Coercion and Exchange: How did Markets Evolve?

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Abstract

What causes distinct trajectories of market development? Why did the modern market economy, characterized by impersonal exchange, first emerge in the West? This paper presents a theory of market development and evaluates it based on the histories of England, China, and Japan. The analysis focuses on how distinct *coercion-constraining institutions* that secure property rights differentially interact with contract enforcement institutions. Although different combinations of coercion-constraining and contract-enforcement institutions can support markets, only some coercion-constraining institutions and institutions enforcing impersonal exchange can be an equilibrium. Among the analysis' insights are the relations between the internal organization of the state and legal development, and why impersonal exchange and political representation historically co-emerged.

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Surprisingly little is known about why institutions gradually evolved to support a larger set of exchange relations in some economies and not others. This limits the ability to address questions central to economic history and economic development. Why did the modern market economy, characterized by impersonal exchange and formal institutions, first emerge in the West? Why did similar developments not transpire in, for example, China or the Muslim World, whose markets had initially been more developed than Europe's? Identifying the institutional determinants of distinct trajectories of market development is important to understanding why some economies are rich and others are poor and what factors limit development.

The literature identified two conditions necessary for market economy; the security of property rights and contract enforceability. The analysis of insecurity focused on the conditions under which confiscatory taxation is limited by an expected economic or political retribution by the economic agents. The analysis of contract enforceability focused on analyzing various contract-enforcement institutions and their inter-relations. Central to this analysis is the distinction between private-order contract enforcement institutions (such as reputation-based institutions) that do not rely on the coercive power of the state and public-order contract-enforcement institutions (such as the legal system) that do. This rich literature provides little insight regarding the mechanisms underpinning the dynamic of market development. It does not explain why the scope of exchange have increased in some market economies more than in others.

This paper argues that the compatibility between institutions that secure property rights and the institutions that enforce contracts determine market evolution.³ Specifically, *coercion-constraining institutions* (CCIs) determine the cost and benefit of using coercive power to abuse

¹ Greif 2006 provides a recent survey of this literature.

² North and Weingast 1989 argued that political institutions limiting rulers' discretions foster financial markets. Greif 1994 argued that individualism and collectivism determine demand for legal contract enforcement. Fafchamps 2004 presents a model of market expansion caused by scale economies.

³ This paper builds on Greif 2005.

property rights.⁴ Various combinations of CCIs and contract-enforcement institutions can support markets. Yet, CCIs differentially enable market expansion based on the introduction of public-order, contract-enforcement institutions that underpinne the rise of the modern market economy. In particular, CCIs under which property rights are secured based on the state's limited administrative capacity to abuse rights are incompatible with public-order contract enforcement. This incompatibility reflects that public-order fosters the capacity of the state to abuse rights. Introducing such public-order contract enforcement institutions – improving the capacity to use force to capture property – therefore undermines the security of property rights and causes markets to contact. The efficiency gains from introducing public-order institutions and the incentives to introducing and using them depend on the prevailing private-order institutions which, in turn, are determined by more fundamental cultural and social factors.

Considering the relations among CCIs, the security of property, and contract-enforcement institutions generates predictions regarding the 'organization of the society,' including legal development, social structure, administrative capacity, military organization, and political representation.⁵ The analysis is therefore testable and its predictions are indeed confirmed in an initial analysis of pre-modern England, China, and Japan.

This paper proceeds as follows. Section I presents how coercion-constraining institutions secure property rights. Section II presents why contract-enforcement institutions determine the extent of the market and the role of public-order institutions in the modern markets. Section III argues that coercion-constraining institutions determine whether public-order contract-enforcement institutions can be introduced without undermining the market while private-order institutions determine whether they will be used if introduced. Section IV presents the impact of coercion-constraining institutions on political development. Section V demonstrates the

⁴ For analyses of CCIs, see Greif 1998, 2005, 2006; Bates 2001; and Bates et al 2002.

⁵ On the study of the state as an organization, see, for example, Tilly 1992 and Greif 1998, 2006, 2008.

relevance of the theory by considering the histories of England, China, and Japan. Section VI concludes.

I. Coercion-Constraining Institutions and Secured Property Rights

A necessary condition for welfare-enhancing markets is the protection of property rights from those with coercive power. It is common to assert that markets require a state with a monopoly over coercive power and constitutional rules limiting abuse of power (North and Weingast 1989). Yet, it is useful to consider deeper institutional determinants of the security of rights because markets require only that those who have coercive power are better off respecting, rather than abusing, rights. Accordingly, this section focuses on *coercion-constraining institutions* (CCIs) that influence the use of coercion in a society. To simplify the discussion, I ignore insecurity due to crime and predation by external actors and focus on constraining the coercive power of a 'ruler' (warlord, duke, elite, president, etc.). Specifically, I consider the implications of a credible threat by the economic agents to impose economic, coercive, and administrative sanctions on the ruler. When the agents have such 'powers,' they can secure themselves some rights. Specifically, they can deter the ruler from abusing any rights worth to him less than the sanctions the agents can impose on him following an abuse. The origin and self-enforceability of various CCIs are briefly discussed at the end of the section. For simplicity of exposition, power is discussed as a discrete variable although in reality it is continuous.

Economic power (or 'mobility') can secure property rights from predation by a ruler when the economic agents can credibly commit to retaliate, following an expropriation, by taking an economic action costly to the ruler. If the cost to the ruler is sufficiently high, he is deterred from expropriation. Merchants, for example, can flee with their assets once expropriation begins and craftsmen can respond by increasing the consumption of leisure or reducing the quality of their products. These responses are costly to a ruler who taxes commerce and production (e.g., Olson 1993; Greif, et al. 1994). If the ruler's gain from abusing some

bundle of rights are less than the penalty the economic agents can impose on him, these rights are secured.

