28. Commitment, Coercion, and Markets: The Nature and Dynamics of Institutions Supporting Exchange

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Markets rest upon institutions. The development of market-based exchange relies on the support of two institutional pillars that are, in turn, shaped by the development of markets. Research in the field of new institutional economics has largely focused upon one such institutional pillar—'contract-enforcement institutions'—that determine the range of transactions in which individuals can commit to keep their contractual obligations. Yet, markets also require institutions that constrain those with coercive power from abusing others' property rights. These 'coercion-constraining' institutions influence whether individuals will bring their goods to the market in the first place.

This chapter's discussion of market-supporting institutions is geared toward the issues we know the least about. First, the dynamics of market-supporting institutions and the implied dynamics of markets; second, the inter-relationships between the dynamics of market-supporting and political institutions where the latter comprise the rules for collective decision-making, political rights, and the legitimate use of coercive power. It argues, in particular, that neither the assertion that liberal political institutions lead to markets nor that markets lead to liberal governance are supported by theory or history. Markets and political institutions co-evolve through a dynamic inter-play between contract-enforcement and coercion-constraining institutions.

Many successful market economies have prevailed in the past; there were adequate market-supporting institutions. Early successes, such as those in the Islamic world or China, were not indicators of later development. It was the commercial expansion that began in Europe during the late medieval period that led to the development of markets that support the complex, dynamic modern economy with its wide-scale reliance on impersonal exchange. Why didn't early success lead to subsequent market expansion? More generally, what does determine the dynamics of market expansion? Addressing these questions is a key to understanding the 'Rise of the West,' the operation of market economies, and the factors that still hinder market development.

The argument advanced here is that markets can rest on different combinations of contract-enforcement and coercion-constraining institutions.

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combinations, in turn, can support distinct sets of exchange relationships, implying that their relative efficiency depends on the details of the related economy. In particular, under conditions elaborated upon below, markets can prosper even in the absence of limited government and the rule of law. Equally important, different initial combinations of contract-enforcement and coercion-constraining institutions lead, in a non-deterministic way, to distinct dynamics of markets and political institutions.

The core idea developed here regarding this dynamic is the following. Contract-enforcement institutions *organically* (spontaneously) emerge in the initial stages of market development as unintended and unforeseeable results from the pursuit of individual interests. Yet, even in the same economic situation, different institutions can emerge as their details are influenced by various factors, including those that are cultural and social (e.g., Greif 1994a; McMillan 2002). The details of these initial contract-enforcement institutions influence which additional institutions the economic agents will find it profitable to use if made available and establish if possible. *Ceteris paribus*, initial contract-enforcement institutions influence what additional, *designed* (intentionally created) institutions the economic agents will 'demand.'

The ability to effectively supply designed—private- or public-order—contract-enforcement institutions, depends on the prevailing coercion-constraining institutions, which are those that influence decisions regarding the acquisition and use of coercive power. This is the case because many designed institutions reveal information about wealth to those with coercive power. Wealth-revealing, designed, contract-enforcement institutions will be utilized only if coercion-constraining institutions are such that this information does not undermine the security of property rights.

Consider, for example, public-order, contract-enforcement institutions. When appealing to the court, using a land registry, applying for a business licence, or submitting to a regulatory agency information regarding one's wealth is generated. This information can be used by those with coercive power to identify and capture this wealth. Wealth-revealing public-order institutions can be *effectively* supplied only if the generation of this type of information does not lead to wealth confiscation. If this is not the case, even if public-order, contract-enforcement institutions are established, they will be underutilized. Distinct coercion-constraining institutions imply distinct abilities for *effectively* supplying various, designed, contract-enforcement institutions that further extend the market.

Interestingly, the coercion-constraining institutions conducive to the growth of the market also likely to lead to the endogenous emergence of political institutions associated with liberal societies in which market participants (the 'commercial sector') have political representation and influence. Political institutions—rules for collective decision-making, political rights, and the legitimate use of coercive power—that are actually followed are self-enforcing in the sense that following them is each political actor's best response. (E.g., Barzel 2002; Greif 1994b, 1998; Hardin 1989; Weingast 1997.) An important determinant of a political actor's decision to follow a political rule depends on his relative coercive power. (E.g., Acemoglu and Robinson 2001; Bates 2001; Bates et al. 2002; Downing 1992; Greif 1994b, 1998). Because coercion-constraining institutions influence decisions regarding the acquisition and use of coercive power, they impact the set of self-enforcing political institutions.

In particular, the coercion-constraining institutions conducive to the effective supply of designed, wealth-revealing, contract-enforcement institutions are those in which the commercial sector has coercive (and economic) power that countervails the coercive power of others, such as rulers. Under certain conditions, the fear of risking a costly retaliation by the commercial sector would induce those with coercive power to prefer consulting it rather than taking unilateral actions effecting property rights. The commercial sector's power induces other political actors to provide it with a political voice through such means as political representation. Political voice precedes the establishment of, in particular, designed public-order institutions because it is required for the commercial sector to communicate the need for particular public-order institutions.

The views that market development requires appropriate political institutions (e.g., North 1990; Weingast 1997) or that political development follows the expansion of markets (e.g., Lipset 1959) are too simplistic. Markets and political institutions co-evolve, reflecting the dynamic interplay between coercion-constraining and contract-enforcement institutions. It is no coincidence that the modern market economy and the liberal state jointly emerged.

The above analysis builds on and integrates elements of Old and New Institutionalism. Old Institutionalism (e.g., Menger 1963 [1883]), emphasizes the distinctions and inter-relationships between organic (spontaneous) and designed (pragmatic) institutions; new Institutionalism emphasizes studying the micro-foundation of contract-enforcement institutions (e.g., Wiliamson 1985; Greif 1989, 1993) and the inter-relationships between the polity and the economy (e.g., North and Thomas 1973). Finally, the discussion here highlights the importance of understanding coercion-constraining institutions which influence the development of both markets and polities. It thus builds on, and contributes to, the emerging literature on the institutional foundations of social order. (E.g., Bates 2001; Bates et. al. 2002; Greif 1994, 1998, forthcoming.)

This chapter is organized as follows. Section I reviews the literature on contract-enforcement institutions while section II defines and elaborates on coercion-constraining institutions. Once the nature of these two types of institutions is clarified, section III provides a tentative theory of the dynamics of market-supporting and political institutions. Section IV draws on history, particularly that of China and Europe, to illustrate the merits of this conjecture.

The theoretical conjecture and historical analysis presented in sections III and IV are very rudimentary. Many aspects of the theory have yet to be worked out and additional important issues—such as agency problems within the polity—have yet to be integrated. Yet, this analysis makes an explicit conjecture regarding market expansion that links the institutional foundations of the market and the polity and is derived from history.

I. CONTRACT-ENFORCEMENT INSTITUTIONS

The extent of the market—the degree of voluntary exchange—is determined by its supporting contract-enforcement institutions (CEIs). CEIs determine the transactions in which one can credibly commit to fulfill contractual obligations and therefore the exchange relationships into which economic agents will enter. CEIs determine who can exchange with whom and in what goods. A market extends when the available set of CEIs increases, allowing a greater number of people to enter into more exchange relationships in more situations. Studying the relative efficiency of markets and their dynamics requires examining their CEIs and their development.

CEIs are required to support markets because exchange is almost always sequential. Some time elapses between the *quid* and the *quo,* providing one with the ability to renege.[1] This sequentiality implies the fundamental problem of exchange: A necessary condition for exchange is for all sides to credibly commit to adhere to their contractual obligations, to the extent that each expects to be better off than refusing to exchange. One will not enter into an otherwise profitable exchange relationship unless the other party can commit *ex-ante* (when a decision is made whether or not to exchange) to fulfill his contractual obligation *ex-post* (when he can renege).

Institutionalists have so far concentrated on contract-enforcement institutions that link conduct in current exchange with future payoffs in a way that makes it known *ex-ante* that the best one can do *ex-post* is not to renege.[2] To illustrate the mechanism, suppose it is commonly known that failure to pay a debt implies future inability to borrow, and that a borrower values the gains from future credit more than those from reneging on his debt contract. Because the best a borrower can do *ex-post* is to pay his debt, he can *ex-ante* commit to doing so. The value of future economic exchange is placed as a bond to be lost in case of breach. One can similarly commit when it is known *ex-ante* that failure to pay a debt implies sufficiently large legal sanctions.

[1] E.g., Greif 1997, 2000; Aoki 2001; Dixit 2004. Williamson (1985) stressed that sunk, relationships specific investment are important in generating sequentiality. But, as discussed in Greif 2000 exchange is sequential, for example, in financial transactions, in labor relationships, in agency relationships, and in the exchange of experience, goods whose attributes are revealed only with use. Indeed, even in spot exchange it is usually technologically impossible for the quid and the quo to be laterally exchanged simultaneously. The only exception is exchange in which goods with objectively known attributes are exchanged simultaneously.

[2] This is common in works focusing on the law (e.g., Williamson 1985) or reputation mechanisms (e.g., Greif 1989, 1993) to the exclusion of institutions based on internalized norms and intrinsic motivation.

Although various CEIs differ in their details, their effectiveness depends on mitigating the same problems of making the threat of sanctions (or rewards) credible. Those who are to apply the sanctions should have the appropriate information regarding past conduct and the incentives to neither shirk their duty nor abuse their power. The offender should be precluded from fleeing to avoid sanctions and the sanctions should be sufficiently high to deter breach. The parties should also share expectations regarding what behavior constitutes a breach and that should be commonly known that the above conditions are met. The details of CEIs make a difference, however, as they determine who will be able to credibly commit in what exchange relationships. An objective and impartial court is effective only in exchanges in which it can *ex-post* verify conduct.

In considering the relative merits of various CEIs, it is useful to group CEIs according to whether they are 'organic' or 'designed' and whether they are 'private-order' or 'public-order.'[3] According to Carl Menger (1883), organic (spontaneous) institutions emerge as an unintended and unforeseeable results of the pursuit of individual interests. Designed (pragmatic) institutions reflect intentional and conscious design and possibly the coordinated responses of many individuals. The former roughly corresponds to what North (e.g., 1990) defines as informal institutions and the latter, formal institutions. Private-order institutions, the importance of which has been emphasized by Williamson (1985), rely mainly on economic and social sanctions imposed by economic agents, while public-order institutions rely mainly on sanctions imposed by the state. In either of these cases, we can either study institutions as self-enforcing or not.[4] In studying self-enforcing institutions we attempt to study as endogenous the behavior of all relevant agents, including, such as judges, priests, or policemen.

In studying CEIs, the economics of information, contract theory and mechanism design have been extensively employed. (Furubotn and Richter 1997 provide a useful survey.) Game theory, however, has been found particularly useful because it exposes the conditions necessary for threats and promises to be credible. It is common to model the contracting environment as some version

[3] More generally, institutions differ according to the associated sanctions: whether they are economic, social, or coercive (in the form of legal sanctions or physical assaults); or by who imposes the sanctions: the interacting economic agents or a third party (either another economic agent such as a trade association or a non-economic agent, such as a legal agency). Actual institutions, as discussed below, often transcend these simple dichotomies. Some combine economic and coercive sanctions imposed by various agents. Organic institutions often evolve to acquire designed components while customs are often codified as laws.

[4] Self-enforcing institutions have been studied under various headings. Relational contracting (in which one's conduct in a particular situation reflects considerations regarding its implications on the entirety of the relationship over time and situations; e.g, McMillan and Woodruff 2000). Social norms (which are rules of behavior that are regularly adhered to although they are not legally enforced; e.g., Kandori 1992). Self-governance (in the sense that the responsibility for contract enforcement is placed in the hands of the interacting individuals; e.g., Dixit 2003) and reputation-based institutions (in which one's current conduct is motivated by fear of losing one's reputation and hence future gains; e.g., Greif 1989, 1997, forthcoming.)

of either a One-Sided Prisoners' Dilemma game or Prisoner's Dilemma.[5] But the flexibility of game theory permits the introduction of various assumptions, regarding, for example, the matching process among the potential parties to exchange or the information available to them, and whether the division of the surplus from exchange should be taken as given or not.[6]

In interpreting these theoretical analyses, however, it is important to recognize that they only expose the conditions required for particular behavior to be an equilibrium outcome and its implications. Empirical analysis, however, is needed to evaluate whether and how these conditions were fulfilled in a particular episode and how this situation became commonly known. This implies considering how the game (or, more generally, the environment) that was assumed in the theoretical analysis was generated.

Organic, Private-Order Institutions

In organic, private-order CEIs the credible threat by the economic agent(s) to impose sanctions deters breach. (Henceforth I will refer to 'organic, private-order CEIs' as 'organic CEIs.) Organic CEIs are likely to emerge when economic agents face the prospect of beneficial, ongoing exchange while breaching a contract is (actually or statistically) observable. The credibility of one's threat to terminate a relationship following a breach is not much of an issue. People are willing to spend resources to punish cheaters (e.g., Fehr and Gächter 2000) and people often expect that past cheaters will cheat again. In either case, the effectiveness of reputation-based deterrence—the range of situations in which it can support exchange—increases as the value of future relationships become higher. It therefore increases, *ceteris paribus*, with the per-period gains from exchange, and the economic agents' patience, and decreases in their alternative income outside the relationship. Organic CEIs are therefore more likely to emerge when the parties are locked into their relationships: the market is thin and it is costly to find a new partner with whom to exchange. McMillan and Woodruff (1999)

[5] One-Sided Prisoners' Dilemma game (OSPD) (Greif 1989, 2000) is known as the Game of Trust (Kreps 1990). One player can initiate the relationship and if he has done so, the second player gets to decide whether to cheat or not. Cheating is more profitable to the second player but expecting cheating the first player is better off by not initiating the relationship. Greif (2000) argues that the commitment problem associated with exchange is well captured by this game. In the Prisoners' Dilemma game (PD) both players move sequentially, each can choose to either cooperate (be honest) or defect (cheat). Defecting is a dominant strategy (it is the best action for each player whether the other cooperates or cheats). If both cooperate, they are better off than if they both defect. (E.g., Kandori 1992; Ellison 1994.) Hodgson 1998 reviews the use of evolutionary game theory to study CEIs.

[6] Greif (1989, 1993), for example, considers the implications of transferable utility (where the payoff distributions are endogenous to the interacting parties) and non-random matching. Milgrom, North, and Weingast (1990) and Dixit (2003) examined the implications of asymmetric games in which the players are not symmetric in their actions sets). Kranton (1996a) Ghosh and Ray (1996) and Kali (1999), Dixit (2003) considered adverse selection situations in which players are of different types in the sense that some are less likely to cheat. Clay (1997) examined the incomplete monitoring situation in which one can mistakenly believe that the other cheated.

tested this proposition in contemporary Vietnam and indeed found that where the closest alternative trader is far away, more credit was granted.

The cost of terminating relationships can endogenously emerge as a part of the institutions. Suppose that exchange is supported only by the above bilateral reputation in which one is punished only by the person whom he cheated. Suppose that the one who cheated has to wait until another relationship is naturally dissolved before he establishes a new relationship. If the implied cost of waiting is sufficiently high, a bilateral reputation mechanism can support exchange.[7]

The above discussion assumes a moral hazard situation. All agents are identical and each faces the choice of whether to breach his contract or not. In reality, however, the economic agents have different unobservable characteristics that determine how likely they are to breach a contract. Some may be more patient than others or have better unobserved outside opportunities. In such adverse selection situations, where some agents are of a 'bad' type and hence more likely to cheat, bilateral reputation can operate even if it is technologically costless to immediately find an alternative partner to an exchange. Because some agents are bad types, each agent is motivated to 'test' new partners in exchange to discover their types. One 'builds' a relationship by initially trading small and gradually increasing the stakes or one demands that his partner bear a sunk cost (e.g., giving gifts or wasting time) at the beginning of their relationship. Such initial sunk cost increases the cost of breach. (Watson 2002; Kranton 1996a; Ghosh and Ray 1996.) In contemporary Africa, suppliers of input and credit were indeed found to initiate exchange in small amounts and gradually increase them (Fafchamps 2004.)

