

## Part IV The Empirical Method of Comparative and Historical Institutional Analysis

The inherent indeterminacy and context-specificity of institutions challenge our ability to study them using the traditional social science empirical methods. These methods rest on the premise that, given a set of exogenous and observable features of a situation, deductive theory can sufficiently restrict the outcome set to render a positive analysis meaningful. In the case of endogenous institutions, we lack such a theory.

Parts I–III highlight several reasons why it may be impossible to develop a deductive theory of institutions. Institutions are inherently indeterminate and context-specific. Various transactions can be linked to a central one, and multiple equilibria—and hence institutions—can prevail in the repeated situations that are essential to institutional analysis. Different institutions embodying distinct cognitive models and information can be self-enforcing. Institutional change is a function of the prevailing institutions, while its direction is influenced by institutional elements inherited from the past. Whether or not a deductive theory of institutions will ever be developed, our current state of knowledge is such that we cannot understand institutions relevant in a particular time and place by relying solely on deductive theory.

Inductive analysis à la Bacon, which identifies and classifies institutions based on their observable features alone, is similarly deficient for studying institutions. Pure induction is insufficient because various institutional elements, such as beliefs and norms that motivate behavior, are not directly observable. Moreover, the same observable elements can be part of different institutions; identical rules and organizations can be components of institutions that differ in their beliefs and norms and hence implications. Finally, over time, institutional change can cause the same rule or organization to be part of distinct institutions with different welfare implications.<sup>1</sup>

Genoa and Pisa, for example, appear to have had the same *podesteria* system, but they had very distinct institutions. In Genoa the *podestà* created a balance of power, whereas in Pisa he represented the domination of one group over another. The merchant guild was initially a

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<sup>1</sup> Conversely, although a rule may no longer be supposed to influence behavior, it may nevertheless do so. Indeed, the community responsibility system, described in Chapter 10, was effective for a long time after it was formally abolished.

welfare-enhancing institution that protected property rights. Over time, however, guilds such as the Hanseatic League began to use their power to reduce welfare by preventing competition.

Multiple institutions can prevail in a given situation, institutions have unobservable components, and the same observable elements can be part of different institutions. Furthermore, the impact of an institution depends on the details of these components and the broader context. Econometric analysis of institutions is therefore plagued by problems of having to cope with too many endogenous and unobservable variables whose causal relationships are not well understood and whose implications depend on the context. Empirical studies that identify an institution with macro-level proxies of the institution's implications, such as political violence, peace, or the protection of property rights, are similarly problematic. Without recognizing the institutional foundations of outcomes and the broader context, an attempt to evaluate the welfare implication of these outcomes is bound to be misleading. As the case of Genoa reveals, peace may not be conducive to economic growth, and political violence may not endanger property rights. Similarly, protecting property rights may reduce welfare and slow economic growth. In Europe, the decline in slavery—de facto prohibiting property rights in humans—contributed to growth by fostering labor-saving technological innovations.

Part IV responds to the challenge posed by the inability to study institutions using the traditional methods of social science by introducing a complementary case study method. Rather than focusing on predicting institutions, this method focuses on *identifying* them, understanding their details and origins, and examining the factors that render them self-enforcing. It then evaluates an institution's impact based on comprehending its micro-details and the broader context. Such an analysis is crucial for comprehending past and present institutions, identifying the factors that lead to distinct institutional trajectories, and foreseeing the direction of institutional change in response to, say, institutional reform or an exogenous environmental change.

This empirical method—a theoretically informed case study method—is based on *interactive, context-specific analysis*. Its objective is both to identify and understand institutions relevant in a given situation and to foster the understanding of institutions in general. Central to this method is a context-specific analysis that interactively uses deductive theory, contextual

knowledge of the situation and its history, and context-specific modeling to develop and evaluate conjectures about the relevance of particular institutions.

Because institutional dynamics are historical processes, relying on the contextual knowledge of the situation and its history responds to the context-specificity and historical contingency of institutions. Combined with theory and context-specific modeling, such knowledge helps the researcher to form a conjecture about the relevant institutions, to expose why particular institutions were more likely to emerge in the particular historical setting under consideration, and to understand how they were rendered self-enforcing.

The method can be crudely summarized as follows. Theory and contextual and comparative information are used to identify important issues, transactions, and possible causal relationships in the episode under consideration. They are also used to determine which institutional factors can be treated as exogenous and which are to be treated as endogenous. Contextual analysis, generic theoretical insights, and empirical evidence are used to develop a conjecture about the relevant institution: which transactions were (or were not) linked, why and in what way, and how and why the resulting game and the beliefs within it led to particular behavior.