Coercive power in a society is *centralized* (or 'monopolized') when the ruler's military capacity is sufficiently large to render futile a violent response by the economic agents following an abuse. The USSR under Stalin is an example of a polity with a centralized coercive power. Coercive power is *dispersed* when there are social units such as tribes or autonomous cities with independent coercive power. Dispersed coercive power is *uncoordinated* when there is no ruler, or other means to coordinate the armed units to enforce some rule of conduct among them. Some tribal societies provide examples of such situations. Coercive power is dispersed and *coordinated* when there is a ruler, potentially with some independent military might, who can effectively coordinate – within the boundaries of his legitimate authority – the armed social units. In particular, the ruler can coordinate the military forces mustered by others to enforce some rules of conduct among them. The feudal system is a classical example.

The distribution of coercive power determines whose rights are secured and to what extent. When coercive power is centralized, rights are not secured, based on countervailing coercive power, from expropriation by the state. When coercive power is dispersed and uncoordinated, those with military power have secured rights. This security, however, is likely to be fragile as one's rights depend on random factors influencing relative coercive power.

When coercive power is dispersed but coordinated, security of those with coercive power is fostered if the ruler coordinates retaliation against any unit that used its military might against another.⁶ A ruler might find coordinating retaliation optimal for him if it maintains the balance of

⁶ An example of such a ruler who coordinated armed social units is provided by a twelfth century source describing the creation of the Kievian Empire in the 9th century. The local Slavic tribes drove the Scandinavian Varangians who subjected them "back beyond the sea, refused to pay them tribute, and set out to govern themselves. But there was no law among them, and tribe rose against tribe. Discord thus ensued among them, and they began to fight each other. They said to themselves, "Let us seek a prince who may rule over us, and judge us according to custom." Thus they went overseas to the Varangians, ...[and told them that], "our land is great and rich, but there is no order in it. Come reign as princes, rule over us". Three brothers, with their kinfolk, volunteered" (The Primary Chronicle cited in Zenkovsky 1974, p. 50).

power that supports his rule. For similar reasons, a ruler might find it optimal to protect the rights of agents without coercive power. Protecting rights in general is beneficial to the ruler if protection prevents those with coercive power from becoming stronger and challenge him. For similar reasons, ironically, the more stable the equilibria among the powerful, the less secured the property rights of those without coercive power. Abusing their property rights is less likely to undermine the equilibrium among the powerful.

Whether coercive power is centralized or dispersed, its perpetuation requires it to be an equilibrium outcome. The distribution of coercive power should be such that each social unit with coercive power is able to protect the economic and other rights required to maintain its coercive power. (See ??JPE, Greif 1998, 2006 and Bates, et. al. 2002 for formal models.) Table 1 summarizes the discussion of the distribution of coercive power and the security of property rights.

Table 1: Coercive power and the security of property rights

Coer. Properties	Centralized	Dispersed & uncoordinated	Dispersed & coordinated
Essence	Monopoly over coercive power	Uncoordinated units with coercive power	Coordinated units with coercive power
Security To whom	Least None	Better The armed units	Best The armed units
Examples	USSR	Tribal society	Feudal system

In addition to economic and coercive powers, CCIs can be based on administrative power (Greif 2008). Rulers have limited physical capacity to implement policy choices, including abuses implying that they have to rely on "administrators" for implementation. Administrators are individuals and organizations such as armies, tax farmers, feudal lords, bureaucracies, self-governed provinces and cities, and clans that have the capacity to implement policies.

Administrative capacity, control, and the administrators' preferences, in turn, influence the costs and benefits of pursuing various policies to the ruler. In particular, administrative structure determines the cost and benefit, to the ruler, from respecting or abusing various rights.

A ruler's commitment to respect rights is fostered by having a *minimal administration*. Creating an effective administration requires time and other resources implying that having no effective administration to govern a particular economic sphere reduces the ruler's benefit from abusing rights in that sphere. A tax collection administration can be used to arbitrarily confiscate wealth and it has the internal organization required to insure that a high portion of the gain will reach the ruler. In the absence of such an administration, an army can be sent to capture wealth. Yet, an army organized to fight a war rather than capturing wealth is likely to be less effective than a dedicated tax administration. To illustrate the role of administrative capacity in abusing rights, consider Mexico after the Revolution. Mexico's constitution called for nationalizing Mexico's oil fields and it army could have been used to to impose this decision on the multinational oil companies that operated the fields. Yet, Mexico did not expropriate the oil fields for a long time because it did not have the administrative capacity to manage them.

Delegation of administrative services also influences the cost and benefit of abusing rights. Delegation is a situation in which the state allows someone to make the investment in human or physical capital required to performing some administrative services.⁷ If this investment is costly to expropriate and expensive and time consuming to replace, the delegates

 $^{^{7}}$ Farming administrative posts differs from delegation. Farmers are a close substitute while delegates are monopolies.

gain some power vis-a-vis the ruler. When the ruler depends, for example, on one's service to sustain his court or maintain the army, the withdrawal of this service is costly to the ruler. If the threat to withdraw services is credible, delegation enhances commitment to respect the rights of the delegates. Such threats seem to have secured the rights of the 16th century Genoese financiers of the mighty Hapsburg Kings.⁸ These financiers had a comparative advantage in the administrative capacity of paying the royal army in Flanders.

An extreme form of delegation is *self-governance* or autonomy. A social unit (e.g., tribe, city, ethnic group) has self-governance when the state is absent (it has no administration to govern the unit) and the unit has its own administration. Similar to the situation in the tribal areas in contemporary Pakistan, the self-governed units can literally be a 'state' within a state with its own army, taxation, and judicial system. A self-governed unit can respond to abuse both by withdrawing administrative services and using its administrative capacity against the state. Thus, self-governance both reduces the benefit and increases the cost of abusing the rights of those with autonomy. Indeed, the Hapsburg kings' army was in Flanders to subdue the autonomous cities and provinces that revolted in response to what they considered to be abuse of their economic and religious rights. Table 2 summarizes the discussion of the relations between administrative structure and security of rights.

