France and *Societé National de Crédit á l'Industrie* in Belgium, or after the second World War, *Kredintaltanlt für Weidarufban* in Germany, Japan Development Bank, the Korea Development Bank, and very 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 their experience in other developing countries (say, in India or Mexico in recent decades) has been mixed at best. Armendáriz de Aghion (1999) points out that unlike in the former cases (particularly in France, Germany, and Japan), in the latter cases the development banks have often been controlled by the government in an exclusive and heavy-handed way, without scope for co-financing (or co-ownership) arrangements with private financial intermediaries (which help risk diversification and dissemination of expertise), and without the opportunity to specialize in a small number of sectors (that helps 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 the pioneering development banks will make, 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 in the narrow context of how to use its power in the enforcement of contracts and property rights one the one hand and at the same time 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) in promoting and channeling 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 early stages of industrialization when private financial and other related institutions were underdeveloped and coordination was not self-enforcing, the East Asian state created opportunities for rents 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 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 who lend it out to firms, who 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 micro-management of capital may be much too intricate for the institutional capacity and information processing abilities of many a state in

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[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

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, compared to East Asia, and the contingent transfers have soon degenerated into unconditional subsidies or entitlements for favorite interest groups. One should also be wary, as the more recent East Asian experience of financial crisis warns us, about the moral hazard problems of too cozy a relationship between public banks and private business and the political pressures for bail-out 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 and the exploration of new technological opportunities becomes highly uncertain in a world of intense global competition and demands more flexibility in decision-making in the face of rapid changes, 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

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(2003).

[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 this has slowed adoption of new technology. For a theoretical model of this, see Acemoglu (2003).

problems of technology adaptation[19]). I think in general the lessons of the East Asian model for early stages of industrial transformation in poor countries are being dismissed much too easily, pointing to the recent problems of Japan or 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 less due to the failure of the developmental state, more a result of 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* (for example, in the case of South Korea in the mid-90's, in a hurry to be accepted into the OECD fold) the onset of the financial crisis. 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 catalyzing growth. The standard complaint that East Asian

19 In a widely noted book Parente and Prescott (2000) have identified 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 implicit or tacit, and cannot be purchased from abroad. Domestic efforts to adapt and assimilate are critical, and in this government investment in market-supporting infrastructure and in research and training and extension are quite important. He compares the total factor productivity (TFP) in Chile after economic liberalization that was much more thorough than in Korea and Taiwan (the latter in the initial decades of industrial growth had a much more protective regime and gave more monopoly rights to domestic firms), and yet the productivity performance in the latter was better than in Chile.

growth has been more in capital accumulation and less in total (multi-factor) productivity is also of limited relevance for poor countries; almost all countries, including the United States in large parts of the 19th century,[20] 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[21]. Economies at early stages of development are beset with coordination failures of various kinds and alternative coordination mechanisms-- the state, the market, the community organizations[22] -- 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 a-historical.

Markets are superb coordination mechanisms in harmonizing numerous non-cooperative interactions and in disciplining inefficiency and rewarding high-valued

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20 See Eichengreen (2002).

21 As RST (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 their institutional quality indicator than China despite having a formal legal regime that is much more in line with European norms than China's.

performance. But when residual claimancy and control rights are misaligned (on account, say, of initial asset ownership differences constraining contractual opportunities) and there are important strategic complementarities in long-term investment decisions, markets fail to coordinate efficiently. The implications of 'imperfections' in, and sometimes the non-existence 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 put selective incentives and pressure on) individuals interacting cooperatively in situations where non-cooperative 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, if it has stable membership and well-developed mechanisms of transmitting private information and enforcing social norms among its members, it has the potential to provide sometimes more efficient coordination than either the state or the market. But, as we point 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 the three types of coordination mechanisms have their strengths and weaknesses, and they sometimes work in mutually conflicting ways (state versus market is,

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

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, in joint-venture industrial or trading firms or research in crops, vaccines and drugs), of community organizations using market processes (for example, business-NGO partnership in Bangladesh in improving access to telecommunications in rural areas), and of community organizations linking up with the government (as, for example, in India in the case of joint forest management between the forest department of the government and local communities, or of SEWA, the well-known self-employed women's organization, covering health-related risks of its members through the government-owned insurance companies, utilizing the larger risk-pooling advantages 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 we widen the horizon of our discussion and admit a variety of institutional arrangements to cope with pressing development problems.

Appendix: Empirical Determinants

In this Appendix we carry out some exercises to look 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 the AJR (2001) paper and that by RST (2002). Our exercise is a small extension of the latter literature in the following ways:

(a) we consider two types of institutional variables, one is a proxy for the rule of law in the sense of protection of property rights, etc., and the other for democratic political rights, more relating to 'voice' and participation;

(b) we consider the state antiquity variable as measured by Bockstette, Chanda, and Putterman (2002) as a possible instrumental variable; and

(c) as our dependent variable we consider apart from per capita income of countries, other indices of 'human development', like literacy and longevity and also the composite human development index of the UNDP.

While our two-stage regressions reconfirm the results of AJR(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 our case), we add the results that the state antiquity measure (indicating a continuous history of state structure) can also sometimes act as an alternative good instrument, and that 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 by the progress of democratic institutions, as by the establishment of property rights protection.