Bilateral relationships provide only limited and often costly contract enforcement. They require market imperfections to insure that the value of the exchange is higher than can be achieved by exchanging elsewhere. Each bilateral exchange may require the costs of building relationships or other sunk costs required to establish trust. Organic institutions based on bilateral reputation mechanisms require that one is able to directly monitor the performance of the other. Hence, these institutions are effective in exchanges such as that of goods where quality is easy to verify, or in credit relations. They are ineffective, however, in an exchange where outcomes are uncertain and not directly observable. (E.g., in agency relations.)

Organic, multilateral reputation institutions can support exchange in a wider range of situations than is possible under a bilateral reputation mechanism. More behavior can be monitored, better information circulated, and higher sanctions would be imposed on those who cheat. These institutions are based on information flows regarding past conduct among many economic agents and on economic sanctions imposed by those who were not cheated. Each individual

[7] MacLeod and Malcomson 1989 present a comprehensive analysis. In equilibrium, the unemployed agent cannot establish a new relationship by offering to, say, sell his product for less than the market price because at such lower prices it is not credible that one will not cheat.

is willing to exchange information with others, expecting to get information in return. Because economic agents have more to lose by revealing valuable information to competitors, the incentive to share information is higher if this is not the case.

The literature identifies three reasons why an individual might find it optimal to participate in a multilateral punishment against someone who did not cheat him. First, in moral hazard situations, the expectation that others will sanction an individual can be enough to motivate punishment, because punishment by others reduces the ability to perform and reduce loss due to breach (Greif 1989, 1993; Fafchamps 2004.) Second, in adverse selection situations, past cheating reveals bad types who will cheat again (e.g., Kranton 1996a; Ghosh and Ray 1996).[8] Third, individuals participate in multilateral punishment according to an internalized sense of fairness among members of a social structure. (Fehr and Fischbacher 2004.)

Because organic CEIs based on multilateral punishment are not designed, they often have symbiotic relationships with social structures, norms, and cultural beliefs (e.g., Greif 1994a). These social features provide the initial conditions for the rise of the economic institution which, in turn, reproduced these social features. Information flows, personal familiarity within such social structures as networks, communities, business groups, and religious groups, make multilateral (community or collective) punishment possible. Shared norms and beliefs and their representation in customs and merchants' laws coordinates on the actions that constitute cheating is provided by.

Individualistic searching for reliable business partners can also lead to the formation of a social structure in the form of a business network or an 'old boys' network. (Kali 1999; Fafchamps 2004.) In either case, the gains implied by the economic institution to each of the members of the social structure motivate retaining affiliation with the social structure and hence, reproduce it. An economy can therefore end up segregated in the sense that exchange, beyond spot exchange, is conducted among members of groups based on non-economic attributes such as religious sects, lineages, etc. In this case, the overlay of an economic institution on a social structure also implies that social sanctions and social, cultural, racial, or religious exclusion supplement, or even replace, the disciplinary impact of economic sanctions.

To illustrate institutions based on a multilateral reputation mechanism, consider the one that governed agency relationships among the eleventh century (Jewish) Maghribi traders who were engaged in long-distance trade all over the Muslim Mediterranean. (Greif 1989, 1993.) Among them, it was efficient—ignoring contractual problems—to operate through overseas agents rather than

[8] Kandori (1992) and Ellison (1994) pointed out the possibility that in random matching PD games, a multilateral punishment can be supported by having the one who is being punished play cooperate when the other punishes him by playing cheat. Punishing is thus profitable to the one who punishes. One cooperates in his own punishment, in turn, because doing so implies that the punishment will cease after a finite number of periods.

having each merchant travel abroad with his goods. But because agents could cheat while handling a merchant's capital abroad, to be employed they had to be able to *ex-ante* commit to be honest *ex-post*, after the goods were sent to them. Among the Maghribis, as arguably among others in similar situations, this commitment was achieved based on a multilateral reputation mechanism within a business network by an institution that can be referred to as a coalition.

The Maghribis employed each other as agents, shared the expectations that Maghribi merchants would hire only Maghribis agents, and that all of them would cease employing an agent who had cheated. Information flows within their commercial and social network enabled detection and circulation of information about cheating. Coordination on multilateral punishment was facilitated by a set of cultural rules of behavior "a Merchants' Law" that specified how an agent should act to be considered honest in circumstances not mentioned in a merchant's instructions.[9] False accusations of cheating were curtailed by the extensive use of witnesses to testify to one's honesty. Multilateral punishment was self-enforcing because each merchant, expecting others to punish, found it in his best interest to punish as well.

Multilateral punishment enhanced efficiency and profitability relative to bilateral punishment (in which only the trader who was cheated retaliated), since it enabled the employment of agents even when the relationship between a specific merchant and agent pair was not expected to recur. The resulting additional gains from cooperation, the value of the information flows, and the expectations concerning future hiring ensured the 'closedness' of the coalition. Merchants were motivated to employ only member agents while agents were motivated not to seek employment elsewhere because being a coalition member was profitable. Although wages were lower than under a bilateral punishment, employment was more certain. Finally, agents were motivated not to cheat in their old age fearing that their children's reputations would suffer.

Social and economic sanctions often inter-relate in organic institutions and this interrelationship can reflect strategic manipulation by individuals pursuing their own interests. This complexity is well illustrated in the study of contract enforcement institutions in Mexican California conducted by Clay (1997a, 1997b).[10] This analysis touches upon two neglected issues in institutional economics: the interplay between social and economic sanctions and multi-tier institutions (although see Dixit 2003a; Greif 2004).

Social relationships were central to a contract enforcement institution in the Mexican communities but there was no institution that enabled their members to commit to buy goods for credit from long-distance American traders. Among these traders, contract enforcement was achieved based on a coalition-like

[9] Rules that make the meanings of various actions common knowledge are central to any institution based on multilateral or third-party punishment. See Greif 1993 for a discussion of economic institutions and Hardin 1989 and Weingast 1997 for political institutions.

[10] For empirical analyses of the interplay between social sanctions and economic institutions, see Ellickson 1991; Landa, 1994; Bernstein 1992; and Rauch 2001.

institution and economic sanctions. The two institutions were linked, however, to create a composite—two tiers—institution that enabled Mexicans to commit to pay their debts. This institution emerged when individual American traders created a link between the Mexican intra-community institution and the American traders' coalition. These individuals integrated into the communities by marrying local girls, converting to Catholicism, and settling in the villages. Hence, they gained access to the intra-community contract enforcement institution. These American traders also retained their membership in the American traders' coalition. An American who settled in a community used the intra-community, social-based institution to collect debt from locals and he could also commit to not to breach a contract with the American trader who provided the loan by the threat of being excluded from the American traders' coalition.

Efficiency-enhancing organic CEIs are not necessarily optimal given the existing monitoring, information, and enforcement technology as lack of coordination hinders adjustments. Each individual behaves optimally given the constraints and opportunities offered by others' behavior and expected behavior, but whenever the environment changes in a way that makes different behavior optimal, there is no mechanism to adjust expectations regarding others' behavior. This expected behavior therefore continues to influence choices thereby hindering adjustments. The efficiency of organic CEIs is therefore higher in a static economy when rules governing exchange and punishments do not have to adjust frequently.

Similarly, the efficiency of organic CEIs is higher when it is less important to adjust the number of interacting individuals. The optimal size of an organic CEI with multilateral punishment is theoretically linked to the speed of information transmission. The optimal size balances the benefit of greater participation with the cost implied by the delay in punishment due to the additional time required to transmit information. But the actual number of individuals governed by the institution reflects either the original social group around which the institution emerged, or individualistic search for worthy partners. In either case, the size may not be optimal. In the presence of adverse selection, organic CEIs based on multilateral punishment can be welfare-reducing as they lower the incentives among non-members to search for worthy partners. (Greif 1993; Kali 1999; Annen 2003.)

Moreover, organic CEIs based on multilateral punishment reduce incentives to create institutions that would foster impersonal exchange and support the needs of a dynamic economy. (Greif 1994a; Kranton 1996.) More generally, the relative efficiency of organic CEIs declines as populations and markets grow. These institutions are relation-based and hence entail low fixed costs (they do not require special organization or other systemwide special investment) but high and rising marginal costs. The expansion of a business entails exchange where one has successively weaker relational links with the other party to the exchange. Expansion thus requires investment in building relationships and carries a greater risk of collapse. (Li 1999.)

Public-Order CEIs: The Legal and Regulatory Systems

Designed CEIs can support exchange that organic CEIs cannot and often reflect a social or private response to gains from providing additional contract-enforcement. They reflect intentional and conscious design and possibly the coordinated responses of many individuals and therefore are characterized by explicit rules that regulate and coordinate membership, behavior, processes for changing rules, and intentionally created organizations, such as guilds, courts, credit rating companies, escrow companies, and business associations.

A social response to the needs for additional contract enforcement manifests itself in public-order CEIs, the legal and regulatory systems. Public-order CEIs coordinate behavior through laws and regulations, collect and process information using various formal procedures and bureaucratic organizations, and deter contractual breaches by threatening legal and regulatory sanctions. They can be particularly effective in influencing behavior because they rely on the authority of the state. They can, for example, employ coercive power to punish violators, impose various auditing and supervisory requirements, and one to appear in court and reveal information.

The legal system constitutes a third party that alters the costs of a contractual breach, enabling parties to commit to a contractual performance in cases in which contracts will not be self-enforcing based on the value of future relationships.[11] In addition, the law can foster the operation of organic CEIs. Boot et. al. (1993) argued that legal contractual incompleteness can be used to signal reputation while Johnston et. al. (2002) empirically found that in post-communist countries the law is used to reduce the cost and time required to build new relationships that are later sustained by reputation.

Compared to the costs associated with organic CEIs, the public-order institutions that support modern markets require high fixed costs. Large legislative, judicial, administrative, and coordination costs are required to establish the system and render it effective and credible in the context of a highly mobile, non-agrarian economy. Once established, the marginal cost of enforcement—and hence exchange relationships—is low and constant. (E.g., Li 1999.) Indeed, until recently economists studied market economies assuming that public-order CEIs provide costless, perfect, objective, and impartial contract enforcement.

In reality, however, the legal system rarely provides costless, perfect, objective, and impartial contract enforcement. (E.g., Williamson 1985; Ellickson 1991; Greif and Kandel 1995.) Public-order institutions that best approximate this situation operate in a few advanced contemporary countries and only in recent times. We know surprisingly little, however, regarding the institutional

[11] Public-order institutions have also been successful in creating markets by compiling and making public the necessary information. Formal land titling and land registrars, for example, underpin mortgage market in developed economies (Arruñada 2003). Approval by the FDA is central to the trade in drugs.

development that led to these modern successes.[12] But even in these cases, the operation of the law as a contract enforcer is restricted by various factors. For a court to enforce contracts, for example, it should be able to *ex-pos*t verify actions taken by the litigants and their impact on observed outcomes.[13] Verification of past actions is often costly, particularly in labor relationships and in complex business transactions and production processes.

Apart from the need for verifiable information, other factors lessen the effectiveness of the legal system. States have a limited geographical scope while laws and regulations may be designed to achieve various policy objectives other than securing rights. Budget constraints and administrative capacity imply that legal proceedings may be time consuming. Direct legal costs, such as legal fees, and indirect costs, such as the opportunity cost of time, are often high. Economic agents' strategic responses to the incentives implied by laws and regulations can limit their effectiveness. (E.g., Townsend 1979.) Polinsky and Shavell (2000) surveyed the literature considering how legal rules can be designed to maximize social welfare subject to these constraints. In the models they surveyed, it was implicitly assumed that the prevailing legal tradition is the European tradition of man-made, explicit law. In societies with other, religious and customary legal traditions, different models may be needed.

Further limiting the operation of public-order institutions is the need to mitigate the associated agency problem. Decision-makers within public institutions, such as judges, policemen, and regulators, have to be provided with the incentive to use their power to protect rather than abuse property rights or otherwise reduce property-rights security. Judges can be bribed or take advantage of the fact that it is difficult to measure the quality of their services. The prevalence of corruption in much of the world testifies to the magnitude of this problem. (Rose-Ackerman 1999; Shleifer and Vishny 1993).

The difficulty of providing appropriate incentives to judges and regulators often reflects their concern about their personal safety following an unfavorable judgment. Powerful members of a society can use coercive power and other means to obstruct justice and circumvent regulations. (Glaeser and Shleifer 2003.) Making judges and regulators free of political control and relying relatively more on regulations rather than laws are ways of mitigating this problem. Yet, relaxing the ability to discipline judges can lead to more corruption. Similarly, regulatory agencies can be established to propagate the policy of legislators beyond these legislators' term rather than promoting welfare (e.g., Weingast 1996).

[12] See Greif 2001, 2004 regarding endogenously providing incentives for a partial law to provide impartial justice. Klerman 2003 summarizes various theses and emphasizes competition among courts of law; Klerman and Mahoney 2004 elaborate on the importance of freeing the legal system from political intervention.

[13] In general, modern legal systems do not collect information in commercial cases. This has not always been the case. In late medieval Venice, the authorities *ex-ante* collected the information required to verify the conduct of agents in long-distance trade ventures. (Gonzalez de Lara, 2002.) I am not familiar with an analysis of the optimal scope of *ex-ante* or *ex-post* information collection by the legal system.

These limitations of public-order institutions imply, in particular, that organic CEIs are more efficient when information is known but not verifiable, when the speed of resolving contractual disputes is important, and when the issues are too complex for the court to grasp at a low cost or when the issues require particular knowledge that the court lacks. Indeed, Macaulay's (1963) seminal work reveals the large extent to which organic CEIs govern contractual relationships in the contemporary USA. (See also Bernstein 1992.) Where and when public-order institutions are ineffective due to corruption or budgetary constraints, the relative profitability of private-order institutions increases. Indeed, the informal sector is disproportionally larger in developing economies and countries in transition (Portes 1994: 438; De Soto 1989: 12, 131; Fafchamps et. al. 1993; Greif and Kandel 1995).

When effective public-order institutions exist, economic agents can respond to their limitations for fostering contract enforcement by appropriately structuring their contractual relationships, property-rights distribution, and organizational forms. Williamson (1985) has emphasized the importance of private-order institutions operating in the shadow of the law. Hostage-taking, vertical integration, and corporate governance are examples of such structuring. (See Williamson 1985; Hart and Moore 1999; Maskin and Tirole 1999; Tirole 2001. Dixit (forthcoming) also explores the implications of bargaining in the shadow of the law.)

Townsend (1979) initiates the analysis of situations in which one economic agent can, at a cost, falsify or verify information while the court can enforce contracts given the endogenous information structure. Theoretical and empirical analyses examined the structures of optimal contracts in such situations of costly falsification and verification. (E.g., Lacher and Weinberg 1989; Williamson, D. 2002.) Recognizing the contractual and efficiency implications of costly state falsification and verification opens the way for considering the implied motivation to alter the institutions that influence these costs. Gonzalez de Lara (2002) presented such an analysis, when she considered how late medieval Venice structured its legal system to reduce these costs, thereby enabling progressively more efficient contracts and more savings to be invested in profitable long-distance trade.

Designed, Private-Order Institutions

A private response to the needs for additional contract enforcement—beyond that provided by existing organic and public-order CEIs—manifests itself in designed, private-order CEIs. (Henceforth, I will refer to these institutions as 'designed CEIs' although public-order institutions are also designed.) These are intentionally established by economic agents in response to profit opportunities entailed by improving contract enforcement beyond what is possible otherwise.