 $^{^8}$ The famous bankruptcies of the Spanish kings were indeed periods of debt reorganization rather than abuse of rights per-se. Conklin 1998; Drelichman and Voth 2008.

Table 2: Administrative power and security of property rights

Adm. Minimal (absent)		Delegation	Self-governance
Properties	state		(autonomy)
Essence	Low adm capacity to Loss of adm		Loss of adm capacity
	abuse	capacity	and its hostile use
Abuse - benefit/cost	Low benefit	High cost	Low benefit & high cost
Who is secured?	Everyone	Delegates	Autonomous units
Examples Post-revolution		Pre-revolution	Flanders
Mexico		France	to 1568

The capacity of property owners to respond to abuses by those with coercive power depends on their economic power (mobility), coercive capacity, the administrative structure and their roles in it. In particular, agents who can move elsewhere, agents with coercive power, and agents providing administrative service to the ruler can respond to abuses in a manner costly to him. A credible threat to respond to an abuse by inflicting sufficiently high costs secures rights. The ruler is deterred from abusing any right whose holder can sufficiently reduce the gains from doing so.

Table 3 provides some examples of the distributions of coercive power and administrative structures that prevailed in various historical states. It illustrates that these features are observable (the bolded cases are examined in section V in more detail).

Table 3: CCIs, markets, and public-order CEIs

Admi.	Minimal	Delegation	Autonomy
Coer.			
Centralized	China ⁹	Bourbon France	Habsburg
	under the Qing		Spain
Dispersed	Armed caravans		
Coordinated	Tokugawa Japan	Early Ottoman	England
	European Feudalism		Early modern

The table, and the preceding discussion, does not examine the self-enforceability and origin of various CCIs. Although an extensive discussion of these issues is beyond the scope of this paper, a few comments are in order (see Greif 2008 for a longer discussion). In the case of economic power, the self-enforceability of CCIs ultimately reflects that some property rights can not be effectively captured using coercive power. In the case of coercive and administrative powers, self-enforceability is due to the distributional consequences of these powers. The powerful can protect their rights to the resources required to maintain their power.

Different CCIs can be an equilibrium outcome and which one will prevail depends on initial condition, evolution, and intentional design. These factors influence selection over alternative CCIs. The distribution of military and administrative powers at the early stages of a state's formation can be beyond the ruler's control. The Ottomans who conquered the area from Syria to Egypt in 1516-7, for example, were unable to militarily subdue the nomad beduins and had to pay them off (Etkes 2008). Protection money enabled the beduin to maintain their independent military power. Similarly, the elected kings of Poland-Lithuania had smaller armies than many of their nobles. In facing external threats, the kings were coordinators of their nobles'

⁹ China had minimal administration specifically in the commercial sector. See below.

military contingencies. This distribution of power was self-enforcing because rulers did not have the military might required to raise the resources needed to unilaterally change it.

But rulers might also stand to gain from creating CCIs that enable them to better respect property rights. When the Bourbons came to power (1589), the Crown auctioned short-term leases to bidders who were weak because they were perfect substitutes ex-ante and ex-post. However, the crown's expenses grew faster than its revenues and the budgetary pressure led the Crown to ex-post renegotiate leases and renege on its contractual obligations. Once the farmers realized this, they reduced their bids and the budgetary crisis worsened. In response, Colbert, France's finance minister, created a strong administrator, the 'Company of General Farms,' in the second half of the seventeenth-century. The company became the sole collector of indirect taxes and thus could more credibly threaten to halt collections if the crown reneged on its obligations. The crown's enhanced commitment increased revenues and resolved the budgetary crisis. (Balla and Johnson 2006.)

Coercion-constraining institutions that secure the rights of sufficiently many economic agents are necessary for markets to prevail. This security, and thus the market, is not a free lunch, however. Its price can be a sub-optimal organization of the economy, the military, and the administration. In any case, the scope of exchange among those whose rights are secured is determined by the prevailing contract-enforcement institutions. These institutions are examined next.

II. Contract-Enforcement Institutions Determine the Extent of the Market

The set of exchange relations that those with secure property rights will enter into is determined by the contract-enforcement institutions (CEIs) they rely upon. Exchange transactions are inherently sequential, as some time elapses between the *quid* and the *quo*, and this sequentiality implies an opportunity to renege. One will therefore not enter into an otherwise profitable exchange relationship unless he believes *ex-ante* (when making the decision to

exchange) that his partner will fulfill his contractual obligation *ex-post* (when that partner can gain from reneging).¹⁰

Contract-enforcement institutions (CEIs) mitigate the above *fundamental problem of exchange* by linking past conduct with future payoffs (Greif 2000). An effective CEI renders breaching a contract unrewarding by sufficiently reducing the future payoffs of one who breached. If it is *ex-ante* known that one's best response *ex-post* is to fulfill his contractual obligations, he can commit to be honest and others can trust him. CEIs can be based on diverse mechanisms such as family loyalty, economic and social reputation, legal sanctions, and supernatural beliefs.

The effectiveness of a particular CEI in enabling commitment in a particular transaction depends on the attributes of that transaction and the broader context. An impartial court, for example, might be able to support impersonal, non-repeat exchange among strangers when conduct can be legally verified. In the same situation, an intra-community, reputation-based CEI cannot support impersonal exchange with non-members. Unlike the legal system, however, this private-order institution might be able to support intra-community exchange relations even when conduct can not be legally verified. CEIs generally complement each other and exchange often relies on several CEIs. A modern firm typically commits to its workers, suppliers, and consumers based on its reputation in these markets, legal contracts, and allocations of property rights.¹¹

All market economies – in the past and present – have 'private-order' contract-enforcement institutions. Such institutions evolve based on economic, social and coercive sanctions imposed by economic agents. The introduction of 'public-order' institutions based on the coercive power of the state can support additional exchange and particularly impersonal exchange, the hallmark of the modern economy. Public-order CEIs support impersonal exchange

¹⁰ E.g., Williamson 1985, Greif 1989, 1997, 2000; Aoki 2001; Dixit 2004

¹¹ As I elaborated elsewhere (Greif 2005, 2006), CEIs can also substitute and can even undermine each another. Broadly speaking, however, complementarity dominates.

directly by enforcing contracts among strangers and indirectly through 'hybrid' institutions. Hybrid institutions have public-order and private-order components which together enable them to support exchange that can not be supported by either type of CEIs alone. Laws and regulations combined with reputation considerations provide the institutional foundation for large-scale impersonal exchange using credit cards (e.g., Greif 2006).