In Table IV we have the descriptive statistics for different variables, for three alternative sample size of countries (since data on some variables are not available for some countries). In Tables II and III we have the corresponding pair-wise correlation matrix. Table I 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, of course, as is easy to see, 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 V, for a sample of 98 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 ethno-linguistic fragmentation (ELF) has a highly significant negative association with it. This may suggest that continuity over a long period of some kind of supra-local 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 is not significant. Instead a different institutional variable, an index of weakness of political rights (WPR) is significant: the weaker are the political rights, the lower the literacy. This may suggest democratic voice and participation are conducive to mass literacy campaigns. In the first-stage regression WPR is significantly related to ELF, but not STATEHIST.

In Table V we also have a smaller sample of 69 countries which allows us to utilize a historical (relating to the year 1500) population density variable (DENS). 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. Our 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 V, for the smallest sample of 57 countries, we can introduce the European settler mortality variable of AJR in addition to the other variables. As before, in the second stage the IV estimate of the coefficient on RULE is significant all through 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, ethno-linguistic fragmentation and population density in 1500 are associated with weak political rights. The European settler mortality variable is significantly related to both of our 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 set-up need not be hospitable to democratic rights, even when it maintains some rule of law regarding property rights.

All the equations in Table V pass the OID test (from regressing second-stage residual on the instrument set) at the 5% level.

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Table I: OLS Regressions

	Larger Sample (n = 98)				*Medium Sample (n = 69)*				*Smaller Sample (n = 57)*			
Dependent Variables →	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
Ordinary Least Squares												
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

Table II: Correlation Matrix (*n = 133*)

	Log GDP per Capita	Literacy 2000	Life Expectancy 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 III: Correlation Matrix (*n* = *57*)

	Log GDP per Capita	Literacy 2000	Life Expectancy at Birth 2000	HDI . 10	RULE	WPR	STATE HIST	ELF	DENS	LLCK	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				
Ethno-Linquistic 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 (LLCK)	-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 IV: Descriptive Statistics

Variable	Mean	Std. Dev.	Minimum	Maximum
Larger Sample (n = 98)				
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
Ethno-linguistic Fragmentation (ELF)	0.35	0.30	0.00	0.86
Land-locked (LLCK)	0.16	0.37	0.00	1.00
Medium Sample (n = 69)				
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
Ethno-linguistic Fragmentation (ELF)	0.39	0.31	0.00	0.86
Population Density in 1500 (DENS)	6.08	14.15	0.00	100.46
Smaller Sample (n = 57)				
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
Ethno-linguistic 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 V: 2SLS Regressions

	Larger Sample (n = 98)				*Medium Sample (n = 69)*				*Smaller Sample (n = 57)*			
Panel A: Two-Stage Least Squares												
Dependent Variables →	Log GDP per capita	Literacy 2000	Life Expectancy at Birth 2000	HDI .10	Log GDP per capita	Literacy 2000	Life Expectancy at Birth 2000	HDI .10	Log GDP per capita	Literacy 2000	Life Expectancy at Birth 2000	HDI .10
Rule of Law (RULE)	1.07 (0.31)*	3.15 (9.48)	10.24 (5.49)***	1.37 (0.71)***	1.50 (0.41)*	13.71 (9.69)	23.09 (7.36)*	2.62 (0.82)*	1.20 (0.27)*	10.04 (7.02)	10.99 (3.16)*	1.68 (0.47)*
Weak Political Rights (WPR)	-0.21 (0.22)	-12.39 (6.76)**	-5.40 (3.91)	-0.82 (0.50)	-0.14 (0.17)	-9.52 (4.11)**	-1.36 (3.12)	-0.44 (0.35)	-0.14 (0.13)	-9.32 (3.44)*	02.48 (1.55)	-0.50 (0.23)**
R^2	0.70	0.35	0.52	0.62	0.60	0.37	0.39	0.55	0.61	0.41	0.55	0.62
Panel B: First Stage for Endogenous Variables												
Dependent Variables →	RULE		WPR		RULE		WPR		RULE		WPR	
State Antiquity (STATEHIST)	1.25 (0.35)*		-0.36 (0.81)		0.89 (0.48)**		0.42 (1.11)		-0.34 (0.60)		2.46 (1.47)***	
Ethno-Linguisitic Fragmentation (ELF)	-1.12 (0.30)*		2.30 (0.70)*		-0.93 (0.32)*		2.35 (0.75)*		-0.18 (0.35)		1.73 (0.86)**	
Land-locked Country (LLCK)	-0.25 (0.23)		0.48 (0.54)									
European Settler Mortality (ESM)									-0.42 (0.08)*		0.47 (0.21)**	
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)		4.22 (.009)		4.31 (.008)		8.84 (.000)		6.05 (.000)	
R^2	0.32		0.14		0.16		0.17		0.40		0.32	

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

STATEHIST: An index of state antiquity constructed by Bockstette et al (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 non-violent 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 AJR (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 US dollars is taken from Penn World Tables. HDI, i.e. Human Development Index (multiplied by 10), Life Expectation at birth and the Literacy rate all relate to year 2000, taken from the UNDP Human Development Report 2002.