Designed CEIs, like organic ones, are based on the expected responses of economic agents. They are established either by the interacting parties (e.g., business associations) or by a third party (e.g., the stock exchange and credit rating companies). Institutionalists examined mainly designed CEIs that foster contract enforcement by the credible threat of imposing economic sanctions by the economic agents. Similar to public-order institutions, designed CEIs are intentionally planned and have explicit rules and intentionally created organizations. Because designed CEIs rely on sanctions by the economic agents, they are analytically similar to organic ones. But because designed CEIs intentional, they often have features similar to those of public-order institutions, such formal procedures to resolve disputes and impose fines.

The organizations and rules central to designed CEIs increase the disciplinary impact of economic sanctions by changing the information structure, providing coordination, and more generally by altering the strategic interaction among the economic agents. The organizations central to designed CEIs—or the people who control them—are often directly motivated by their economic interests and would not abuse their power seeking profit.[14] This mechanism, as elaborated below, often has to be supplemented by legal means.

Information intermediaries are pervasive in the modern economy, taking such diverse forms as auditing firms, credit reporting firms, the Better Business Bureau, credit rating firms, the Consumer Report, and business associations.[15] They reduce the cost of acquiring information regarding an economic agent's past conduct, ability to perform, and professional credentials. They improve information quality, increase the speed of its circulation, and even certify one's identity in cyberspace. Information intermediaries improve monitoring, aggregate and track information regarding past conduct, and enable one to signal his reputation by paying fines, providing arbitration, and checking the quality of goods and services upon delivery or because of a complaint. Organizations, such as business associations, coordinate responses to contractual breaches, thereby fostering the certainty that a multilateral punishment will be imposed but reducing the risk of being improperly punished.

Other organizations foster contract enforcement by altering the structure of the interactions among the economic agents, particularly by replacing infrequent interactions among any two economic agents with frequent interaction with the organization. This changes the set of self-enforcing beliefs regarding conduct. A prominent example is a credit card company. When one pays with a credit card, the (possibly) infrequent transactions between the seller and the buyer are replaced by the frequent transactions between the buyer and the credit card

[14] For a formal analysis, see Milgrom, et. al 1990; Dixit 2003; Greif 2004.

[15] In 1985, for example, a credit reporting firm, currently called 'Seafax', began selling information regarding the past conduct of buyers in the fresh fish industry via the internet. It responded to the profit opportunity presented by the fact that sellers of perishable goods need to quickly market their product. They have little time to verify the creditworthiness of a new customer. Indeed, during the 1980s, the US fresh fish industry was characterized by repeated interactions (lock-in relationships) in which those selling fish were in a weak bargaining position. Seafax capitalized on this situation by becoming an information intermediary. It now provides information regarding companies in all segments of the perishable food industry in North America and its business news is updated every half hour. For analysis of such intermediaries, see Bernstein 1996; Klein 1997.

company. Failing to pay a debt to a credit card company, unlike to a one-time seller, entails losing the gains from future purchases using the card.[16] Exchanges, such as the London Exchange or the NYSE, operate on the same principle. The infrequent interaction between two particular sellers and buyers of securities is replaced by frequent ones between each seller and buyer and the exchange itself. Escrow companies, large retailers, and hotel chains foster contract enforcement in a similar fashion.

Hotels and other chains illustrate how organizations also foster contract enforcement by aggregating reputation. The organization is structured in a way that reputational consideration makes it credible that it will monitor and discipline its constituting members. A hotel chain is motivated to maintain the same level of service quality in its individual hotels, expecting that once disappointed, a customer will shun its other hotels. (Ingram 1996.) A chain enables more commitment than is possible by individually owned hotels. Stock exchanges are similarly motivated by reputational considerations to discipline their member traders.

The credible threat by an organization to discipline its members, increases the value of membership, as each member can attract more trade. This higher value, in turn, provides the organization with an effective disciplinary device in the form of exclusion. Indeed, reputation considerations motivate the NYSE to examine and certify the creditworthiness of its traders, judge disputes among members, suspend members who are at fault, and screen listed firms for their quality (Banner 1998). Arguably, similar considerations motivated craft guilds and credit cooperatives (Guinnane 1994) in the pre-modern economy and large producers, and business associations in modern times.

Because formal organizations are central to designed CEIs, these institutions' cost structure is similar to that of public-order CEIs. There is a high fixed cost in initially setting up an institution, as it requires the acquisition of organizational capacity (such as storing information), specifying and making common knowledge rules and processes (regarding membership, filing a complaint, and sanctions), generating awareness of the new organization, and creating the belief that it can support contract enforcement in a way that is beneficial to its customers. Once established, however, designed CEIs exhibit low marginal cost of expanding the number of individuals covered by the system or the number of transactions each is engaged in.

This assertion regarding the nature of the marginal cost, however, is too simplistic. It considers only the technological determinants of costs. But strategic considerations of these costs muddy the water. The organization (or the individuals who control it) can gain from abusing the information and power at their disposal. A credit rating company can gain by extorting money for good reports or charge customers for unjustifiably improving their rating. A business association can let its members go unpunished for selling defective goods and keeping the gain or sharing it among themselves. Ignoring possible legal

[16] A credit card company is also more likely to seek legal sanctions, given that its reputation is on the line and that credit card's debt aggregates the monetary value of many purchases.

sanctions, such behavior is likely to be punished eventually by customers who take their business elsewhere. The threat of losing future business to discipline the organization, however, means that its profits need to be sufficiently high. The costs of the institution also include the mark up—beyond the technological marginal costs—required for providing the organization with the appropriate incentives. The cost of designed private and public CEIs can also by higher than technologically warranted because they are often natural monopoly and hence, ignoring other factors, would not change marginal cost for their services.

The high fixed costs associated with designed institutions imply that organic ones would be more efficient when there is little to gain from expanding the number of exchanging individuals or when the loss due to bilateral repeated relationships is relatively small. There is rationale behind the observation that the largest (in term of coverage) designed CEIs seem to be located in the consumer and retail sectors. The credit card companies and stock exchanges are but two examples. In any case, designed CEIs can substitute for organic ones and, due to their lower marginal costs and designed features, may be more efficient in providing contract enforcement in impersonal, complex exchange and in a dynamic environment.

We do not have a systematic body of knowledge regarding either the relative efficiency of public-order and designed, private-order CEIs or the factors influencing their relative efficiency. Public-order CEIs entail the potential benefits of impartial third party enforcer but also entail the various costs elaborated above. The organizations or individuals central to designed CEIs would enforce contracts only to the extent that they can directly profit from doing so. Competition among designed CEIs would therefore not necessarily be beneficial as it is the expectation of future profit that motivate the CEIs not to abuse its enforcement ability. Yet, without competition, the CEIs would charge the price for its service that maximizes its profit rather than gains from exchange. Relative to public-order institutions, designed ones are likely to be better able to learn from the market's feedback, diversify their products, rely on tacit knowledge and statistical measures of performance, provide faster service and be more cost effective than a legal system.

Irrespective of their relative costs or other implications, designed CEIs can often substitute public-order institutions. The Bourse of Amsterdam was the most important and best organized in Europe during the seventeenth century. Yet, many of the financial instruments traded in it, such as short sales, forward contracts, options, and hypothecation of shares as collateral, were either in legal limbo or actually illegal. Reputation sustained trade until the time when these instruments became legal.[17] The threat of economic sanctions can achieve the same deterrence as the equivalent legal sanctions.[18] Even today, where legal

[17] Stringham 2003. Quinn 1997 and Neal and Quinn 2001 report similar findings regarding goldsmith-bankers in London around the same time.

[18] But legal sanctions can be imposed when economic sanctions cannot due to, for example, budget constraints, outside economic opportunity, etc.

systems are relatively ineffective, as for example, in contemporary Mexico, economic sanctions replace legal ones. (E.g., Woodruff 1998.) Even where the legal system is well developed, as in the USA, similar sanctions are important in commercial transactions. (E.g., Bernstein 1992, 1996.)

Arguably, designed CEIs substituted for the public-order CEIs in past economies to a larger extent than in modern ones as the latter were relatively undeveloped and the state had limited administrative capacity. (Although historically the distinction between private and public was less sharp than in modern time). Furthermore, there is evidence to support the claim that designed CEIs were central to the historical process through which various market economies grew and led to the conditions favorable to the establishment of public-order CEIs. Markets did not wait for public-order institutions provided by a centralized, territorial state. Rather, they developed based on designed CEIs.[19]

Consider the case of impersonal exchange characterized by separation between the *quid* and the *quo* over time and space. Despite the lack of impartial legal enforcement provided by the state, such exchange prevailed in late medieval Europe based on an institution that can be referred to as the Community Responsibility System (CRS). This was a designed system (although perhaps with organic roots dating back to the sixth century) with explicit rules and an organization that built on the fact that merchants were members of particular communes that had intra-commune contract-enforcement institutions. These intra-community institutions provided the foundation for an institution that provided contract enforcement in inter-community impersonal exchange despite the absence of a state with effective public-order institutions. (Greif 2002; 2004.)

Under the CRS, communities established organizations in trading centers that enabled merchants to learn the communal and personal identities of their (otherwise unknown) partners in an exchange. If a member of community A, for example, had cheated a member of community B each and every member of community A was held responsible by community B for the damage. Hence, community A had the choice of either ceasing to trade with community B or compensating for the damage and seeking retribution from the individual who cheated. This joint-liability—which was neither contractual nor voluntary for an individual merchant—implied that each community was endogenously motivated to utilize its community enforcement institutions to discipline a merchant member who cheated in inter-community exchange. Anticipating compensation, merchants were motivated to learn the communal and personal identities of their partners to an exchange and could credibly commit to complain in a case of default despite the cost involved. Hence, communal courts provided impartial justice in inter-communal disputes although a community's courts were partial. Indeed, they provided impartial justice because they represented the interests of their merchants and cared about their reputations.

[19] See Greif 2000 regarding Europe, and Schaede 1989; Ramseyer 1991; Ryser 1997; Okazaki 2002; and Kambayashi 2002 regarding Japan.

Institutions such as the CRS, that fall in between the way we model private and public-order institutions, probably constituted an important step in the development of market economies. Indeed, if exchange historically began based on organic CEIs founded on personal relationships within relatively small groups, the emergence of the impartial legal system to facilitate impersonal exchange requires an explanation. Why was a high, fixed-cost, legal system for impersonal exchange established if the volume of impersonal exchange was low? We know that contracting efficiency alone does not lead to a transition from one system of contract enforcement to another. (Greif 1994a and Kranton 1996b.) Private-order institutions, such as the CRS, generated the initial volume of impersonal exchange required to justify the high sunk cost of the public-order institutions. Indeed, these institutions were established following a decline in the economic efficiency and political viability the CRS. (Although, as discussed below, the success or failure of this transition depended on the existence of complementing institutions.)

Designed CEIs seem to be equally prominent in modern market economies. They are such an integral part of these economies that it is easy to lose sight of their importance. They manifest themselves in organizations such as banks, credit cooperatives, credit card companies, consumer groups, escrow companies, trading companies, wholesalers, chain stores, hotel chains, banks, trade associations, unions, trading companies, trade and industry associations, stock exchanges, clearinghouses, credit rating agencies, credit bureaus, and better business bureaus. Their operation is reflected in brand names, copyrights, audits, guarantees, accreditations, etc.[20] Although the associated institutions have many other functions, such as reducing search costs, matching savers with investors, and smoothing consumption, contract enforcement seems to be an integral and important part of their operation.

Indeed, although we lack a systematic analysis of the relative importance of different types of institutions in various economies, designed CEIs seem to be the hallmark of advanced market economies. Fafchamps (2004) examined the institutional foundations of markets in contemporary Africa. He found that all have organic institutions and some have effective public-order institutions. Where they uniformly fall behind is in their designed CEIs. Similarly, the engine of growth in modern economies has been the rise of their service and consumers' goods sectors. One can conjecture that this rise is due to their designed CEIs. Such CEIs have a relative advantage in these sectors due to the difficulties of measuring quality, the relatively small sums, and the many instances of infrequent interactions.

We similarly lack a systematic analysis of the relationships among and designed and public-order CEIs. Designed institutions are often established in response to their details and to circumvent the need and reduce the cost of using

[20] Separating the identity of a business owner and that of the business itself fosters contract enforcement. The option of selling the business and its reputation increases the cost of a breach. (Kreps 1990 and Tadelis 2002.)

public-order institutions. Title insurance companies and escrow companies are examples. Public-order institutions are often required to prevent designed CEIs from using their economic power to curtail rather than expand exchange and efficiency. A drastic example is that of the Hanseatic League. This was an inter-city alliance that initially secured the property rights of German merchants abroad, and thereby promoted Baltic and Atlantic trade during the late medieval period. The same economic power that enabled the Hanseatic League to check the coercive power of rulers abroad, enabled it also to acquire exclusive trading rights. It eventually turned into a welfare-reducing monopoly that restricted the entry of more efficient traders (Greif 1992).

Although many designed institutions are completely private-order, others critically depend on complementary public-order institutions. Indeed, many designed institutions are what can be referred to as 'quasi-private.' Contract enforcement between the interacting economic agents in the main exchange relationships does not depend, or does so only marginally, on the law. The threat of economic sanctions provides the appropriate motivation. Yet, the law is critical to the operation of these institutions by creating the various conditions necessary for them to function and mitigating auxiliary contractual relationships.

The ability of credit rating agencies to secure property rights in exchange, for example, critically depends on public-order institutions that increase the cost of falsifying one's identity. Hotel chains, large producers, wholesalers, and banks commit by placing their reputations and hence future business as bonds. Yet, the value of this reputation critically depends on public-order institutions that protect their brand names. Accreditation and seals-of-approval provided by business-associations or the Better Business Bureau motivate their holders to adhere to their contractual obligations. This motivation, however, benefits from the increase in the cost of forgery that public-order institution create. Public-order contributes to maintain the value of organizations' reputation by increasing the cost for copy cats to enter, assume the organization's identity and cheat its customers.

Similarly, the designed CEIs in the modern economy imply separation between ownership and control. The corporate governance literature explores the contractual implication of the associated agency problems, concentrating, in particular, on inducing agents to exert the level of effort most beneficial to the firm in the presence of asymmetric information and contract incompleteness. Yet, an additional first-order problem is preventing these agents from directly taking actions that benefit themselves but harm the company. The corporate governance literature usually ignores such possibilities. Managers are assumed to be able to supply inefficient level of effort but are unable to take the money and fly to Bermuda. More generally, those in control can, for example, transfer assets to their private accounts, get kickbacks from suppliers, provide their customers with defective products or false information, raise their salaries, and give themselves bonuses, and extort money using their ability to inflict sanctions. The firm or organization and their owners may care about the implied reputational or other losses, but those in control may not care about either their own reputations or the organization's. (E.g., Johnson et. al. 2000).

Very little systematic analytical and empirical attention has been devoted to the importance of quasi-private institutions. Even less attention has been devoted to hybrid institutions that combine elements of private and public-order and/or combine economic, social, and coercion sanctions. The CRS discussed above represents such a hybrid, as the concern of a community's reputation motivated it to use its coercive power against a community member who defaulted in inter-community relationships. Medieval guilds often motivated their members by economic, social, legal and even religious sanctions. (E.g., Richardson 2002; Olds and Liu 2000.) The famous Grameen Bank lends to an individual through a formal contract but conditions its lending to others on repayment, thereby soliciting social pressure to motivate repayment. (E.g., Ghatak and Guinnane 1999.) Several works examined the role of private coercion—organized crime—in providing contract enforcement. (E.g., Gambetta 1993; Greif and Kandel 1995, and Dixit 2003.)