The evolution of markets is therefore being determined by the dynamics of their underpinning CEIs. In particular, markets expand when public-order CEIs mitigate the fundamental problem of exchange. Markets expand – more people exchange in more products in more situations – as more CEIs are being used.

III. Public-Order Institutions, Coercion, and Markets Development

Markets expand when additional, complementary CEIs are introduced. Complementing private-order with public-order CEIs enables the modern market to expand beyond what had been previously possible. This section presents why distinct CCIs differentially enable introducing without reducing the security of property rights, public-order CEIs, why some cultures create more demand than others for public-order CEIs, and why, when this demand is low, socially efficient public-order CEIs might nevertheless fail to foster market expansion.

To illustrate why public-order CEIs can undermine markets, consider, for example, the creation of a legal system with the capacity to enforce contracts. Creating a legal system amounts to creating the organizational and physical infra-structure required for capturing individuals and subjecting them to monetary and other penalties. This infra-structure can be used to either protect or abuse rights. More generally, creating public-order contract-enforcement institutions requires to make credible the threat of capturing wealth and inflicting other punishments. In the

absence of countervailing forces, creating effective public-order institutions therefore reduces the security of property rights and potentially undermine the market.¹²

Whether a public-order CEI would actually undermine the property rights of the economic agents depends on the nature and effectiveness of the CCIs protecting their rights. In particular, if abuse is prevented only by a minimal administration, introducing a public-order CEI will undermine property rights and the market. Minimal administration secures rights based on the low benefit to the ruler from predation in the absence of effective administration. Creating an effective public-order CEIs increases administrative capacity and therefore the benefit from predation. Markets can not expand based on public-order institutions when rights are secured only by a limited administrative capacity to capture wealth.

For similar reasons, if coercive power is centralized and mobility is low, public-order CEIs are more likely to undermine the security of property rights and markets. Public-order CEIs undermine security the least when economic mobility is high, the economic agents have self-governance, and they provide the ruler with valuable administrative services. In other words, CCIs public-order institutions can be established without reducing the security of property rights when the economic agents can better credibly commit to impose heavier economic, administrative, and coercive penalties on the ruler. The more effective the CCIs are in securing the economic agents' rights, the more likely public-order CEIs are to expand markets. Table 4 summarizes this discussion.

¹² Insecurity due to public-order institutions can be user-specific. The one who uses the legal system to resolve a commercial disputes facilitates expropriating property or extorting payments from himself.

Table 4: CCIs and market expansion. (Deterrence increases from left to right.)

Coercive power	Centralized	Dispersed &	Dispersed &
		uncoordinated	coordinated
Adm power	Minimal	Delegated	Autonomy
Econ power	Immobile	Some mobility	Mobile

Introducing public-order CEIs that do not undermine security nevertheless can fail to expand markets when the private-order institutions are efficient. Public-order institutions, particularly for impersonal exchange, exhibit network externalities. The value, for a market participant, of exchanging through an impersonal market increases as the number of other participants increases. As more people exchange through the market, search costs decline and the informational quality of price signals improves. The private return from using public-order CEIs increases as more agents use them. This implies that their viability requires that a sufficient number of individuals switch to using the public-order institutions once they are introduced. The number of individuals who would switch, in turn, depends on the efficiency of the private-order CEIs. Fewer individuals would find it optimal to switch when public-order CEIs are initially introduced when private-order CEIs are more efficient. Efficient private-order CEIs make it more likely that public-order institutions will fail establishing themselves even when impersonal exchange is socially beneficial (Greif 1994; Kranton 1996).

The efficiency of private-order CEIs varies across societies because of their inter-relations with social and cultural factors. *Ceteris paribus*, initial social structures and cultural features influence which private-order CEIs will prevail. Social structures provide networks for

information transmission while cultural beliefs and behavioral norms coordinate expectations and provide a shared understanding of the meaning of various actions.¹³

Whether a society is more 'collectivist' (or 'communalist') or more 'individualist' (Ball 2001, Triandis 1990) is an important socio-cultural feature determining the efficiency of its private-order institutions (Greif 1994, 1996, 2006). In collectivist societies, social structures that are based on innate characteristics such as kinship, place of birth, or religion (e.g., lineage, tribes, or religious sects) are prominent. These societies tend to be 'segregated:' each individual interact socially and economically mainly with members of his group and their members feel involved in the lives of other members of their group. Private-order CEIs in a collectivist society are therefore more likely to be based on intra-group's economic and social sanctions. In more individualist societies, the individual and family, rather than larger, innate social structures, are prominent and individuals expect that others will interfere relatively little in their affairs. Individualistic societies tend to be more 'integrated': economic transactions will be conducted among people from different groups. Their private-order CEIs tend to be based on bilateral economic and social sanctions among individuals and business networks.

These socio-cultural features are likely to lead to distinct private-order institutions that tend to perpetuate these features (Greif 1994, 2006). A collectivist society's private-order CEIs are relatively effective in disciplining its members without public-order institutions. 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 pursuing exchange outside. The private benefit to an economic agent from relying on the public order is therefore relatively low. An individualistic society's private-order

¹³ For works indicating the importance of social and cultural factors see Granovetter 1985; Greif 1994, 1996, 2006; Clay 1997a, 1997b; McMillan and Woodruff. 2000; Moriguchi 2003; Stulz and Williamson 2003; Biggs et. al. 2002; Fafchamps 2004; Olds and Liu 2000.