The conjecture is formalized and evaluated using a context-specific model in which the exogenous, historically determined technological and institutional factors define the rules of the game. Combining analysis of the game, which recognizes the role of historical factors in influencing equilibrium selection, with evidence enables us to evaluate—reject, refine, or “accept” (i.e., not reject)—the conjecture and thereby to understand the relevant endogenous institutions. This conjecturing and evaluating process is interactive: we repeatedly use theory, contextual knowledge, and evidence to develop a conjecture; we then present and analyze the conjecture using an explicit context-specific model, and finally we use predictions and other insights from the model to evaluate and modify the conjecture.

The analyses of historical institutions presented in Parts I–III relied on such interactive, context-specific analysis. The empirical study in Chapter 10 more explicitly illustrates the need for, and benefit of, this method and its main assertion, that induction, deduction, and context-specific analysis are complementary in institutional analysis. Theory and context-specific

modeling discipline the historical accounts, whereas induction and contextual-knowledge discipline the theoretical arguments.

Chapter 10 makes this argument by examining the institutions that supported impersonal exchange in Europe before the territorial state provided (relatively) impartial justice. It analyzes the historical transition from economies based on personal exchange to those in which progressively more impersonal exchange is also possible. The analysis thus touches on an issue central to economic history and development: the transition of economies and societies from ones in which personal relationships limit economic and social interactions to ones in which impersonal economic exchange and social mobility prevail.

Chapter 11 argues the generality of the assertion that neither deduction nor induction is sufficient for analyzing endogenous institutions. It then introduces the mechanics of conducting an interactive, context-specific analysis, focusing on the role of contextual, historical knowledge and context-specific modeling. Appendix C, which examines private-order, reputation-based institutions, complements this discussion by elaborating on the role of theory in an interactive, theoretically informed, context-specific analysis.

## Chapter 10 The Institutional Foundations of Impersonal Exchange

This chapter illustrates the merit of interactive, theoretically informed, context-specific analysis by examining a central question in economic history and development economics. This question concerns the institutional evolution that enabled increasingly more impersonal exchange in some economies but not in others (see North 1990; Greif 1994a, 1997a, 1998b, 2000, 2004b 2004c; Rodrik 2004; Shirley 2004). We often assert that such institutional evolution facilitates specialization, efficiency, and growth. Yet we know little about the historical development of the institutional foundations of impersonal exchange.

This historical development is the focus of this chapter. It examines the nature and dynamics of institutions that supported impersonal exchange characterized by separation between the *quid* and the *quo* across jurisdictional boundaries in pre-modern Europe. Commerce particularly expanded during the three hundred years prior to the mid-fourteenth century even though there were no impartial courts with geographically extensive judicial powers to support exchange among traders from various corners of Europe. What were the institutions, if any, that supported interjurisdictional exchange characterized by separation between the *quid* and the *quo* over time and space? Specifically, were there institutions that enabled such exchange that was also *impersonal* in the sense that transacting did not depend on expectations of future gains from interactions among the current exchange partners, or on knowledge of past conduct, or on the ability to report misconduct to future trading partners?<sup>2</sup>

The theoretical and historical analysis presented here substantiates that in premodern Europe impersonal exchange characterized by separation between the *quid* and the *quo* across jurisdictional boundaries was facilitated by a self-enforcing institution: the community responsibility system. Central to this system were the particularly European, self-governed communities known as *communes*, which occupy the gray area between communities and states as we usually conceptualize them. The communes were similar to communities in that they were characterized by intracommunity personal familiarity. Like states, however, they had a (geographically) local monopoly over the legal use of coercive power. The courts of these self-governed communes, however, were partial and represented the interests of the community.

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<sup>2</sup> Note that this question does not assume that such institutions existed just because they may have been efficient.

Under the community responsibility system, a local, community court held all members of a different commune legally liable for default by anyone involved in contracts with a member of the local community. If the defaulter's communal court refused to compensate the injured party, the local court confiscated the property of any member of the defaulter's commune present in its jurisdiction as compensation. A commune could avoid compensating for the default of one of its members only by ceasing to trade with the other commune. When this cost was too high, a commune court's best response was to dispense impartial justice to nonmembers who had been cheated by a member of the commune. Expecting *ex post* dispensation of impartial justice, traders were motivated to enter into impersonal, intercommunity exchange. Intercommunity impersonal exchange was possible not despite the partiality of the court but because of it; the court cared about the community's collective reputation.