Many other aspects of designed CEIs are still waiting for a rigorous analysis. We don't have a theory for the internal organization of business associations and similarly designed CEIs, or the conditions under which reputation considerations prevent abuse of information and organizational power. The organizations central to many designed CEIs are often natural monopolies implying that despite their low (technical) marginal cost, their prices may be high, diminishing their usefulness. Even in this case, competition may be beneficial for reducing prices and ensuring quality of service. Yet, too much competition can erode the reputational incentives that provide motivation to these organizations not to abuse their information and power. Conversely, firms strategically respond to the information regarding their reputations that is produced, for example, by credit rating companies.

The dynamic process of the emergence of designed CEIs or how exactly acquire the information critical to their operation has not been rigorously studied either. Empirical studies (e.g., Hoffman et. al. 2000) suggest the importance of initially having sufficiently valuable information which enables the organization to both gain from its distribution and use it to acquire additional information. The implications of increases in market scale (e.g., through globalization) on designed CEIs, has also not been studied. Conversely, the implications of international trade on desiged CEIs have barely been considered. (Although see Greif 1992; Yarbrough and Yarbrough 2003.)

Various contract enforcement institutions—private and public, organic and designed—have their distinct advantages and disadvantages and each complements and substitutes for the other. More reliance on organic CEIs, however, is optimal in relatively small and static economies and when there is less to gain from impersonal exchange. More reliance on public-order and designed CEIs is optimal in relatively large, dynamics economies with much to gain from impersonal exchange. Arguably, public-order institutions are more important in industrial economies in which complexity is relatively low and transactions relatively large. In this case, the court can relatively easily verify past actions and the threat of a law suit is credible given the sums involved. Designed CEIs are relatively more important in complex, consumer- and service-oriented economies in which actions are difficult to verify *ex-post* and the sums are relatively small.

Coercion-Constraining Institutions

As noted by John Locke, among many others, the feasible extent of markets depends on protection from coercive power. For one thing, displaying one's goods in the market facilitate their confiscation by those with coercive power. In small social units, such as tribes, communities, and clans, the use of coercive power to capture another's property is likely to be effectively curtailed by the density of personal, social, and economic ties and the relative even distribution of coercive power. In larger social units, this is not the case leading many, such as Hobbes, to argue that a state is required to protect rights and foster markets. This implies a dilemma: a state strong enough to protect rights is also strong enough to abuse them.

It has been suggested that this dilemma can be resolved by political institutions limiting rulers' power: limiting their prerogatives and placing political decision-making rights in the hands of asset holders. (E.g., North and Weingast 1989; Weingast 1997.) Yet, as was noted in the chapter by Mary Shirley, this answer is unsatisfactory. Market economies often prosper despite the lack of such political development. China had an extensive market economy during its Imperial past in the absence of such political rules. More generally, from 1950 to 1990, the rate of growth in national income of democracies and dictatorship was almost the same. (Przeworski et. al. 2000.) Conversely, the political rules of modern developed economies were often adopted in developing economies without disciplining rulers or fostering markets. The political rules of the modern state are neither necessary nor sufficient for markets. Understanding the prevalence of markets and the co-evolution of markets and political rules requires examining deeper factors.

Accordingly, the following concentrates on coercion-constraining institutions (henceforth, CCIs.) CCIs influence decisions at the social level regarding the acquisition and use of coercive power. Effective CCIs make violence economically productive as it is used to protect property rights from abuses, such as expropriation by the state, the ravages of a civil war, and large-scale military raids. They secure property rights by discouraging those who can acquire coercive power to abuse rights from doing so, and by motivating those who have coercive power—rulers, the elite, states (and I henceforth use these terms interchangeably)—to protect rights. These CCIs rely on balancing one's coercive power with either the coercive power of others or their ability to inflict economic sanctions on one who abuses rights. CCIs deter abuse of rights by creating the shared beliefs that attempting to do so will lead to a costly retaliation.

There is no one-to-one correspondence between states and CCIs. There can be effective CCIs in the absence of a state while in predatory states there are no effective CCIs. Yet, the common denominator of CCIs can be illustrated by considering the argument that a state strong enough to protect property rights is also strong enough to abuse them. Two assumptions are implicit in this statement. The first is that only the state has coercive power. But the existence of a state does not preclude social units within it—including those composed of economic agents—from having actual or potential coercive power. Countervailing coercive power can constrain the state. Indeed, states' coercive power has historically often been no more than the aggregation of the coercive power of its composing social units. A balance of coercive powers within a polity—among such social units as towns, clans, tribes, and classes—can limit the abuse of rights.

The second assumption implicit in the above statement is that having coercive power implies an unconstrained ability to gain from abusing rights. This, however is not the case. The costs and benefits to a ruler from abusing rights depend on the state's administration's capacity to gain information regarding assets that can be captured, capturing them, and transforming the proceedings into goods and services beneficial to the ruler. A ruler's costs and benefits from abusing rights depends on administrative capacity and who controls the administration. Furthermore, administration is required for effective ruling. The court and the army need to be provided for and resources have to be mobilized to advance the ruler's policies. Those controlling the administration are therefore in a position to take actions that are costly to the ruler. In particular, if the state's administration is controlled by the asset holders, abusing their rights can undermine, rather than foster a ruler's welfare. The capacity of, and control over the state's administrative can be structured in a way that the ruler can either credibly commit not to abuse rights or is deterred from doing so.

Furthermore, various technological and institutional factors limit a ruler's grabbing hand. These factors influence a ruler's benefits from abusing a particular asset and the extent to which economic agents can respond to expropriation by economically sanctioning the ruler. For example, a ruler gains little from capturing an asset whose value is lost without the original owner's complementary human capital, and abusing alien merchants' assets can drive the merchants away, depriving a ruler of trade benefits. Hence, even a ruler with a monopoly over coercive power can be deterred from abusing rights by countervailing economic powers reflecting either administrative structure or institutions taking advantage of limits to a ruler's grabbing hand.

CCIs that are based on either countervailing coercive or economic powers reflect the same principle. The expected responses of those with coercive and economic powers influence one's decision regarding abusing their assets. Protection is afforded, however, only to those who can retaliate. This section presents the principles on which various CCIs rest (although a CCI often rests on several principles), their origin, dynamics, and relationships with political development.

Balancing Coercive Powers

In CCIs based on balancing coercive powers, the expected violent response of the asset holders deters one from abusing these assets. Bates et. al. (2002) provided a general framework to study the nature and costs of various such CCIs in polities with and without a ruler.[21] The analysis considers the strategic decisions regarding acquiring and using coercive powers focusing on equilibria in which no abuse occurs. By imbedding this problem in a resources allocation problem, it is possible to measure the cost of securing rights under various CCIs. It is the difference between the equilibrium and the first-best allocation of resources.

Consider an infinitely repeated interaction among agents (e.g., clans, tribes, and towns). In each period, each agent simultaneously chooses how to allocate a finite amount of effort among production, investment in coercive power, or leisure (which cannot be expropriated). After observing the choice of the other, each can sequentially decide whether to raid the other—at some cost—or not. The amount gained from raiding increases in one's relative coercive strength, the superiority of defense over offence, the amount produced by the other, and the share of the products lost due to a raid.

No Ruler: Mutual Deterrence Among Social Units When there is no ruler, there are equilibria in which each agent sufficiently invests in coercive power to deter the other from raiding him. Theoretically, such a 'mutual deterrence' equilibrium is more likely to exist the more the agents value the future; the higher the cost of raiding; the more the military technology favors defense; the higher is the share of the products lost due to a raid; and when the agents also gain from economic cooperation (e.g., trading or joint production that they can lose following a raid). Furthermore, the higher the value of these parameters, the lower is the cost of securing property rights as the equilibrium allocation of effort is closer to first-best. Yet, such a mutual deterrence equilibrium generically entails a socially wasteful allocation of effort to acquire coercive power. Furthermore, it reduces the incentives to make productive investments because wealth requires resources to protect it. Finally, mutual deterrence equilibria are unstable in the sense that even transitory changes in relative might or wealth lead to military conflicts.

Tribal societies provide the classic example of polities without a ruler but such polities even exist in urban settings. The commune of Genoa was a polity in which security of property rights was based on mutual deterrence. By the end of the eleventh century, the decline in the Muslim and Byzantine naval powers provided maritime cities, such as Genoa, with an opportunity to gain from expanding its overseas trade.[22] The Genoese responded by establishing a commune in which mutual deterrence among Genoa's heavily armed clans

[21] See also Greif 1994b, 1998; Muthoo 2000; and Bates 2001. For works considering the relationships between military technology and security of rights, see, e.g., Skaperdas 1992; Skaperdas and Syropoulos 1996; Konrad and Skaperdas 1996, Grossman 1997; Grossman and Kim 1995; Moselle and Polak 2001.

[22] See Epstein 1996 for Genoa's history. For analysis, see Greif 1994b, 1996 1998, forthcoming.

secured property rights. Clans jointly mobilized their resources to equip the navy and the military force required to expand Genoa's commerce. The extent of inter-clan cooperation was limited, however. Consistent with the claim regarding the disincentive for wealth expansion under mutual deterrence, the clan who gained most from the previous expansion ceased cooperating in further expansion. A richer Genoa would have required increasing its military investment to deter others from attacking it.

Wide-scale commercial expansion did not occur until 1155 when the constraint implied by mutual deterrence was relaxed by an external military threat from the German Emperor. Inter-clan military conflict would have made the city more vulnerable to attacks by the Emperor. As each clan had to devote fewer resources to deter the other, each was willing to cooperate by advancing commerce. Yet, as Genoa grew in wealth and the external threat unexpectedly subsided (due to a civil war in Germany) in 1164, a prolonged period of civil war ensued.

Make me a King Extending the model to include a ruler with coercive power enables examining the conditions under which he would better secure rights. Assume that a ruler can use his coercive ability, after paying a fixed cost, to capture assets. He will capture the assets with some positive probability (which can depend on the agent's coercive power). Apart from the actions discussed above, each agent can be now also either pay a tax or not.

Consider the equilibria in which property rights are secured. Each economic agent is deterred from raiding by the military ability of the others, but in addition, he is also deterred by the threat of the ruler retaliating against one who raided. The ruler is motivated to retaliate by the expectation that as long as he does so and refrains from abusing rights, the agents will pay him taxes. If he fails to retaliate or abuse rights, the agents will revert to playing another equilibrium strategy in which they invest more in military ability and consume more leisure. In this case, the ruler loses tax revenues. In such equilibria, the coercive power of each player—the ruler and the economic agents—is constrained by the coercive power of the two other players.

Distortions are caused by two factors. If the relative coercive power of the ruler is not sufficiently high, in and of itself, to deter the economic agents from raiding each other, each of them will invest in acquiring coercive ability. Effort allocation is therefore distorted. As the ruler's coercive power increases, however, and his expected retaliation is sufficient to deter raiding, this distortion approaches zero. A second distorting factor is taxation. Although taxation is socially beneficial as it motivates the ruler not to abuse rights, it causes the economic agents to consume more leisure than in the first-best allocation. The per-period equilibrium taxation (on-the-equilibrium-path), and hence distortion, is lower then lower a ruler's per-period payoff after he abused rights (that is, off-the-equilibrium path). Intuitively, if his continuation value is lower, a lower per-period tax (on-the-equilibrium-path) is sufficient to deter the ruler from abusing rights. (The distortion declines in the ruler's discount factor. Olson (1993) presents a non-strategic analysis of this important consideration.)

The extent to which an equilibrium with a ruler can approximate a world with perfectly secured property rights and a first-best allocation of effort thus depends on two factors. The higher a ruler's coercive power, the less effort each agent has to allocate to deter raiding; the lower the ruler's continuation value after he abuses rights, the lower the per-period tax required to deter abuse, and hence the lower is the access consumption of leisure due to taxation. At the limit, the allocation of resources approaches the first-best as the ruler's coercive power increases but his continuation value decreases. The ruler's coercive power constrains the economic agents' coercive power while their ability to acquire coercive power and consume leisure constrains the ruler's coercive power.

Central to the economic efficiency of the CCIs with a ruler is his coercive power on- and off-the-equilibrium path. The CCIs are more efficient the higher is the ruler's coercive power on-the-equilibrium-path (that is, as long as he did not abuse rights or reneged on punishing those who did) and the lower is his coercive power off-the-equilibrium-path (that is, after he abused rights or failed to punish those who did). The following discussion presents historical CCIs in which this condition has been satisfied to various degrees. It highlights the efficiency of CCIs in which there is no ruler with an independent military power.

A Ruler with an Independent Coercive Power

Motivated by a severe external military threat, the Genoese altered their political system in 1194 by introducing a *podestà* (literally, a 'power') to create a balance of coercive power among their clans. The *podestà* was a specialist in violence, a non-Genoese hired by the city for a year to be its military leader, judge, and administrator. He was supported by the soldiers and judges he brought with him. The *podestà's* military strength was such that the threat of him possibly joining forces with a clan that was attacked deterred each of Genoa's main clans from instigating an attack. Yet, the *podestà* was too weak to become a dictator and abuse rights given the strength of Genoa's clans and its population. A set of pre-specified rules defined which actions by the *podestà* constituted an abuse.

Central to the *podesteria* system, however, was the way that the "threat" of the *podestà* retaliating against a transgressor by joining forces with another clan was made credible. The *podestà* was promised a high wage at the end of his term, but because he was weaker than each clan, if one clan took control of the city, there would be no reason to reward the *podestà*. Hence he was motivated to act against a transgressor because otherwise his payoff would be lower. Furthermore, this reward scheme made it in the *podestà*'s interest to not fundamentally alter the balance of power between the clans. Hence, he could credibly be impartial and retaliate against those who broke the law rather than turn against an entire clan.

For this incentive scheme to be effective, however, it was imperative to insure that no clan would be able to credibly commit—using such means as marriage—to rewarding the *podestà* if he assisted that clan against another. More generally, it was imperative that the *podestà* could not acquire a power base within Genoa. This was accomplished through a series of regulations, supervised by a committee, that restricted his actions. E.g., the incoming *podestà* was selected by a council, whose members were chosen to prevent control by any specific clan, and the selection process for the new *podestà* was governed by the outgoing *podestà*. The *podestà*—as well as his relatives to the third degree—was restricted from socializing with Genoese, buying property, marrying a local woman, or managing any commercial transactions for himself or others. Furthermore, the *podestà*, as well as the soldiers who came with him, had to leave the city at the end of his term and not return for several years. A *podestà*'s son could not replace him in office.

The Genoese promise to reward a *podestà* at the end of his term if no clan had initiated and won an inter-clan war was credible because reneging would have impeded Genoa's ability to hire a high quality *podestà* in the future. Indeed, Genoese *podestà*s were recruited from a handful of Italian cities, in particular from Milan, and the contract between Genoa and its *podestà* was read in front of the "parliament" of the city from which the *podestà* was recruited. This does not imply that a *podestà* was given a free hand to mismanage the city's affairs. After the end of his term he had to remain in the city for fifteen days while his conduct was assessed by auditors. Deviations from pre-specified rules were punished by fines that were subtracted from his payment.

Historically, other polities, similar to Genoa, contracted with an external ruler to govern them to mitigate internal conflicts over leadership. Indeed, the prevalence of this practice into the modern period seems to have facilitated colonization (Henley 2004). As colonialism illustrates, rulers with independent coercive power were sometimes able to capture the polity. But even in this case, a balance of coercive powers often secured rights. Consider the Manchurian Qing Dynasty (1644–1911) which gained control over China after the Manchurians were invited to intervene in a civil war in China. The relative size of China and that period's military technology implied a high cost of subduing a revolt by the masses. The Emperors recognized "the people as a persistent potential threat to the Chinese state" (Wong 1997: 93) while a Chinese tradition conferred legitimacy on a dynasty if it was able to foster economic prosperity. Emperors were therefore motivated to commit to protect property rights and foster prosperity.