¹⁴ Initial socio-cultural features are not destiny. They perpetuate only as long as they and the institutions perpetuating them are equilibria.

CEIs are relatively ineffective in disciplining its members without public-order institutions. Higher mobility, for example, limits the ability to impose punishment (Greif 1994). The private benefit to an economic agent from relying on public-order CEIs is therefore relatively large.

Because private-order institutions in a collectivist society are relatively more efficient in the absence of public-order CEIs, investing in public-order may not be socially beneficial.

Moreover, even if introducing public-order CEIs is socially beneficial, using public-order CEIs may not be individually rational. The effectiveness of private enforcement implies that the private benefit from switching to use the public-order is too low given that most other agents do not use them. Rulers who recognize that either of these situations prevails would not make the sunk investment required to create public-order institutions. After all, creating public-order CEIs institutions requires an up-front sunk investment in, for example, physical infra-structure and human capital, and requires inducing beliefs in the institution's effectiveness. This investment exhibits increasing return; the more people use the system, the higher the return on the investment.

Public-order CEIs can potentially expand markets but can also undermine them by reducing the security of property rights. In particular, CCIs based on minimal administration are incompatible with public-order CEIs. More generally, the more effective the CCIs are in protecting rights, the less likely the public-order to actually reduce security and undermine the market. In addition, the more (less) effective the private-order, the lower (higher) the 'demand' for public-order and the more (less) they will be used if created. The private-order, in turn, is likely to be more effective under collectivism than under individualism. Finally, the introduction of public-order CEIs will not transpire unless the 'ruler' who can create them has the motivation and resources to do so.

IV. The Political Implications of Coercion-constraining Institutions

CCIs under which public-order CEIs expand markets also motivate rulers to create political assemblies in which those whose power constrain the ruler have political voice and influence. Political assemblies in non-democratic, pre-modern states are an enigma, because they foster coordination against the ruler. Aristotle, for one, noted that tyrants "don't allow [even] associations for social and cultural activities or anything of that kind; these are the breeding grounds of independence and self-confidence, two things which tyrants must guard against" (Politics 5.11). Yet, representative bodies have been common in a 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). Why did rulers allow political assemblies although such bodies facilitated organizing opposition to the ruler?

When a ruler can be penalized, given the prevailing CCIs, for deviating from the expected pattern of behavior, he also stands to gain from representative bodies. If a constrained ruler takes an action – raises an army or changes the administrative structure – that is considered a deviation and he would be penalized. Representative assemblies composed of those whose economic, coercive or administrative power constrain the ruler, are a means to coordinate on acceptable actions and avoid unnecessary conflicts. Representative assemblies are therefore more likely to be established when the ruler and those who constrain him can gain from bargaining.

We have no models of bargaining in the context of various CCIs. It is intuitive, however, that providing the ruler with additional resources risks shifting the balance of power. Those who constrain the ruler and therefore are in a position to authorize this transfer 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*.

¹⁵ Myerson (2008) argues that political representation is established by rulers when they can gain from the implied better ability to coordinate actions against them.

Ironically, representative assemblies also facilitate the abuse of property rights. They provide those whose powers limit each other freedom of actions with a means to coordinate abusing the rights for those who do not have such power. Conversely, if the economic and coercive power of groups represented in the assembly no longer constrains the ruler's actions, these groups will become, at most, a rubber stamp.

V. Historical Markets – China, England, and Japan

The above conjecture about the relations between CCIs, CEIs, and political development is testable. It specifies relations among observable variables such as military organizations, administrative structures, CEIs, market expansion, and political assemblies. It predicts, for example, that markets can prevail even in an autocratic society in which the ruler has a monopoly over coercive power and the traders' threat of taking their trade elsewhere is not credible. The traders' property rights can nevertheless be secured by limited administrative capacity in the commercial sector. The market can even be rather efficient and well integrated if the society is a collectivist one. The introduction of public-order CEIs, however, is likely to undermine, rather than promote, the market. As discussed below, the historical experience of China confirms this prediction.

Another prediction is that markets would be relatively inefficient in individualistic societies in the absence of public-order CEIs. Such societies are more likely to introduce public-order CEIs and the market would subsequently expand if the economic agents' power constrain the ruler. In this case, the ruler will consent to a political assembly that includes the economic agents. As discussed below, the historical experience of England confirms this prediction. That these and other predictions are confirmed by a tentative analysis of the histories of England, China, and Japan suggests the merit of further evaluating the analysis in a larger sample.

V.1 China

Chinese markets, during the late Imperial period, were as integrated as Europe's (Shiue and Keller 2003). The efficiency and scale of these markets challenge the conventional view that a limited government is necessary for markets. Furthermore, the military organization of the Empire implies little scope for merchants to protect their rights based on coercive power. Military power was centralized and those who served in the army were recruited from social groups uninvolved in commerce. Higham and Graff (2002) noted that military leaders and civil officers were recruited from different social groups (Ibid, p. 12). Moreover, "from the eight century onward, a long-service, mercenary soldiery distinct from the farming population tended to predominate" and "an important role was played by specialized units recruited from among non-Han peoples" (p. 10). In short, the organization of the Chinese state was such that CCIs based on merchants' coercive power did not protect their property rights. ¹⁶

Merchants' economic power similarly seems to have been limited because the political, social and legal context rendered non-credible a threat by the merchants to take their trade elsewhere in response to an abuse. Politically, the large geographical extent of the Empire increased the cost of emigration. Socially, the Chinese society was clan-based. Clans provided many services to their members including protection, education, and welfare assistance in case of need. Ancestors worshiping was culturally important and centered around the clan's cemetery. Finally, one's extended family or clan were generally held liable for his crimes and had legal and customary authority over their members. These political, social and legal settings increased the cost of emigration.