More generally, the strategy and organizational structure associated with the community responsibility system enabled impersonal exchange among traders with finite lifespans in the absence of partial legal contract enforcement. The community responsibility system turned communities into ongoing organizations with infinite lifespans that internalized the cost of a default by each of their members on other members. Partial communal courts were thereby motivated to administer impartial justice.

The community responsibility system also motivated communities to establish the organizational structure required to enable one to reveal credibly his personal and communal identity to his trading partner and motivating one who was cheated to reveal misconduct to the court. This *ex post* information, rather than *ex ante* knowledge of past conduct or the ability to communicate misconduct to future trading partners, enabled exchange to be an equilibrium outcome.

Two intertransactional linkages were therefore central to the community responsibility system. First, the linkages of information-sharing, coercive, and economic transactions among particular groups of traders—the communes' members—made it possible to believe a commune would punish a member for default in intercommunity exchange. Second, the intercommunity economic transaction between particular traders was linked to future transactions between all members of their respective communes. A commune was thereby motivated to punish a member who defaulted in intercommunity exchange.

The community responsibility system constitutes the missing link in our understanding of the development of the institutional foundations of modern markets. Theoretically, the development of law-based institutions supporting impersonal exchange is puzzling. Arguably, reputation-based institutions that support personal exchange have a low fixed cost but a high marginal cost of exchanging with unfamiliar individuals. Law-based institutions, which enable impersonal exchange, have a high fixed setup cost but a low marginal cost for establishing new exchange relationships (Li 1999; Dixit 2004).

If exchange was initially personal, why was a legal system established to support impersonal exchange despite the high fixed cost, and how was knowledge about the benefit of impersonal exchange generated?<sup>3</sup> In Europe the *community* responsibility system constituted an intermediary institution that was neither purely law based nor purely reputation based. It enabled intercommunity impersonal exchange based on communities' partial legal systems and reputational considerations.

The community responsibility system was a self-enforcing institution in which incentives to both courts and traders were provided endogenously as an equilibrium outcome. Over time, however, trade expansion and growth in the size, number, and economic and social heterogeneity of merchants' communities reduced its economic efficiency and intracommunity political viability. By the late thirteenth century, the system was declining, at least in the areas examined here, due to the impact of trade and urban growth on the very factors that had rendered it an equilibrium outcome. Ironically, the community responsibility system may have undermined itself as the processes that it fostered increased trade and urban growth - the causes of its decline.

The ability to effectively replace the community responsibility system reflected the environmental effect, because it depended on political governance. When and where the appropriate institutional environment prevailed, its demise fostered the gradual development of the institutions supporting impersonal exchange based on territorial law and individual legal responsibility that are common today.

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<sup>3</sup> Other factors apart from the expenses of setting up the system can hinder the transition from reputation-based to law-based institutions, even when law-based institutions are more efficient. These factors include coordination failure (Greif 1994a; Kranton 1996), collective action problems (Li 1999, Dixit 2002), and the inability of the state to commit to respect property rights (Greif 1997b, 2004b).

This analysis also relates to a question central to international trade (trade across jurisdictional boundaries). This question concerns the institutional determinants of trade, the impact of domestic institutions on these trade flows, and their impact on domestic institutions (see Greif 1992; Staiger 1995; Maggio 1999; Grossman and Helpman 2002, 2003). The community responsibility system was a domestic institution that fostered trade across jurisdictional boundaries. Furthermore, the institutional transition that the decline of the system entailed highlights the importance of studying the causal relationships between international trade and the development of domestic institutions.

Despite numerous studies on the impact of international trade on growth, very little conclusive causal evidence has emerged (Helpman 2004). The history of the community responsibility system supports the conjecture that institutional change is an important channel through which trade influences growth.<sup>4</sup> Indeed, the decline of the system and the subsequent institutional development fostered the institutional distinction between domestic and international trade. Under the community responsibility system, there was little, if any, distinction between the institutions that governed impersonal exchange within and outside states. Indeed, *nation* is the term frequently used during the premodern period to refer to communes. The uneven demise of the system within and across national boundaries, however, rendered state boundaries relevant to trade.

The historical analysis presented here draws on the rich historical sources available from Florence and England. Together with secondary sources, these sources are sufficient to establish the centrality of the community responsibility system in Europe as a whole, although there is much room for additional historical and comparative research.