An elaborate system of rules, organizations, and precedents was used to generate the correct beliefs that rights would not be abused by, ironically, making the threat of revolt credible. The Qing imposed a relatively low tax, coordinated expectations regarding taxation by fixing its amount and making it common knowledge at the village level. Additional customary taxes were collected by the bureaucrats to finance local public goods and to remunerate them. Yet, bureaucrats were disciplined not to tax the peasants beyond the official and customary level. A bureaucrat who increased taxation faced riots by the peasants, which subsequently triggered an investigation and possibly punishment by the central authority. (Yang 2002.)

A Ruler with a Conditional Coercive Power

In the competition among the Italian maritime city-states, it was Venice which overtook Genoa. Interestingly, it had a CCIs with a ruler without an independent coercive power but with a conditional power: he was strong on-the-equilibrium-path (that is, as long as he did not abuse rights or failed to punish those who did) but was weak off-the-equilibrium-path (that is, after he abused rights or reneged on punishing those who did). Hence, Venice's CCIs entailed a low-cost protection of property rights.

Initially, however, Venice's polity was characterized by the absence of an effective rule. The Venetians were left to govern themselves from the eighth century due to the decline of the Byzantine Empire.[23] The city's main families and clans became engaged in lengthy and bloody competition over the position of the Doge (who previously was a Byzantine governor sent from Constantinople). Of the twenty-nine Dogi that governed between 742 and 1032, about three-quarters were either assassinated, blinded, resigned, or expelled due to internal conflict.

A stable polity was established, however, during the eleventh century, probably in response to the increasing gains from jointly mobilizing resources to promote long-distance trade. The Doge was made a magistrate, elected for life and responsible for establishing social order and providing public goods. Coercive power remained highly diffused among the prominent clans and families of Venice which were represented in a general council. The Doge himself was supervised by an elected council, was not allowed to go against its advice, and was subject to the law. Without a standing army, a Doge could be punished for breaking the law and abusing rights. Yet, the Doge was strong on-the-equilibrium-path as each clan was motivated to support the Doge if any other clan attempted to capture the position of the Dogeship or abuse others' rights.

Motivation for the clans to lend the Doge their coercive power, was based on the way that Venice's institutions distributed gains from the city's wealth. Lucrative economic and political posts were distributed independently of a clan's relative coercive power. Posts, including that of the Doge, were allocated to members of the political elite through a mixture of deliberation and random selection. The random component implied that one's clan relative military power and patronage system had little influence on the outcome. Explicit rules and historical experience coordinated the clans' beliefs on the above behavior.

Balancing Coercive Power with Economic Power

The prospect of losing future economic gains following an abuse can constrain coercive power even in the absence of countervailing coercive power. In considering CCIs based on balancing coercive power with economic power it is useful to differentiate between two groups of institutions. First, institutions based on

[23] See Lane 1973; Norwich 1977. The analysis here builds on Greif 1995; forthcoming.

an inherent limit in the ability to gain economically from one's coercive power; second, institutions based on the need for administrative capacity to gain from abusing rights and effectively rule. The following discussion reflects that these institutions have not been extensively studied.

CCIs Based on the Limited Reach of the Ruler's Grabbing Hand Confiscation of an asset can reduce its value due to complementarities between it and other assets, human capital, and expertise. If this reduction is high enough, providing a stream of rent to those with coercive power would be more profitable to them than capturing the asset. Rent can be provided, for example, by paying taxes or providing economically lucrative jobs. The cost of security is the distortions implied by mixing politics and economics in the absence of the rule of law. These costs will decrease the more value is lost from confiscation, which is the case when production requires high human capital, inventiveness, and complementary assets that are difficult to expropriate. Indeed, Mexico has failed for a long time to de facto nationalize its oil industry because the foreign oil companies had the expertise, organizational capacity, and the complementary assets required to render oil production profitable. (Haber, et. al. 2003.)

Abuses can also be deterred by the expectation that the economic agents will shift their activities following an abuse in a manner that would be costly to the abuser. Agents can shift their activities abroad or turn to produce or consume goods, such as leisure, that are more difficult to expropriate. Deterrence is enhanced by the mobility of assets, complementarities with other assets that cannot be captured, and the ability of the economic agents to overcome the collective action and free-rider problems associated with collectively responding to abuses. The following example highlights the general principles underpinning such institutions.

Specifically, consider the case of the medieval merchant guild. (Greif, et. al. 1994.) Long-distance trade in late medieval Europe was based upon exchanging goods in geographically favorable places. Medieval rulers who controlled these areas faced the temptation to abuse merchants' property rights using their coercive power. Furthermore, a ruler could abuse the rights of some merchants but not others implying that, when there are many merchants, the threat of one whose rights were abused to never trade again following an abuse was insufficient to enable a ruler to credibly commit to secure rights. Hence, without an institution making the ruler's pledge to provide protection credible, alien merchants were unlikely to frequent that trading center, a costly outcome for both ruler and merchants.

Theoretically, to surmount the ruler's commitment problem at the efficient level of trade, an organization with two abilities was needed: first, the ability to coordinate the responses of all (or enough) merchants if the rights of any merchant were abused; second, it had to have the ability to enforce its embargo decision on the merchants despite the fact that if an embargo was in force, an individual merchant had a lot to gain from trading. Indeed, the value of his trade to the ruler would be so high, that the ruler could credibly commit to respect that merchant's rights. The late medieval period witnessed the rise of merchants' territorial associations with coordination and internal enforcement capacities that governed the relations between their members and rulers of other territorial areas. These organizations took many forms, such as the German Hansa, merchant guilds, and autonomous cities. Yet, all of them had the capacity to coordinate action and discipline their members. Together with the shared beliefs associated with the above multilateral reputation mechanism that they made possible, these organizations constituted the merchant guild institution.

CCIs Based on the State's Administrative Structure Sending soldiers on a rampage is a costly way for a ruler to materially benefit from his coercive power. In contrast, state-controlled administration with the appropriate information, organizational capacity, and incentive reduces the cost and increases the benefits from confiscating wealth. It has information regarding who has wealth, where it is located, the capacity to take control of it, and the ability to dispose of or employ it in a way that benefits the ruler. Furthermore, administration is required for the state to function: the ruler and the court must be supplied, soldiers have to be recruited, trained, equipped and paid, and the public-order benefitting the ruler has to be maintained. The size, capacity, and control over the administration thus influence the costs and benefits of abusing rights to a ruler.

The (limitedly) **absent state**: By not creating an effective administration to govern a particular economic sphere, a ruler can commit not to abuse rights in that sphere because limited administration increases his cost of confiscation. When a ruler stands to gain less from abuse, property is more secure. Security increases with the cost and time it takes to establish an administration with the capacity to abuse rights at low cost. Similarly, security increases the more the agents are able to consume, transfer, or hide their assets after observing the initial stages of establishing a more effective administration. The initial absence of an effective administration, in turn, fosters their ability to do this. By being absent from a particular economic sphere—in the sense of not having an effective administration—a state can better commit to respect rights. Note that a state committing to rights in this way can be and usually will be absent only to a limited extent. To survive it has to be able to raise revenues, have an effective military force, and be able to provide public goods. These must be supported by an administration confined to these tasks.

Because assets' mobility increases security in the presence of an absent state, CCIs based on such absence were particularly important historically in securing traders' rights. Indeed, a common feature of many past market economies was the small extent to which movable assets were taxed apart from customs and payment for services within the market area itself. This was the case in the medieval Muslim world whose market economy was perhaps second-to-none. Traders were not subject to wealth or income tax and were taxed only when they voluntarily brought their goods to a particular locality such as market places and ports. (Goitein 1971; Udovitch 1988.) The same situation prevailed in the prosperous market economy of Imperial China (Wong 1997; Pomeranz 2000; Yang 2002.) In both cases, however, the state was not absent from other spheres of economic activity. It provided public goods, including social order, personal security, and agricultural and commercial infrastructures.

Delegation of state administration to asset holders: Commitment to not abuse the rights of asset holders can also be achieved by delegating state administration to these asset holders. Instead of having an administration controlled by the state, public goods and services to the state are provided directly by the asset holders. Similar to an absent state, commitment to property rights is achieved by depriving the ruler of the information and organizational capacity required for low-cost abuse of rights. More commitment is possible, however, because the asset holders can respond to abuse of their rights by cutting off the flow of services to the state. When the state depends on financing or tax collection provided by the asset holders to sustain its courts or maintain its army, the cost of withdrawing services can be high. The factors determining the extent of security of through delegation are similar to those in the case of the absent state.[24]

The large extent to which delegation can secure rights is reflected in its ability to constrain the most powerful rulers of sixteenth century Europe: the Hapsburg Kings of Spain. The kings borrowed heavily from Genoese financiers who had an international monopoly over paying the royal army outside Spain. The Genoese could therefore respond by withdrawing these services if the king refused to pay his debt. The famous bankruptcies of the Spanish kings were indeed periods of debt reorganization rather than abuse of rights per-se. (Conklin 1998.)

The experience of the Genoese in Spain also illustrates how delegation fosters security by influencing the information structure and thus the cost of various actions. The Genoese collected the taxes used to pay Spaniards who held the Crown's domestic loans, each of which was linked to a particular tax revenue source. Because the king did not have information about who held the various loans, he could not repudiate them without possibly hurting those—such as his military elite—who could retaliate against him. Abuse risked hurting those upon whom the ruler depended to maintain his control.

Self-governance: Property rights are even more secure when delegation is done in the context of giving the asset holders an autonomy. As before, delegating the administration of the state renders it vulnerable to economic sanctions. But self-governance further fosters the asset holders' ability to commit to retaliating following an abuse of their rights. Self-governance entails having bodies of collective decision-making, mechanisms, such as judicial processes and police forces, to overcome the free-rider problem and motivate and induce

[24] Delegation is different from farming out of state administration under which agents (who are not necessarily the asset holders) compete for the right to e.g, collect taxes. Property rights security thus depends on the state's interest and ability to prevent over-taxation. Ottoman history illustrates the fragility of such systems.

members to participate in sanctions. (The above discussion of the merchant guild is relevant here.)

Hapsburg Spain illustrates the effectiveness of self-governance. During the sixteenth and seventeenth centuries, towns had administrative autonomy (Nader 1990) that balanced the Crown's coercive power with their economic power. In 1571 the Crown decided to substantially increase the sales taxes collected in the towns. The administration of sales tax collection, however, was in the hands of the towns themselves. They informed the Crown that they would not farm out this higher tax, leaving the king with little option but to look for additional revenue elsewhere.

The Origin and Dynamics of CCIs and Political Institutions

Many factors that are exogenous to CCIs influence whether a particular CCI can be an equilibrium outcome in a given situation. Furthermore, generically, many CCIs can be equilibrium outcomes in a given situation. So while exogenous factors determine the set of feasible institutions, initial, possibly even transitory, historical factors influence which CCI will prevail.

CCIs based on either balance of coercive or economic powers are more likely to be an equilibrium the more those with coercive power value the future. CCIs based on a balance of coercive powers are also more likely to be an equilibrium as the production and military technologies reduce the per-period gain from abuse and increase the asset holders' potential military strength. E.g., the lower is the portion of the product that can be expropriated, the less mobile and more perishable is the product, the more defense is superior to offense, the easier it is to convert civilian production controlled by the asset holders to military production. CCIs based on balancing coercive power with economic power are more likely to be an equilibrium as the geography, production, monitoring, and information technologies increase the costs and reduce the benefits of expropriation. E.g., those with coercive power have limited independent economic resources, it is less costly to move assets away from their reach, and establishing a new administration is time-consuming and costly. The distortions and hence costs entailed by the need to secure rights declines in the above parameters.

For a particular CCI to prevail the relevant actors should share the beliefs that the related strategies will be followed. They should share beliefs regarding what action constitutes an abuse and what the consequences of doing so will be. Which set of shared beliefs, out of the many that are generically possible as an equilibrium outcome, will prevail reflects initial conditions, such as the initial distribution of wealth, military might, and coordinating mechanisms. Non-economic and potentially temporary factors, such as cultural heritage, the legitimacy and interest of coordinating organizations, and charismatic leaders, therefore play a role in institutional selection. Initial conditions, spontaneous evolution, learning, and intentional design influence institutional selection.

The CCIs of Genoa and Venice illustrate this argument. The Genoese and Venetians had similar military technology and similar initial endowments in the form of little arable land and locations favorable to trade. But they differed in their initial social structures, distributions of wealth and military ability, and tradition of centralized endogenous rule. The less concentrated social structure and more even and wide spread distribution of wealth and military might in Venice and the coordinating effect of the tradition of a Doge led to different institutional development.

Once a particular CCI establishes itself as an equilibrium outcome each actor's unilateral ability to change it is limited. An attempt to unilaterally change the CCI by taking such actions as raising a standing army or expanding the administration, entails military or economic retaliation. CCIs imply deterrence; one is prevented from taking an action that he would find beneficial in the absence of the institution. Each actor acts optimally given the constraints on his behavior implied by the institution, but he would have preferred, *ex-ante* or *ex-post*, not to be constrained. This is so even in the case when the CCI is Pareto-improving, enabling one to credibly commit not to abuse rights. E.g., a CCI can enable a ruler to *ex-ante* commit not to confiscate wealth *ex-post*, thereby promoting growth. *Ex-post*, however, the ruler would prefer to be able to confiscate it.

But CCIs do not last forever. They cease being effective, are changed unilaterally or multilaterally, intentionally or spontaneously, in response to exogenous changes in factors rending them equilibria, unexpected consequences, strategic innovations, external threats, and mutual gains. Unilateral institutional changes occurred in Europe, for example, following the fifteenth century Military Revolution which tilted the balance of coercive power in favor of the Crown and landed nobility and against peasants. Less able to constrain abuse, peasants throughout Europe were subject to increasing serfdom and taxation. This increase, however, was gradual, reflecting a learning process of the implied new balance of power. (Pettengill 1970.)

Gain from cooperation and external threats are a main source of mutually agreed upon institutional change as the histories of Genoa and Venice illustrate. The cities' histories also illustrate that the heritage of previous CCIs influence the set of CCIs that can be established as a new equilibrium outcome. The distribution of military and economic resources, shared beliefs, social structures, cognitive structures, and organizations that were part of the previous CCIs constitute part of the initial conditions in processes of institutional change. Hence new CCIs include institutional elements inherited from previous ones. (Greif, forthcoming.) Before and after the Genoese podesteria, a high concentration of military power and wealth and beliefs regarding the objectives and behavior of clans implied CCIs based on inter-clan mutual deterrence.

The set of feasible, consensual, institutional changes is also limited by the need to insure that each actor who can *ex-ante* block the change will not do so. This requires that those who will, *ex-post*, have more coercive or economic power commit not to use this power to make others worse off. Changes that otherwise would be Pareto-improving would not feasible without such commitment. For these changes to be agreed upon, those who will have less power should nevertheless expect to be better off by having a smaller share in a larger pie or by *ex-ante* devising *ex-post* safeguards, which take into account the *ex-post* new distribution of powers.[25]

Strategic innovations motivated by the constraints implied by existing CCIs facilitated establishing new CCIs. The introduction of the *podestà* in Genoa represents an innovation leading to a Pareto-improving CCI. The innovation constitutes a response to the needs of the Genoese but it reflects the introduction of a *podestà* in Italian cities that were controlled by the Emperor decades earlier and a learning process through which Italian cities experimented in various CCIs and administrative structures. Strategic innovations aimed at advancing one's relative power often take advantage of the ambiguity over which actions constitute a deviation. E.g., the rights of monopolies were ill defined under feudalism and European kings later attempted to take advantage of this by creating monopolies to gain resources and might.