The conjecture that coercive and administrative powers did not constrain the Emperors gain further support from the observation that political assemblies were not created in China. As noted above, this is expected when property rights are secured by a minimal administration rather than by the coercive and administrative powers of the economic agents. Furthermore, China's

¹⁶ The number and localization of peasants, however, render them militarily stronger.

organizational history is consistent with the conjecture that social units with coercive and administrative powers did not constrain the Chinese emperors. 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.

Integrated, large scale markets, as we saw, can prevail even when neither countervailing coercive nor economic power constrain the state. The security required for the market can be provided by limited administrative capacity in the commercial sector. This is more likely to be the case in a collectivist society. In any case, if security is provided by limited administrative capacity, public-order CEIs would be relatively unimportant, society is likely to be collectivists, private-order institutions would be prominent, and political assemblies would not be created. If public-order institutions are introduced, they would either undermine the market or would not be used. The evidence confirms these predictions.

The Chinese state did *not* create the administrative structure required for effective predation on the commercial sector and, generally interfered much less than the European states in the operation of the market (e.g., Pomeranz 2000). Minimal administration was not due to an inability to create an effective administration. China had had an effective administration for taxing land and providing public goods, such as security, defense, famine relief, commercial infrastructure, and the distribution of better agricultural knowledge (e.g., Pomeranz 2002). The administration, although centralized, was thin and was not aimed at taxing property other than land. Beneath the roughly 1350 county-level magistrates "were several towns and hundreds of villages and a population ranging from several tens of thousands to hundreds of thousands" (Wong 1997: 108). Taxation was indeed imposed on the agrarian sector and land tax was the main source of state revenue (e.g., Szonyi 2002, p. 58). Commerce, in general, was taxed less in

China than in Europe. ¹⁷ This light taxation seems to have been intended to foster exchange (Wong 1997, p. 134).

Similarly, if limited administration secured merchants' property rights, the state could not have committed to repay loans taken from merchants. Indeed, the Chinese state, prior to 1850, did not borrow from the merchants (Wong, 1997, pp. 132-3) consistent with the conjecture that merchants' economic or coercive power did not constrain the rulers. In Europe such loans were common during the same period. More generally, an unconstrained ruler will increase taxes at his discretion rather than through consent. Indeed, in China tax increases took the form of 'contributions' (*juan*) that were not negotiated upon but declared and imposed by the authorities. The riots that higher taxes sometimes led to were subdued by force.

Consistent with the insight that public-order CEIs and CCIs based on limited administration are incompatible, there was little provision of and reliance on public-order CEIs in commercial disputes. The authorities invested little in commerce-related legal infra-structure and discouraged legal adjudication of commercial disputes. There was no commercial code of law prior to the early twentieth century and the magistrates were subject to heavy penalties if they made mistakes in adjudication. Magistrates were motivated to seek compromises rather than legal rulings. Legal uncertainty in commercial disputes was probably high. The Chinese proverb "of ten reasons by which a magistrate may decide a case, nine are unknown to the public" (Bodde, 1963, p. 376) is suggestive.

The lack of public-order CEIs is consistent with the Confucian ideology that disputes in general should be resolved informally, without resorting to the court of law. Administrating justice was one among the many responsibilities of the magistrates who were not trained in law and relied on secretaries with some training. "It is indicative of the Chinese attitude toward law that this secretary did not himself belong to the formal administrative system. He was merely a

¹⁷ Consistent with the analysis, rich merchants with state monopolies (e.g., in salt) were heavily taxed. In total, tax on commerce amounted to less than a quarter of total revenues. Wong 1997, pp. 132-3.

personal employee of the magistrate, who paid his salary out of his own private purse. Hence the secretary was not permitted to try cases himself or even to be present at the trials" (Bodde, 1963, p. 376). It is therefore notable that public-order CEIs were created to resolve disputes in non-commercial matters. Since at least the Zhou dynasty (1122-256 BC) there was legal enforcement of contracts, particularly those regarding tax-related assets such as land (eg., Zelin et. al. 2004).

Private-order CEIs supported commerce. "In China, the absence of formal justice, at least on commercial and civil matters, spawned a plethora of informal rules in the form of family bylaws, lineage rules and guild regulations which, enforced through a collective mechanism, alleviated the pervasive information and commitment problems to effectuate the commercial expansion in Ming and Qing China... Merchant groups and commercial guilds have long been a dominant form of commercial organization throughout Chinese history. Historians often identify at least ten distinctive native-place merchant groups in China" (Ma 2004, p. 267).¹⁸

Consistent with the assertion that private-order CEIs are relatively more effective in collectivist societies, pre-modern China seems to have had a collectivist culture. As already noticed, China was a clan-based society and such societies tend to be more collectivist. Indeed, even contemporary China is relatively collectivist although the Communist regime labored to dismantle the clans and the associated culture. Contemporary China ranked as the 59th most collectivist country (out of 79). China score is 20, out of 100, and the USA scores the highest, 91.¹⁹

The Chinese merchant groups seem to have recognized that protection from a predatory administration is crucial for their prosperity. They disproportionally invested in education and were successful in passing the examinations required to gain administrative positions (Ma 2004).

¹⁸ Historically "the Chinese society consiste[d] of networks of people whose actions are oriented by normative social relationships" (Hamilton 1994: 199). Nakamura 2004 argues that reliance on the law was more wide spread than generally recognized.

¹⁹ http://www.clearlycultural.com/geert-hofstede-cultural-dimensions/individualism/ Accessed Oct 12, 2008.

Moreover, as the economy grew and the demand for expanding the scope of exchange increased, these groups did not respond by approaching the state to provide public-order institutions. Arguably, this would have undermined their property rights. Instead, lineage-based or territorial-based mercantile groups responded by altering their economic organizations. These grew larger and were often based on contractual relationships, had centralized bureaucracies, and drew on outsiders' resources and talents (e.g., Herrmann-Pillath 1999).