An earlier generation of scholars (e.g., Wach 1868, Santini 1886, Arias 1901, Maitland and Bateson 1901, Planitz 1919, Patourel 1937) noted the wealth of historical documents reflecting aspects of the community responsibility system. This chapter builds on the works of these prominent scholars who, lacking an appropriate analytical framework, could not account for the system details, development, implications, and inter-relationships between various institutional and organizational features.

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<sup>4</sup>. I am indebted to Elhanan Helpman for pointing out the general importance of this issue. Acemoglu et al. (2002) conjecture that premodern Atlantic trade fostered institutional development.

The importance of studying the institutional foundation of impersonal exchange during the late medieval period did not escape more recent scholarly attention. But scholars have relied either on theory (and formal modeling) alone or on history alone to assert the relevance of particular institutions. Neither line of research succeeded in establishing that impersonal exchange prevailed or in identifying its institutional foundations. I compare this research methods and conclusions with the one derived here to highlight the merit of theoretically informed, context-specific analysis.

Section 10.1 begins with a historical background. Then sections 10.2 and 10.3 critique analyses based on either theory or history claiming that particular institutions governed impersonal exchange in premodern Europe. Section 10.4 presents a context-specific analysis of the community responsibility system. Section 10.5 discusses the system's endogenous decline and subsequent institutional developments.

### **10.1 Exchange in Which the *Quid* Is Separated from the *Quo***

Exchange characterized by a separation between the *quid* and the *quo* over time and space was common in Western Europe during the late medieval commercial expansion, perhaps for the first time since the fall of the Roman Empire. In towns, fairs, and marketplaces, merchants from distant parts of Europe provided and received credit, used contracts to buy and sell goods for future delivery, and insured cargo they shipped overseas.<sup>5</sup>

What institutions generated these regularities of behavior among merchants from distant parts of Europe? Did they enable impersonal exchange characterized by separation between the *quid* and the *quo*? Or was exchange confined to impersonal spot exchange (supported by local courts) or personal exchange (supported by repeated interactions or family relationships)?<sup>6</sup>

Institutions that support impersonal exchange characterized by a separation between the *quid* and the *quo* over time and space have to mitigate the contractual problem intrinsic to it: the

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<sup>5</sup> For a general discussion, see Lopez and Raymond (1955, pp. 157-238) and de Roover (1963, pp. 42-118). For evidence on exchange among merchants from distinct parts of Europe, see R. Reynolds (1929, 1930, 1931); Face (1958); Postan (1973); Moore (1985); and Verlinden (1979). For historical examples, see Obertus Scriba 1190, no. 138, 139, 669; Lanfranco Scriba, (1202-26, vol. 1, no. 524); Guglielmo Cassinese 1190-2, no. 250.

<sup>6</sup> The historical evidence does not allow us to address these questions by tracing the exchange relationships of individual merchants over time. Discovering whether impersonal exchange was possible in premodern Europe requires determining whether there was an institution that enabled it.

need to commit *ex ante* not to breach contractual obligations *ex post* despite the separation between the *quid* and the *quo*. A borrower, for example, can enrich himself after obtaining a loan by not repaying his debt. Expecting such behavior *ex post*, a lender will not lend *ex ante* in the absence of institutions that enable the borrower to commit to repay the loan. For such commitment to be undertaken in impersonal exchange, trading partners have to be able to commit to one another even though they do not expect to trade again, lack information about their partners' past conduct, and are not able to credibly commit to report misconduct to future trading partners.

## **10.2 The Inadequacy of Deduction Alone to Identify Institutions**

Scholars who have studied the institutional foundations of impersonal exchange have noted the absence of an effective, national, and impartial legal system in the early stages of the late medieval commercial expansion in Europe. They drew on theoretical arguments—deduction—to conjecture about whether and which alternative institutions prevailed. In the absence of contextual and historical analysis, different scholars reached surprisingly different conclusions. Those who view contract enforcement by the state as the cement of economic activity conclude that impersonal exchange did not take place. Impersonal exchange was infeasible, according to this view, because the “personal ties, voluntaristic constraints, and ostracism” that supported exchange during this period were not “effective” in supporting impersonal exchange (North 1991, p. 100). According to this view, the rise of impersonal exchange in premodern Europe had to wait for the rise of the state and its legal system.