Gradual and unanticipated consequences implied by existing institutions lead to institutional change. They alter such factors as wealth, military power, and information that constitute the necessary conditions for the existing CCI to remain an equilibrium. The absolutist French kings of the late seventeenth century who were above the law had to pay a high interest rate for their loans. Aspiring to be able to better commit to pay their debts, they allowed the financiers to establish corporations. These were better able to balance the Crown's coercive power with an economic power. The long-run unexpected consequence was that these financiers became so economically powerful that they blocked institutional reforms that would have hurt them financially but might have saved the monarchy. (Root 1989.)

Such unanticipated consequences imply that those who benefit from the existing CCIs would be wary of organizational, economic, and political changes that can undermine these CCIs. Rulers, in particular, would be wary of delegation, self-governance, and independent military organizations. The threat to rulers from allowing self-governance is well reflected in the history of Genoa where a large scale, designed private-order institution altered CCIs by aligning the incentives of many economic agents and increasing their organizational capacity. The Genoese Bank of San Giorgio was established, according to Niccolo Machiavelli (1532), when the republic conceded control over various revenue sources to its creditors after a military defeat. These creditors organized themselves as a self-governed entity, the Bank of San Giorgio. As Genoa's debts continued to accumulated, the Bank gained the administration of most of the towns and cities in the Genoese dominion. It became so powerful, according to Machiavelli, that whoever gained political control over Genoa, had to respect the rights of the Bank "as it possesses arms, money, and

[25] E.g., Greif 1998 and forthcoming (Genoa); Greif 2001 (contemporary Middle Eastern dictators fearing that fostering development will create a countervailing economic power). Acemoglu and Robinson 2000 and Acemoglu 2003 (the limits on political transitions due to the need to commit to *ex-post* compensate a ruler). Fearon 1997(bargaining over distribution when it determines ex-post coercive power and hence further bargaining power). Galor and Moav 2003 (inter-state conflicts motivate capitalists to increase workers' human capital although this leads to their deminse).

influence," and abusing its rights entailed "the certainty of a dangerous rebellion" (p. 352).

Although delegation, self-governance, independent military organizations, and large-scale, private-order institutions endanger rulers, they nevertheless will establish or tolerate them when their benefits are high relative to the risk they imply. This is more likely to be the case when the ruler's budget constraint is binding; when the ruler's legitimacy is high and hence the risk of revolt is low; when the organization can be abolished at will (as was true regarding the Merchant Guild); and when the institution provides services that are important for the ruler's control, such as feeding the capital city. Greif (2000), for example, argued that because the legitimacy of European rulers was high relative to that of Muslim rulers in the late medieval period, the former allowed more designed CEIs than the latter. Okazaki (2002) noted that despite initial resistence, the Tokugawa Shogunate (1603–1868) allowed food merchants to organize themselves, fearing that otherwise volatility in food prices would lead to riots that would undermine their control.

CCIs influence political development, particularly whether representative bodies would emerge or be established by rulers as means for collective, political, decision-making. Such bodies have been common in variety of political systems, ranging from monarchies (e.g., the English Great Council), constitutional monarchies (e.g., the English parliament), and tribal societies (e.g., the Afghani Loya Jirga). Seemingly diverse, these representative bodies reflect the constraint implied by CCIs. CCIs imply that, fearing retaliation, each actor will be deterred from taking unilateral actions that can be considered abusing rights or attempting to undermine the existing CCIs in a manner that would leave them worse off. Hence, an actor wishing to take such an action without invoking retaliation, would seek the consent of those who can retaliate.

This account provides a rationale for a puzzling observation: why do rulers, as was common in pre-modern Europe, allow for representative organizations whose members are not hand-picked by them although such bodies provide an arena for revealing and coordinating opposition to the ruler? The French revolution transpired after the Crown summoned the Estates-General for the first time since 1614. But when a ruler faces effective CCIs, he also stands to gain from representative bodies. They enable him to take actions with lower risk of costly retaliation. Representative bodies are a means to design explicit rules increasing—temporarily or permanently—the range of acceptable actions. Representative bodies are therefore more likely to be established when the ruler's budget constraint is binding and he is unable to provide the public goods he and his subjects desire.

We have no models of bargaining in the context of various CCIs. It is intuitive, however, that those who provide a ruler their consent, will demand and receive concessions for doing so. As noted above, these concessions are likely to take the form of safeguards against future abuses. Providing the ruler with additional resources risks shifting the balance of power in his favor, implying that those who are in a position to authorize this transfer, given the existing CCIs, will seek to safeguard their position. They will demand various concessions—such as freedom from taxes, administrative control, military resources, legal rights, the right to supervise or authorize various actions—to increase their ability to constrain the ruler *ex-post*.

Ironically, representative bodies also facilitate the abuse of property rights. Representative bodies are populated by those who balance each other's coercive and economic powers, providing them with a means to coordinate the abuse of rights for those who are not represented. In Poland, after the European Military Revolution that began in the fifteenth century, the balance of military power shifted in favor of the landed, lower nobility. They gained dominance in the kingdom's national assembly and used expropriated rights. The Polish serfs lost many rights during that time. Their tax obligations, for example, increased several times.

Conversely, if the economic and coercive power of groups represented in the representative body no longer constrains the ruler's actions, these groups will become, at most, a rubber stamp, a mechanism for a ruler to coordinate collective actions he finds useful. Alternatively, when the risk to the ruler of coordinating opposition through these bodies outweighs their benefits, he will not summon them. When absolutism reached its pick in France during the seventeenth century, the Estates-General was not summoned.

THE DYNAMICS OF MARKET-SUPPORTING INSTITUTION AND THE IMPLIED DYNAMICS OF MARKETS AND POLITICAL INSTITUTIONS

The dynamics of CEIs reflect preceding initial institutions. Initial organic, private-order CEIs influence the extent to which economic agents will find it profitable to use public-order and designed CEIs if available and establish them if possible. Initial CCIs influence the extent to which these CEIs can be effectively provided or established. Public-order and designed CEIs that reveal wealth to those with coercive power will only be utilized if the CCIs are such that revelation of wealth does not undermine property rights security. Conversely, rulers will permit designed, large-scale CEIs only if the CCIs are such that they either cannot prevent their establishment or these institutions do not undermine their control.

Initial institutions can lead market economies along distinct institutional trajectories. Furthermore, the same CCIs that are conducive to the emergence of wealth-revealing public and designed CEIs, and hence to market expansion, are also conducive to the emergence of political institutions in which the commercial sector will be represented and have influence. Members of the commercial sector need not fear revealing their wealth if the CCIs imply that a costly retaliation can be imposed if their rights are abused. These same CCIs imply that a ruler will find it beneficial to get permission from the commercial elite prior to taking action, particularly any action related to their property (e.g., taxation), to reduce the likelihood of costly retaliation. When market expansion and the development of political institutions reflect these kinds of CCIs, market expansion will further strengthen them and enhance their influence.

The Demand for Public-Order and Designed CEIs

Organic, private-order CEIs are universal, reflecting responses to gains from exchange. Although these organic CEIs reflect the need of trade they also reflect social and cultural factors. Initial social structures demarcate and verify membership and provide networks for information transmission. Cultural beliefs and behavioral norms coordinate expectations and provide a shared understanding of the meaning of various actions.*Ceteris paribus,* initial social structures and cultural features therefore influence which, among the many possible organic CEIs, will emerge, become an integral part of these institutions, and be reproduced by them. (Greif 1994a, 1996.)

Empirical and theoretical work indicates the relevance of the extent to which a society is more 'communalist' or more 'individualist.'[26] In the former case, larger, innate social structures that are based on kin, place of birth, or religion (e.g., lineage, tribes, or religious sects) are prominent and members of those societies feel involved in the lives of other members of their group. In more individualist societies, the individual and family, rather than the larger, innate social structure, are prominent and individuals expect that others will interfere relatively little in their affairs. The more communalist a society is in the initial stages of market development, the more, *ceteris paribus*, its organic CEIs will be based on each intra-group's economic and social sanctions among its members. The society will be more 'segregated:' each individual will interact socially and economically mainly with members of his group. The more individualistic a society is in the initial stages of market development, the more its organic CEIs will be based, *ceteris paribus,* on bilateral economic and social sanctions among individuals and families. The society will be more 'integrated:' economic transactions will be conducted among people from different groups. In either case, as discussed above, the symbiotic relationship between organic CEIs and their underlying cultural and social foundations, will lead to their mutual reinforcement.

Organic CEIs that reflect communalism and imply segregation generate relatively weak demand for public-order and designed CEIs. The ability of each social group to punish its members reduces the relative cost of intra-group economic exchange while the thinness of intergroup exchange reduces the benefits to each individual from leaving his group and pursue outside exchange. Even if economic efficiency calls for institutional development, it may nevertheless not

[26]This discussion is based on Greif (1994a) in which I used the term 'collectivism' instead of 'communalism.' 'Communalism' was suggested by Timur Kuran and Joel Mokyr. For works indicating the importance social and cultural factors see Granovetter 1985; Clay 1997a, 1997b; McMillan and Woodruff. 2000; Moriguchi 2003; Stulz and Williamson 2003; Biggs et. al. 2002; Fafchamps 2004; Olds and Liu 2000.

be rational for each individual agent to pursue the change. In contrast, organic CEIs that reflect individualism and imply integration implies relatively weak ability of each group to discipline its members. Such CEIs therefore generate a relatively strong demand for public-order and designed CEIs. (Greif 1994a; Kranton 1996b.)

Initial CEIs thus influence the extent to which the economic agents find it profitable to use, if available and establish, if possible, public-order and designed CEIs. The 'demand' for these CEIs reflects more than non-institutional, environmental and technological conditions.

The Supply of Public-Order and Designed, Private-Order CEIs

Demand for public and designed CEIs will not necessarily be met, however. Using public-order CEIs reveals wealth to those with coercive power. Appealing to the court, using a land registry, applying for a business licence, or submitting to a regulatory agency generates valuable information that can be used to identify and capture a person's wealth. Public-order institutions can be *effectively* supplied only if revealing wealth to those with coercive power does not undermine the effectiveness of the CCIs and hence the security of property rights. If this is not the case, even if public-order CEIs are established, they will be underutilized. Distinct CCIs imply different extent to which public-order CEIs can be *effectively* supplied.

Although the relationships between various CCIs and effectively supplying public-order CEIs have not been systematically studied, tentative conjectures can nevertheless be advanced. Consider first CCIs based on the state's administrative structure. An absent state has a limited ability to provide wealth-revealing, public-order CEIs without undermining property rights' security. It can provide weak public-order institutions which do not increase its ability to abuse rights supporting social order and personal safety. Delegating the state's administration to those in need for wealth-revealing, public-order CEIs entails a greater ability to effectively supply them. The property rights of the administrators are secured and, if they either make a living from providing these administrative services or benefit from commercial expansion, they can better commit than the ruler to respect others' property rights. For similar reasons, self-governance by those in need for wealth-revealing, public-order CEIs entails an even greater ability to provide such institutions, particularly on the local level.

Consider now coercion-constraining institutions based on balancing coercive power. When a balance of coercive power among social units constrains its use, there is no third party with coercive power to back the operation of the public-order institution.[27] A ruler with independent coercive power is able to more effectively provide public-order institutions although his ability is limited because revealing wealth increases the ruler's ability to gain from abusing rights.

[27] On the demand side, the expectation that a business dispute among members of different social units can lead to a military conflict among them undermines incentives to enter into such transactions.

This increased ability to gain from abusing rights undermines the previous balance of coercive powers. A ruler whose conditional coercive power is provided by those in need for wealth-revealing public-order CEIs is able to even more effectively provide these institutions. Unlike a ruler with independent coercive power, one with conditional coercive power can be punished by the asset holders following an abuse.

Table 1 summarizes the interrelationships between various organic CEIs and CCIs and the demand for and ability to effectively supply public-order CEIs.

Table 1. Supply and demand for public-order CEIs

*Coercion-constraining institutions as determinants of ability to effectively **supply** public-order CEIs:*			*Organic, private-order CEIs (technological factors) as determinants of **demand** for public-order CEIs:*	
			Low	*High*
	CCIs based on administrative structure	CCIs based on balancing coercive powers.	**Communalism/ Segregation** (Lower demand if small, static economies and low gains from impersonal exchange.)	**Individualism/ Integration** (Higher demand if large, dynamic economies and higher gains from impersonal exchange.)
Low	**Absent state:** Thin administration controlled by the state.	**Mutual deterrence:** No ruler. Asset holders coercive power mutually deters abuse.	Low demand, low ability to effectively supply. *E.g., China under the Qian and the First Muslim Empire. Communalism and an absent state.*	High demand, low ability to effectively supply.
Medium	**Delegation:** The state's administration is controlled by the asset holders.	**A ruler with independent coercive power:** Balanced by the asset holders coercive power.	Low demand, medium ability to effectively supply.	High demand, medium ability to effectively supply.
High	**Self-governance:** Administration provided by autonomous units controlled by the asset holders.	**A ruler with conditional coercive power:** Asset holders provide the ruler with coercive power.	Low demand, high ability to effectively supply.	High demand, high ability to effectively supply. *E.g., England: individualism. Autonomy with economic and coercive powers. A ruler with conditional coercive power.*

Different initial combinations of organic CEIs and CCIs therefore imply distinct institutional dynamics. In particular, organic CEIs reflecting and entailing communalism and segregation combined with an absent state or a balance of coercive power among social units imply low demand and low ability to effectively supply wealth-revealing public-order CEIs. On the other hand, organic CEIs reflecting and entailing individualism and integration imply a high demand for public-order CEIs. These can be particularly effectively supplied if the CCIs are based on self-governance by those who stand to gain from public-order CEIs who also have a coercive power that balances the ruler's.

Similar analysis applies to designed CEIs. Demand for them reflects initial organic CEIs. Many designed CEIs reveal wealth to those with coercive power. The wealth of the guild, the lists of stock holders, the records of transactions in the stock exchange, and the information stored by the credit card companies or credit bureaus, reveal who has wealth and in what form. Furthermore, many designed CEIs operate in the shadow of the law or are quasi-private, as discussed above, and hence their operation depends on public-order CEIs. The ability to effectively supply wealth-revealing designed CEIs is a function of CCIs. Such CEIs will be established and used only by those with the countervailing economic or coercive power required to protect their assets. Others will only use CEIs that neither reveal wealth nor rely on public-order.

Table 1 doesn't reflect two more considerations. First, the demand for public-order and designed CEIs can be more effectively met, *ceteris paribus*, the more a ruler's coercive power is checked by the limited reach of his grabbing hand. E.g., the ability of the asset holders to move their assets elsewhere following an abuse, enhances their ability to reveal wealth without fearing losing it. Second, those with coercive power will permit designed CEIs to be established only if their benefits outweigh the countervailing economic or coercive power that these CEIs entail.

The above discussion emphasizes that institutional dynamics reflect initial—organic, private-order and coercion-constraining—institutions. But technological and other non-institutional factors also influence these dynamics particularly by influencing the relative efficiency of various CEIs and hence their demand. This demand would be, for example, higher in dynamic economies (where there is more to gain from an increased ability to quickly respond to changing needs) and when there is more to gain from impersonal exchange characterized by separation between the *quid* and the *quo* over time and space. We don't have good empirical evidence or theoretical understanding regarding the relative importance of institutional and non-institutional factors in determining demand for various CEIs.