The Qing's responses to the military and economic conflict with the West during the nineteenth century reveals the difficulties in introducing public-order institutions when property rights are secured by a limited administrative capacity. The conflict required additional revenues and the emperors authorized taxing goods in transit. Increasing the capacity to abuse rights without creating a countervailing economic or coercive power, however, was costly. Corruption prevailed and trade suffered (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).

Similarly, if the property rights required for the market were secured by a limited administration, introducing public-order CEIs should have undermined the market. This was indeed the case when commercial legal code was introduced in the early twentieth century. The legislation had three objectives; to strengthen the central government, to end the extraterritorial legal right of Western nationals, and to promote economic growth.²⁰ The first two objectives were achieved but not the latter. The assumption that formal law would become an "essential vehicle for private Chinese economic development, ... prove[d] quite mistaken" (Kirby 1995, p. 44). In the absence of countervailing CCIs, however, a legal system provided a conduit to abusing

²⁰ Western powers argued that in the absence of formal law, Chinese authorities should not have legal authority over their nationals in China. Introducing a commercial law was a means to deflect this argument.

property rights as noted in a Chinese proverb "win your lawsuit and lose your money" (Bodde, 1963, p. 376).²¹

The above evidence suggests that security of merchants' property in late medieval China was based on a limited administrative capacity to abuse rights. Limited administrative capacity reduced the ruler's gain from abusing rights. The collectivist – clan-based – Chinese society of that period produced private-order contract enforcement institutions that supported a vibrant market economy. The relative absence of the state from the commercial sphere in late Imperial China that hindered development (Herrmann-Pillath 1999). Consistent with the claim that this absence was a means to committing to the security of rights, when the authorities introduced public-order CEIs, the market suffered.

V.2 England

England's market economy was arguably not a match for China's circa 1,000 AD. By the late nineteenth century, however, it was a symbol of the emerging modern market economy in which private-order and public-order CEIs prevailed and impersonal exchange was common. England's CCIs confirm the conjecture that such market expansion predicates on having a ruler constrained by an effective combination of the economic, coercive and administrative powers of the economic agents. Strong feudal lords, autonomous cities, corporations such as the Bank of England, a ruler without a standing army, and a parliament that approved taxation and coordinated political actions were the manifestations of these coercion-constraining institutions.

Initially, William the Conqueror and his immediate successors were constrained by the coercive power of the great lords, usually referred to as the Barons. The military weakness of the Crown is reflected in the Magna Carta (1215) in which the king agreed not to have a standing army, not to recruit mercenaries, and not to tax without consent by the Great Council. That

²¹ I am unable to date this proverb.

Council, in which the nobles were represented, reflected the prevailing CCIs: a balance of military power between the Crown and the Barons.

In the context of the conflict between the Crown and the lords, particularly during the thirteenth century, numerous English cities got charters recognizing their rights to self-governance. 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. They collected taxes, administrated justice, and mustered military units. These towns' economic, administrative and military powers rendered them important in constraining the Crown.

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' were represented. In 1265 King Henry III dissolved the Great Council and levied unapproved taxes. Consistent with the claim that a CCI based on the Barons' military power prevailed, Earl Simon de Montfort organized a revolt. During the conflict, de Montfort attempted to summon a 'Parliament' to which he invited, in addition to the nobles and the clergy, also representatives from the towns and counties.

Although de Montfort was eventually defeated, this episode reflects the increasing importance of the counties and towns in national conflicts. Recognizing that they were part of the CCIs he was facing, King Edward I summoned the so-called 'model parliament' (1295), which for the first time included representatives from the commercial, urban sector. 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, only the rights of those with a countervailing powers were respected and during that period the Crown abused, for example, the rights of Italians traders. At the same time, kings with conditional coercive power constrained the autonomous cities to compete with each other

economically, but not militarily. 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. 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.

For example, before the thirteenth century, the Community Responsibility System (CRS) enabled some impersonal exchange characterized by separation between the *quid* and the *quo* (Greif 2006). English towns were motivated to punish their members who cheated members of other towns by the threat of losing their collective reputation. The CRS began to decline, however, due to the commercial expansion and the growth in the size, number, and economic and social heterogeneity of towns. Given the economic, military and administrative power of the towns, it was possible to replace the CRS with a public-order CEI without undermining the market.²² Furthermore, because England was an individualistic society (e.g, Morris 1972; Macfarlane 1978), these public-order CEIs were demanded and used.

The development of the Common Law courts and their increasing administrative importance further constrained the Crown. Their administrative power enabled them to protect their jurisdiction independence and by the fifteenth century this fostered the provision of public-order CEIs. This situation is well 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 mayor ... have the power and use of hearing" such cases. (Munro 1990: 74.) The king withdrew his demand and negotiated credit instruments became legal. By the

²² 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 2006; Volckart 2001.)

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 Barons and increased the administrative power of the commercial sector. The War of the Roses (1455–85) decimated the ranks of the great lords making the Crown more dependent 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 increasing financial needs of the Crown due to the Military Revolution compelled it to sell this land to the gentry, thereby further strengthening them. 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. During and after the Glorious Revolution (1688) the new balance of power was tested and formalized. New rules coordinated on appropriate behavior by the Crown and new organizations altered administrative power. Among these rules and organizations were the Bill of Rights, a better separation between the judiciary and the executive, and the Bank of England. (North and Weingast 1989.) That the Glorious Revolution formalized 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.²³

²³ E.g., O'Brien 2001; Quinn 2001; Sussman and Yafeh 2000; Harris 2004.

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 financial elites. The subsequent history is thus marked by gross abuses of property rights through the large increase in taxation, monopolies, parliamentary enclosures of the open fields, and colonial expansion.²⁴ Yet, a state controlled by its landed, commercial, and financially elites and later empowered by the Industrial Revolution was a boon for the extension of markets. The evolution of the modern market reached its zenith.