Market Expansion and Political Development

For the reasons discussed above, the CCIs fostering the supply of wealth-revealing, designed and public-order CEIs also aid the development of political institutions in which the commercial sector has voice and influence. These political institutions, in turn, play an important independent role in market expansion by providing information and knowledge required to bring such CEIs about. In markets, discrepancies between demand and supply are filled as individuals respond to the information conveyed and the motivation provided by prices. In the absence of a price system, however, the demand for institutions has to be directly communicated to those with the ability to respond to it. Market development is thus fostered by a polity in which the commercial sector has a voice and influence on the function, policy, and organization of the state. This influence is a reflection of CCIs. The commercial sector will have political representation if it has the coercive and economic powers to balance that of the ruler. Also, as discussed above, these CCIs also likely to make possible the exchange between the commercial sector and a ruler required to motivate him to provide such public-order CEIs.

Furthermore, when these CCIs exist, market expansion will lead, *ceteris paribus*, to further strengthening the economic and coercive power of the commercial sector, and the development of political institutions in which the commercial sector has voice and influence. When they do not exist, though, commercial expansion is not likely to lead to such political development. Indeed, as further discussed below, in societies such as the medieval Islamic empire or pre-modern China and Spain, the commercial expansion that occurred failed to lead to liberal governance. The opposite occurred, however, in England.

REFLECTIONS ON THE HISTORICAL DEVELOPMENT OF MARKETS AND POLITICAL INSTITUTIONS

A comparative analysis of the institutions that supported markets in various historical episodes, their extent, and dynamics has yet to be conducted. Yet, our current state of knowledge suggests the merit of the above conjecture. For example, it postulates that a market can thrive under a state that is absent from the commercial sphere, a ruler with independent coercive power constrained by the coercive power of the masses and coordinated by observing abuse, and communalist and segregated organic CEIs. Such a market, however, would only have a limited ability to extend as there is weak demand and ability to effectively supply public-order and designed CEIs. This may very well have been true of Imperial China.

Indeed, pre-modern Chinese markets—at least as measured by market integration in grain—were no less developed than Europe's as late as the nineteenth century (Shiue and Keller 2003) and standards of living in various areas within China were comparable to Europe's (Pomeranz 2000). The Chinese state was active in providing public goods, such as defense, famine relief, commercial infrastructure, and distribution of knowledge regarding better agricultural techniques. (E.g., Pomeranz 2002.) The Empire had an effective administration and a long tradition, dating back at least to the Zhou dynasty (1122–256 BC) of the legal enforcement of contracts, particularly those regarding assets relevant to the state's revenues like land. (E.g., Zelin, et. al. 2004.)

At the same time, many students of China's institutions have provided evidence suggesting that its organic CEIs reflect communalism and lead to segregation, and its CCIs were based on a state absent from the commercial sphere that provided only weak public-order CEIs. The administration of the state was heavily centralized yet thin, and did not extend below the roughly 1300 county magistrates. Beneath each of these magistrates "were several towns and hundreds of villages and a population ranging from several tens of thousands to hundreds of thousands" (Wong 1997: 108). In the commercial sector, property rights were secured by an absent state and commercial taxation was low. In the agrarian sector, property rights were secured by balancing the state's coercive power with that of the numerous peasants (Yang 2002), and balancing the power of the local elite by that of the state (Wong 1997; Yang 2002). The state fostered the creation of shared beliefs regarding appropriate taxation by announcing that it would never be raised and distributing information regarding its level in the villages.

Even during most of the last dynasty, the Qing, there was no commercial code of law and it was administered by magistrates, persons of literary and philosophical learning with multiple duties unrelated to the law. These magistrates were subject to heavy penalties if they made mistakes and hence they sought compromises rather than legal rulings. Organic CEIs were central to the operation of the market. In comparing them to the European CEIs, Hamilton (1991) noted the large extent to which they reflected communalism, and that historically "the Chinese society consiste[d] of networks of people whose actions are oriented by normative social relationships" (Hamilton 1994: 199). In particular, lineage was the social structure around which business organizations were formed.

As the economy grew, lineages responded to changing needs and opportunities by becoming more designed. Their economic organization was often based on contractual relationships, had centralized bureaucracies, and drew on outsiders' resources and talents (e.g., Herrmann-Pillath 1999; Redding 1991). In summarizing the related vast literature regarding late Imperial China, however, Herrmann-Pillath (1999) noted that it was the relative absence of the state from the commercial sphere that hindered further development and led to an institutional evolution that was different from Europe's. Similarly, although Pomeranz (2000) highlighted the role of distinct natural endowments in enabling Europe to economically overtake China, he noted that the Chinese state interfered much less than the European states in the operation of the market.

The Qing's responses to the military and economic conflict with the West during the nineteenth century lends support to the conjecture regarding the institutional foundations of its markets. Constrained from increasing the land tax, the Qing resorted to taxing goods in transit because merchants along the road, being few in number, did not pose a threat, promoting a 'top down' industrialization, and providing public-order CEIs. Departure from an absent state without creating a countervailing economic or coercive power, was counter-productive. Corruption prevailed, trade suffered, and designed CEIs, such as the stock exchange, were not established (Yang 2002; Goetzmann and Köll 2003). The state resorted to expanding the role of guilds, delegating to them such functions as commercial tax collection and provision of local public goods. Top-down industrialization and monopolistic guilds, however, hindered industrialization and commerce. (Goetzmann and Köll 2003; Ma 2004.) Even the famous Chinese silk industry fell behind Japan's.

Political development in Chian is consistent with the above theoretical conjecture. At least under the Qian (1644–1911), prior to the Opium War (1840), the state's budget constraint was not binding and there were no CCIs empowering the commercial sector. Indeed, representative bodies were not established in China. Furthermore, consistent with the argument that rulers fear large-scale economic organizations, economic corporations were not legal entities, and guilds, although known, were few and relatively weak until the late nineteenth century when the state delegated various functions to them in response to the fiscal pressure from the conflict with the West.

On the other end of the spectrum, the above conjecture implies that individualism and integration create demand for public-order and designed CEIs. These can be effectively supplied if there is a ruler constrained by a commercial sector with self-governance which, in addition, has coercive power to render the ruler one with a conditional coercive power. In this case, if the ruler's budget constraint is binding and his need for resource fluctuates, he would establish a representative body that includes the commercial sector. Arguably, this has been the case in pre-modern England. Its most distinguishing features were individualism, the autonomy—self-governance and military ability—of its commercial sector, and its rulers' weak independent administrative capacity and lack of sufficient revenues.

While I return to the case of England below, it should be noted that its market economy was arguably not a match for China's circa 1,000 AD. By the nineteenth century, however, it was the forerunner and symbol of the emergence of the modern market economy. England is well known to have been individualist at least from the late medieval period. (Macfarlane 1978.) The autonomy of its cities and parishes, which were controlled by either the commercial or landed sectors, implied both self-governance and a military ability to check the coercive power of rulers. At the same time, a ruler with conditional coercive power constrained the autonomous cities to compete with each other economically, but not militarily, while coordinating common policies. The budget constraint implied by these CCIs and the inter-state European competition fostered the creation of an effective parliament that facilitated resolving collective action problems associated with providing public-order institutions and other public goods. Public-order CEIs were established, used, and expanded. Market expanded increasing the relative power of the commercial elite and hence fostering institutional trade. But prior to the rise of democracy, consistent with the argument advanced here, property rights' protection was not universal. Even after the Glorious Revolution of 1688, protection was afforded to the landed, commercial, and financial elite. Only those who had economic and military power received protection.

The rise of the modern market economy, however, was a European (or Western) phenomena. It neither began in pre-modern England nor was it stopped from relatively quickly expanding the rest of Europe. This observation is consistent with claim regarding European individualism, which arguably fostered organic CEIs that generated demand for public-order and designed CEIs. Furthermore, the re-emergence of polities in Europe following the collapse of the Roman and the Carolinian Empires transpired in the context of rulers with binding budget constraints (due to inter-state competition) and self-governed units controlled by asset holders with coercive and economic powers. By the late medieval period representative bodies, constitutional and limited monarchies were the rule in Europe alongside republican polities.

Although every society has individualistic and communalist elements, and categorization is a matter of their relative importance, a long line of research has emphasized the relative pervasiveness of European individualism.[28] Individualism is considered a heritage of ancient Greece (e.g., Hsu 1983, Gurevich 1995) and early Christianity encouraged it by placing the individual rather than his social group at the center of its theology. It advanced the creation of "a new society, based not on the family but on the individual, whose salvation, like his original loss of innocence, was personal and private" (Hughes 1974: 61). From as early as the fourth century, the Church was also systematically engaged in weakening kin-based organization of society by prohibiting marriages among kin (sometimes up to 7th degree!). (Goody 1983). By the late medieval period, Western individualism manifested itself in such diverse ways as war tactics, the emergence of confession, nicknames, and landholding. (E.g, Morris 1972; Macfarlane 1978.)

It is important to emphasize that no society is composed of "atomistic" individuals and even in such individualistic contemporary societies like the USA, social and business networks are important. Similarly, European history provides many examples of institutions based on multilateral punishment among neighbors and business associates. (E.g., Muldrew 1998.) By and large, however, these did not reflect innate, kin-based social structures. They either reflected economically motivated processes through which such organic CEIs emerge, as discussed above, or were designed CEIs.

Late medieval, European coercion-constraining institutions reflect a dispersed distribution of coercive and economic powers and states' meager administrative capacity. After the disintegration of the Roman and Carolinian Empires the rulers of the emerging polities had relatively weak coercive power and administrative capacities. The size of European armies was small in absolute and relative terms. Frederic Barbarossa (d. 1190), the Emperor of the Holy Roman Empire, the King of Germany, and the King of Italy sailed to the third Crusade with several hundred knights. As late as the early 15th century, European armies were only a few thousand strong, the largest one (France), numbering circa 40,000 in 1470. (Downing 1992: 69.) Balance of coercive power between

[28] Various studies, however, used the term individualism differently. For communalism in China see Hamilton 1991. For segregation in the Islamic world, see Lapidus 1984 and Hodgson 1974. Goitein 1955 noted that the organic CEIs among the Maghribis represent those of the Muslim world.

rulers, great lords, and cities, and administrations based on delegation and self-governance—particularly in the form of autonomy—was the rule.

Indeed, the polity under the European Feudal system was one in which a ruler was a coordinator of coercive power, who was further constrained by the self-governance of its subordinated units, feudal lords and cities alike. These subordinated units had the wealth, technology, organization, and manpower required to sustain military strength in a period in which, for a long time, defense was superior to offense. No wonder that the period's ideology considered the ruler's job to be merely the maintenance of social order—providing the balance of power among his vassals and coordinating their joint protection and other endeavors. As noted by the historian of Frederic Barbarossa, his "duty was merely to protect all the subjective rights everybody had. It was not his business to issue laws of his own . . . he was supposed to play a purely passive role as law protector." (Munz 1969: 100.) Indeed, Barbarossa had little independent military might. He had to stop his military campaign against the Normans of southern Italy in 1155, for example, because his vassals declared that they served their time for that year.

Medieval England similarly reflects the essence of the feudal king as a coordinator of power but also the need for constantly refining the associated institution to maintain a balance of power. As noted by Tilly (1990: 154):

> "in the process of making war and intervening in dynastic rivalries, the barons on whom the English king relied for their wars acquired enough power to fight the king as well as each other, exacting chartered concessions—most dramatically the Magna Carta—from the monarch. The Great Charter of 1215 committed the king to cease squeezing feudal obligations for the wherewithal to conduct wars, to stop hiring mercenaries when barons would not fight, and to impose the major taxes only with the consent of the great council, representative of the magnates."

The importance of the underlying balance of coercive power is reflected in a clause in the charter delivering several castles to the barons and the prohibition on a mercenary army.

Increasing peace brought about by the feudal order,[29] population growth, lords' desires to gain from trade, and attempts of kings and lords to strengthen their positions vis-à-vis each other, fostered urban growth. Changes in military technology, particularly after the eleventh century, shifted the balance of coercive power to the masses and urban dwellers and away from the armored knights. Among these changes were the reintroduction of stone walls, the invention of the crossbow, the introduction of the longbow and the pike-based, heavy infantries. Once cities grew in population and wealth, they were able to gain military might comparable to that of lords and hence retain autonomy and gain rights.

These changes and the emergence of a new balance of coercive power are well reflected in the rise of representative bodies and republican movements throughout Europe by the twelfth century. By then republican movements

[29] The 'Peace of God' movement also played a role in bringing peace by coordinating the countervailing coercive power of economic agents. E.g., Head and Landes 1992.

swept European cities, particularly in Northern Italy, whose ruler, the Emperor, was weakened due to its military conflict against the Pope that was a part of the Investiture Controversy. But even the Pope had to confront a militant republican movement in Rome itself. Representative bodies were established throughout Europe, in England, Spain, France, and Flanders among other states. Even the Emperor of the Holy Roman Empire, Charles IV, had to issue a Golden Bull (1356) detailing the rules governing the empire as a constitutional monarchy.

Various rulers' relative military weakness during this time (prior to the fifteenth century Military Revolution) is well reflected in cases in which they overestimated their ability to extract taxes from their subjects. After the Empire attempted to tax the cities of Northern Italy, they broke away from it militarily gaining de facto independence and de jura freedom in the Peace of Constance (1181). The Swiss Confederation was established in 1291 in response to what residents of several cantons of the Holy Roman Empire considered inappropriate taxation.

In this context of self-governance, rulers with conditional coercive power provided by the economic agents, and economic agents with political representation, the necessary conditions for providing public-order and designed CEIs were met. Indeed, the late medieval period witnessed legal revival, the establishment of public-order and designed CEIs, and market expansion. This legal renewal also reflects other pan-European processes such as the conflict between the secular authorities and the Church (Berman 1983); its details may have been shaped by the need to protect judges from intimidation (Glaeser and Shleifer 2002); and it has been facilitated by the Roman legal tradition and the associated concept of designed, man-made laws.

Yet, the function—serving the economy—and implications—creating public-order and designed CEIs—of this legal revival are illustrated by the fact that the legal foundations of the modern business corporation were laid in this period. The modern corporation was created through the fusion of the late medieval joint-stock company, which was in fact a partnership, and the traditional legal form of the corporation as it was developed during the medieval period. More broadly, the contemporary European laws and practices regarding commerce, bankruptcy, insurance, apprenticeship, patents, and banking originated then. Designed CEIs, as well as hybrids between private and public ones, were established throughout Europe, taking such forms as guilds, municipalities, monasteries, universities, insurance fraternities, banks, and large-scale partnerships and family firms. This led to further innovations and practices, such as trading in shares, limited liability, auditing, and various accounting procedures. The invention of public debt that served Europeans well for centuries to come also attests to the existence of effective CCIs. A necessary condition for public debt is that the state can commit to repay the wealth that was placed in its custody.

Northern Italy, free from any ruler, emerged as Europe's leader in institutional, organizational, and legal innovations that fostered commercial expansion. This freedom, reflected the coercive power they were able to obtain based on their intra cities CCIs, the Investiture Controversy between the Emperor and the Pope that weakened both, and the commercial opportunities in the Mediterranean sea. In the long run, however, Northern Italy declined not least because most cities, like Genoa, failed to establish institutions that were able to constrain violence for long. Internal violence plagued these cities and whoever gained control attempted to make most of it through profitable but inefficient policies, such as providing guilds with monopoly rights and forestalling technological advances. Later, the Italian city-republics fell prey to the mercenaries they brought in to fight their inter-city wars and to the feudal agrarian lords which the cities never fully defeated.

By the fifteenth century, the Military Revolution had led to external domination over northern Italy. Cannons, introduced to the Italian battlefields during the 1494 French invasion, made the thin and tall medieval city walls a frail defense. Firearms enabled equipping and training larger armies than had been possible before, providing an advantage to larger and richer states. The Italian city-states failed to coordinate responses against such invasions, arguably due to the rapidity of the Military Revolution and the history of military confrontations among themselves. In the absence of effective CCIs, markets and economic vitality subsided.

This was not true in Flanders, which, together with northern Italy, experienced large-scale urban growth and autonomy during the late medieval period. It began with the fortifications of towns against the Norman invasion and gained momentum when these cities began to process wool exported from England. Several times during this period, the prosperous cities of this area conflicted with their feudal overlords to gain and retain independence, but achieved only self-governance. CCIs based on self-governance and a ruler with independent coercive power prevailed. Unlike northern Italy, therefore, these cities were protected from an external invasion during the initial stages of the Military Revolution. Within Flanders itself, however, the prosperity of cities shifted the balance of coercive power from the ruler to their favor. In 1463 Philip the Good created a representative body, the States General, which enacted laws and had the authority to vote on taxation. European commerce shifted to Flanders which became the center of innovations in public-order and designed CEIs such as the first European bourse in Bruges) the stock market in Amsterdam, and increasing transferability of bills.

When Charles V, the King of Spain and the Holy Roman Emperor, inherited Flanders in the early sixteenth century, its administration was based on autonomous and well-coordinated cities. The military revolution implied that wealth could buy military might more than before while developments in fortification techniques restored the balance between defense and offense. The growth of the cities therefore shifted of the balance of coercive power in their favor. As noted by the prominent historian of Flanders, Israel (1995), the very success of the economy of Flanders posed a danger to the Hapsburg regime. Yet, given the CCIs that limited the ability of the Habsburgs to tax their German possessions (which were, as noted above a constitutional monarchy), the King gambled on pressing Flanders to pay more to finance his religious and other wars. The resulting tax revolt (1579) turned into a war of independence in which northern Flanders became the Dutch Republic and the center of European commerce during the seventeenth century.

The internal organization of this republic, however, was such that it was ill-suited to mobilizing resources to wage effective wars elsewhere. In 1651 England passed the first of the Navigation Acts that were directed at undermining Dutch commercial dominance by shifting trade and freight to England and its shipping industry. The chief provisions were that no goods grown or manufactured in Asia, Africa, or America could be transported to England except in English vessels, and that the goods of any European country imported into England must be brought in British vessels, or in those of the country producing them. In the subsequent wars, the Dutch Republic failed to reverse these acts.

While the institutional history of England was not a linear progression toward institutions favorable to market extension, it nevertheless can be characterized as having a ruler who was a coordinator of others' coercive power and an administration provided by autonomous, particularly commercial units controlled by economic agents who had actual or potential military power. Strong feudal lords, autonomous cities, a ruler without a standing army, and a parliament that both approved taxation and coordinated political actions are the manifestations of these coercion-constraining institutions.

Initially, William the Conqueror and his immediate successors faced the challenge of restraining the coercive power of the lords. The military weakness of the Crown is reflected in the Magna Carta (1215) as noted above and the king's obligation not to have a standing royal army, not to recruit mercenaries, and not to tax without consent by the Great Council. That Council, in which the nobles were represented, reflected the prevailing CCIs: a balance of military power between the Crown and the lords.

In the context of the conflict between the Crown and the lords, particularly during the thirteenth century, the former gave charters to numerous English cities. By the end of the thirteenth century, there were about 500 such autonomous, self-governed, towns (boroughs) that became an integral part of the kingdom's administration. Furthermore, they had the wealth, manpower, organizational infrastructure, and production capacity to have potential and actual military power. Alongside the self-governed parishes, these towns changed England's CCIs. Indeed, chartering cities had arguably been a strategic response by the Crown, aimed at diverting tax revenues away from the lords and creating a countervailing power.

That these towns became part of England's CCIs is well reflected in the events surrounding the transformation of the Great Council into a Parliament in which the towns' dwellers were represented. In 1265 the King Henry III dissolved the Great Council and levied unapproved taxes. The effectiveness of the CCIs balancing the Crown's power with that of the lords was challenged. Earl Simon de Montfort responded with a revolt, during which he called a meeting in which the nobles, the clergy and representatives of the counties and towns were present.

Although de Montfort and his army were eventually defeated, the event reflects the increasing importance of the counties and towns' support in national conflicts. Recognizing that they were part of the CCIs he is facing, King Edward I summoned the so-called 'model parliament' (1295), which included, for the first time the representation of the commercial sector: two burgesses from each borough and two citizens from each city. It was during this parliament that the Crown issued a charter seceding the right of approving new taxes to the parliament. In 1297 Edward I confirmed the Magna Carta, asserting that it should be observed as common law, and declared that on no account were aids and taxes to be taken without the common assent of the whole kingdom and for the common benefit.Yet, during that period the Crown abused the rights of Italians traders. Only the rights of those with a countervailing power were respected.

CCIs that constrain the power of the state based on the administrative and military power of the commercial sector enable effective provision of public-order CEIs and establish designed CEIs. Indeed, the latter half of the thirteenth century was a period of reform and expansion of English law and the legal system. Edward I is known as the 'lawyer-king' (Hogue 1996: 69) and his legislation directly influenced the extent of the markets.

Recall, for example, that by the thirteenth century, the Community Responsibility System (CRS), based on the legal autonomy of the English towns, enabled impersonal exchange characterized by separation between the *quid* and the *quo*. During that century, the CRS began to decline due to the commercial expansion and the growth in the size, number, and economic and social heterogeneity of towns. The CCIs that restricted the Crown's power, at that time, however, were such that it was possible to replace the CRS with a state wide legal process for placing collateral and its collection. This, however, was not the case in other parts of Europe. In Germany, for example, CCIs that balanced the central authority and local lords were no longer an equilibrium due to the Investiture Controversy. Although the CRS declined, a suitable alternative was not provided. (Greif 2004; Volckart 2001.)

The development of the Common Law courts further constrained the Crown with these courts perceived rights for independence in areas where they acquired customary jurisdiction. Infringing on the jurisdiction of these courts was considered an abuse of rights.[30] By the fifteenth century the ability to effectively provide public-order CEIs was fostered by these semi-independent courts. This situation and its implications regarding the provision of partial public-order CEIs is illustrated in the first known court case in England regarding negotiable credit instruments (1436). The London Mayor's court at Guildhall had customary rights in cases involving merchants, but one of the parties approached the King's Bench to transfer the case to its jurisdiction. The Mayor of London, however refused to consent to the Bench's demand, arguing that "according to the Law Merchant and the ancient liberties and free customs of the city itself . . . the

[30] Exactly how corruption was prevented in these courts is not clear. Arguably, internalization of values, social pressure, compensation by the litigants, and competition among courts over cases played a role.

mayor . . . have the power and use of hearing" such cases. (Munro 1990: 74.) The king withdrew his demand and negotiated credit instrument became legal. By the sixteenth and seventeenth centuries such public-order CEIs enabled the expansion of credit and bonds beyond that possible based on reputation alone. (Muldrew 1998.)

Subsequent events further reduced the power of the lords and increased the relative ability of the commercial sector to constrain the king's power. The increasing financial needs of the Crown due to the Military Revolution compelled it to sell its landed properties making it more dependent on tax contributions. The War of the Roses (1455–85) decimated the ranks of the great lords making the Crown more dependent than ever on the administrative capacity and other resources of its autonomous towns and the local unpaid Justices of Peace. The Crown confiscated the Church's large land holding in the sixteenth century in the context of establishing the Church of England but its coercive power was sufficiently constrained at this point that it was unable to use this resource to undermine the existing CCIs. On the contrary, the Crown's binding budget constraint compelled it to sell this land to the gentry, thereby further strengthening them. Moreover, the greater efficiency in which the gentry utilized the land probably further constrained abuse by the larger implied loss of value. (Rajan and Zingales 2003.) The flow of wealth from the emerging Atlantic trade may have had a similar impact (Acemoglu, et. al. 2002).

The Civil War of the seventeenth century was another step in this process of institutional evolution. The war made it evident that the crown neither had the independent military ability nor the administrative capacity required to rule without the consent of the economic elite which was also the military elite. The Crown was a ruler with conditional coercive power and the supremacy of the Parliament was firmly established. The zenith of formalizing this situation occurred during the Glorious Revolution (1688). New rules coordinating on appropriate behavior by the Crown, such as the Bill of Rights, a better separation between the judiciary and the executive, and new organizations, such as the Bank of England, formalized and fostered this situation. (North and Weingast 1989.) This essence of the Glorious Revolution—that reflected a de facto prior situation—accounts for the puzzling observation that the historical evidence does not indicate that the Glorious Revolution altered the security of property rights.[31]

Indeed, once the parliament gained supremacy, it was not in the business of protecting property rights per-se. Its policy reflected the interests of those who controlled it, namely, the landed, commercial, and financially elite. The subsequent history is thus marked by gross abuses of property rights through the radical increase in taxation, monopolies, parliamentary enclosures of the open fields, and colonial expansion.[32] Yet, a state controlled by its landed,

[31] Clark 1996; O'Brien 2001; Quinn 2001; Sussman and Yafeh 2000, 2004; Harris 2004.

[32] Harris 2004. For economic analyses of the great English trading companies which were monopolies. see Irwin 1988; Carlos and Nicholas 1996; Carlos 1992.

commercial, and financially elite and later empowered by the Industrial Revolution was a boon for the extension of markets. The evolution of the modern market reached its zenith.

Other European states began, under feudalism, with initial conditions similar to England's. Their subsequent institutional evolution, however, differed due to such factors as the greater risk of invasions (France), discoveries that provided resources for the Crown (Spain), and feudal lords too strong for the Crown to constrain in the absence of autonomous cities to do so (Germany). These distinct experiences illustrate how precarious England's institutional evolution was. But Europeans shared a common heritage of individualism, self-governance, a broad distribution of coercive powers, and man-made laws. Reversing their institutional developments and enabling market extension was relatively easy.

Concluding Comments

Contract-enforcement institutions provide the foundations of markets, and their details, expansion, or contraction determines the market's extent and dynamics. Contract-enforcement institutions changed due to environmental changes that influence various institutions' relative economic efficiency and profitability. In addition, however, as this chapter has argued theoretically and demonstrated historically, the dynamics of contract-enforcement institutions are also a function of initial, organic, contract-enforcement institutions and coercion-constraining institutions. New institutions emerge or are established in the context of existing ones.

Distinct, initial, organic, contract-enforcement institutions generate different demands for additional, public-order and designed, private-order, contract-enforcement institutions that can further extend the market. Distinct, initial, organic institutions can emerge in the initial stages of market formation due to different economic conditions and social and cultural factors, such as individualism and communalism.

Hence, efficiency-promoting, contract-enforcement institutions will not be utilized or have the expected impact even if they are introduced, because they are not compatible with existing, organic, private-order institutions. These institutions create a wedge between the institutions that, if utilized by everyone, will extend the market, and the institutions that each individual, given the existing organic institutions, will find optimal to utilize. Initial, organic, contract-enforcement institutions generate different demands for additional institutions by influencing the extent to which economic agents will find these institutions profitable to use if available, and establish if possible.

But even if there is a demand for public-order and designed, contract-enforcement institutions, their effective supply will not necessarily be forthcoming. Utilizing these institutions implies revealing wealth to those with coercive power, implying an increase in the risk that it will be expropriated. The extent of this increased risk however, depends on the existing coercion-constraining institutions. For markets to function, property has to be protected from those with coercive power. When this is not the case and economic agents are subject to predation, markets are confined to the exchanges that are possible based on private-order, contract-enforcement institutions that are more successful in mitigating the threat posed by coercive power.

More generally, public-order and pragmatic, private-order, contract-enforcement institutions can be supplied only if particular coercion-constraining institutions already prevail—specifically, those whose effectiveness is not undermined by revealing wealth. In particular, coercion-constraining institutions based on the absence of the state from the commercial sphere have a limited ability to effectively supply public-order and pragmatic, public-order institutions. Furthermore, when a ruler's legitimacy is weak and his budget constraints are not binding, he is likely to consider large-scale, private-order institutions more as a threat than a benefit.

In contrast, coercion-constraining institutions based on self-governance by the market participants, and a ruler with conditional coercive power provided by these participants are favorable for effectively supplying public-order institutions and establishing pragmatic, private-order institutions. Where such coercion-constraining institutions prevail, and the ruler's budget constraint is binding, political development associated with the rise of a liberal state will transpire. A state effectively constrained by the commercial sector will have to provide it with political representation, will respect property rights, and will pursue market-enhancing policies.

Historical evidence suggests the merits of this analysis. The pre-modern market leaders—China and the Muslim world—had organic, contract-enforcement institution and coercion-constraining institutions that were neither conducive to the rise of public-order and designed, private-order, contract-enforcement institutions, nor giving political representation to the commercial sector. In contrast, England, considered by many as the initial role model for the modern market, had organic, contract-enforcement institutions and coercion-constraining institutions conducive to the rise of public-order and designed, private-order institutions, as well as representative bodies and a constitutional monarchy. This observation regarding the co-evolution of economic and political institutions is consistent with the argument that at least the security of property initially reflected 'might rather than right.' England was no stranger to abusing rights through, for example, Parliamentary enclosures and the exploitation of colonies.

The public-order and designed contract-enforcement institutions that were initially developed in Europe are considered necessary for market development. It is also perceived that markets follow the creation of a constitutional state with effective administration and public-order institutions. Markets are assumed to follow the creation of public-order. Historically, however, it seems that limited government, representative bodies, and modern markets co-evolved in a process reflecting deeper institutional variables. These variables included particular, organic, contract-enforcement institutions and coercion-constraining institutions that revealed and embodied different cultural and social factors, and the particularities of pre-modern production, communication, transportation, and military technology.

If this is the case, development strategies need to be reconsidered. The same factors, such as communalism and segregation that led developing economies on distinct institutional trajectories may still prevail, implying that their institutional needs are distinct from those that were developed in the West. Indeed, contemporary social psychologists have found that most of the developing countries are communalist, whereas the developed West is individualist. (E.g., Bellah et al. 1985; Reynolds and Norman 1988; and Triandis 1990.)

The details of the optimal contract-enforcement institutions in a communalist/segregated society, however, are arguably distinct from those developed in an individualist/integrated society and some empirical work suggests this is the case. (Ensminger 1997; Goldstein and Udry 2002.) Furthermore, market expansion, economic growth and the development of more costly contract-enforcement institutions in the West has been a process rather than an event. The attempt to duplicate these costly institutions in poor economies may very well be like placing the wagon in front of the horses. Indeed, past European public-order institutions were very distinct from contemporary ones. The experience of the Community Responsibility System suggests, for example, that the optimal unit of non-contractual legal liability is not necessarily the individual. Levinson (2003) has advocated changing legal concepts accordantly.

Similarly, development policy has been predicated on the assumption that growth requires creating a western-style state with extensive administrative capacity. In the West, however, such a polity has been the end result of institutional and economic co-evolution rather than its beginning. In particular, central to this co-evolution were coercion-constraining institutions based on self-governance by the economic agents and widespread, yet locally organized, distribution of coercive power. The related constitutional polities had representative bodies that could effectively restrict the coercive power of rulers and each other by drawing on these resources. The creation of a western-style state with extensive administrative capacity and representative bodies in other parts of the world has been done in a different context. It therefore led, more often than not, to limited market expansion, crony capitalism, a high concentration of wealth among the politically well-connected, corruption, and predatory states.

Theory and history indicate the challenge of promoting welfare-enhancing market extension. Future research, however, will have to point to a better way to confront it. It is not merely the protection of property rights that matters. What matters to market expansion, and therefore to economic growth, are the details of the institutions that secure rights—contract-enforcement institutions and coercion-constraining institutions—whose rights they secure, in what products, and how these institutions are mapped into political institutions and policy.

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