V.3 Japan

The economic and political history of Tokugawa Japan (1603-1868) is particularly interesting here because it highlights that even if CCIs secure property rights based on coercive power and autonomy, the interests of the people constraining the ruler impact outcomes. More specifically, a CCI constitutes an equilibria that endogenously determine economic and other policy interests. The Japanese CCIs were based on a balance of military power and this balance was kept by a policy of 'seclusion' from the rest of the world and prohibiting the elite from engaging in economic activities.

During the Tokugawa period, the *Shogun* was a *de jure* a ruler who is above the law. *De facto*, however, his military power was constrained by that of the other great lords (*daimyo*). Unlike the English Barons, however, the Japanese lords were not economic agents but a military elite. They had taxation rights but not user rights over their domains and were prohibited from any economic activities.²⁵ Cities were not autonomous but ruled by centrally appointed governors

²⁴ Harris 2004. For economic analyses of the great English trading companies which were monopolies, see Irwin 1988; Carlos and Nicholas 1996; Carlos 1992.

²⁵ The interests of the clans that circumvented this ban diverged over time and they played an important role in the Meiji Revolution. Indeed, the pivotal clan in the success of the revolution was the Satsuma clan. This clan opposed the Tokugawa during the civil wars but did not participate in the final decisive battle. Its relatively large army remained intact. The Shogunate did not confront this army, which was located in the Satsuma's large domain in the relatively remote and difficult to access southern island of Kyushu. The Satsuma remained powerful and gained special privileges such as a partial exemption from having to reside in Edo. This and their trading with Korea

backed by a military contingency. The *daimyo* had no direct (official) interest in establishing public-order CEIs to promote trade.

Consistent with the argument that assemblies are established in response to the need to adjust rights, there was no political assembly in Japan. Japan did not face external military threat and its policy of restricting international trade – the Seclusion – further maintained stability and reduced the need to adjust rights. Similar to China, limited administrative capacity of the state and the need to maintain balance of economic resources among the lords, secured merchants' property rights. There was little in terms of administrative structure to collect sales or income tax from merchants. Merchants' rights were therefore generally secured although they sometimes were subjected to levies, forced loans, and even in rare cases, confiscation of their property. Consistent with our analysis, public-order CEIs were not introduced and the merchants acquired some economic power only when increasing urbanization and population rendered the regime weary of social unrest due to volatility in food prices. Gradually, the Shogunate allowed food merchants to organize themselves (Okazaki 2002). The Meiji Revolution (1868), radically changed Japanese institutions but its analysis is beyond the scope of this paper.

VI. Concluding Comments

Market can be supported by various combinations of coercion-constraining institutions that secure property rights and contract-enforcement institutions that mitigate the fundamental problem of exchange. Different institutional configurations, however, support distinct sets of exchange relations and cause different trajectories of market development. In particular, coercion-constraining institutions that rely on limited administrative capacity are incompatible with public-order enforcement institutions, after all, require administrative capacity to capture wealth. Exchange has to rely on private-order contract-

and China, partially in defiance of the Seclusion, enabled them to increase their wealth and power. When they joined the anti-Shogunate forces in 1868 they tilted the balance of power against it.

enforcement institutions and market expansion is correspondingly limited. Yet, the efficiency gains of introducing public-order institutions depends on the prevailing (private-order) contract-enforcement institutions. The more the private-order is efficient (as is more likely to be the case in collectivist societies), the lower is the efficiency gain from public-order, if it could have been introduced. At the same time, it is also more likely that socially beneficial public-order institutions would not be utilized if introduced.

Another institutional combination is one in which coercive power is sufficiently constrained by countervailing economic, coercive, and administrative powers that contract enforcement can be provided by public-order contract-enforcement institutions. The less efficient the private-order (as is more likely to be the case in individualistic societies), the higher the efficiency gains from public-order institutions.

Different institutional combinations also have distinct distributional implications. By determining the set of exchange relations, distinct institutional combinations also impact the distribution of gains from exchange. Private-order contract-enforcement institutions build on personal relations and therefore imply unequal access to the market. Public-order institutions, in contrast, can impartially provide equal access to enforcement and exchange.

Indeed, institutional foundations and dynamics of markets in pre-modern China, England and Japan are consistent with this analysis. In particular, because coercive power in England was constrained by countervailing economic, coercive, and administrative powers, public-order contract-enforcement institutions could be effectively introduced. In contrast, coercive power in China was constrained by limited administrative capacity in the commercial sector. If introduced, public-order contract-enforcement institutions would have therefore undermined the security of property rights. Market expansion based on public-order was thus limited.

Specifically, market participants in England were organized in self-governed social structures such as towns and guilds. Their independent coercive power and the value of their administrative services effectively constrained other actors from abusing their property rights.

Public-order institutions that undermine the security of property rights were established without actually reducing the security of property rights. Given the prevailing individualism, relying on public-order institutions contributed to market expansion once the growing economy strained the capacity of its private-order institutions.

In late Imperial China, markets were based on another set of market-supporting institutions. Although merchants had no coercive or administrative powers to constrain the state, their property rights were secured by a limited administration. Limited administrative capacity in the commercial sector reduced the benefit, to the emperors, from attempting to capture mercantile wealth. Contract enforcement was provided by private-order institutions that were highly effective in a collectivist, clan-based society. Whether the Chinese system would have effectively adapted to foster more impersonal exchange in the long run is an experiment that history does not provide. Western expansion forced changes in China's administration, policies and politics that altered the course of its institutional development.

Be it as it may, this paper highlights that the institutional foundations of markets are deeper than legal rules and apparatus articulating property rights and enforcing contracts. A society's market-supporting institutions are an integral part of its organization. Their details and implications depend on the ways that the state implements its policies and on the prevailing sociocultural features. It may well be the case that some of the difficulties in creating market economies in developing countries is due to creating public-order institutions in the absence of appropriate coercion-constraining institutions. More generally, given the West's historical experience and these societies' political, social, and cultural characteristics, contemporary western legal institutions may not be the optimal one to adopt.

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