Other scholars reach the opposite conclusion. Those who object to state intervention in economic affairs claim that the prevalence of impersonal exchange during the late medieval period supports their view that state intervention is unnecessary even for contract enforcement. Thus, Benson (1989) argues that during this period a private-order institution, that of the law merchant, enabled “thousands of traders [who] traveled to fairs and markets all over Europe exchanging goods which they knew little about with people they knew little about” (p. 648). “Merchants formed their own courts to adjudicate disputes in accordance with their own laws. These courts’ decisions were accepted by winners and losers alike, because they were backed by the threat of ostracism by the merchant community at large—a very effective boycott sanction”

(p. 649). This was a “voluntarily produced, voluntarily adjudicated, and voluntarily enforced mercantile law” (p. 647).

The validity of this assertion, like the validity of the claim that impersonal exchange did not take place, is questionable, given the lack of empirical support and the internal logical contradictions. Benson’s only reference to historical support is a study by Trackman (1983, p. 10), but that study examined the content of law during the premodern period, not how it was enforced. Though Trackman suggests that reputation probably supported impersonal exchange, but he does not substantiate the assertion.

Logically, the argument is not very convincing either. How could the fear of ostracism influence behavior if interaction was with individuals about whom “they knew little” (Benson 1989, p. 641)? For an argument about ostracism to hold water, it is necessary to articulate how information about past behavior is diffused among traders and how they are motivated to participate in collective punishment.

### **10.3 The Inadequacy of Theory Enriched with a Microanalytic Model**

Recognition of the need to endogenously account for information flows and enforcement is at the heart of the article on this issue by Milgrom, North, and Weingast (1990), who use a microanalytic model to lend support to the deductive assertion that a private-order institution supported impersonal exchange. Their analysis focuses on contract enforcement at the Champagne fairs, arguably the most important interregional trading fair in Europe during the twelfth and thirteenth centuries (Verlinden 1979). During this period, much of the trade between Northern and Southern Europe was conducted at these fairs, where merchants from different localities entered into contracts, including contracts for future delivery, that required enforcement over time (Verlinden 1979). How could a merchant from one community commit to honor contractual obligations toward a member of another?

Milgrom et al. argue, that in the large merchant community that frequented the fairs, a reputation mechanism based on familiarity could not have surmounted this commitment problem, because the traders lacked the social networks required to make past actions known to all. Noting the operation of judges at the fairs, they pose the following question: “What prevents a merchant from cheating by supplying lower quality goods than promised, and then leaving the

fairs before being detected? In these circumstances the cheated merchant might be able to get a judgment against his supplier, but what good would it do if the supplier never returned to the fairs? Perhaps ostracism by the other merchants might be an effective way to enforce the payment of judgments. However, if that is so, why was a legal system needed at all?" (pp. 5-6).

To address this question, Milgrom et al. present a formal model, the essence of which is as follows. Suppose that each pair of traders is matched only once and each trader knows only his own experience. The fairs' court is modeled as capable only of verifying past actions and keeping records of traders who cheated in the past. Acquiring information and appealing to the court is costly for each merchant. Despite these costs, there exists a (symmetric sequential) equilibrium in which cheating does not occur. The court's ability to activate a multilateral reputation mechanism by controlling information provides the appropriate incentives. Each merchant is motivated to pay the fee and check on the past conduct of his partner with the court. This is the case because only then the court will record the exchange. Without this record, the court will not make the occurrence of cheating known to others in the future. Expecting not to be punished in the future, one's best response is to cheat. Anticipating that this will be the case, a trader finds it best to pay the court and make a record to begin with thereby ensuring to have a cheating recorded. A trader who was cheated is motivated to complain, because the cheater will then compensate him. The cheater will do so because otherwise the court will inform each of his future partners that he cheated in the past. These future partners will cheat a trader who cheated before (if he did not make amends), knowing that the court will not inform future partners of their actions.

Hence a court can ensure contract enforcement through time, even if it cannot use coercive power against cheaters. Milgrom et al. suggest that the role of the Champagne fairs' court was similar to that described in their theoretical analysis. This theoretical analysis thus supports the assertion that the law merchant system could have provided contract enforcement at the fairs. This analysis is theoretically insightful, but is it empirically relevant? Was the law merchant system central to late medieval trade in general and the fairs in particular?

Milgrom et al. bring two arguments to support the relevance of their analysis. First, the analysis explains exchange characterized by separation between the *quid* and the *quo* among traders from distinct parts of Europe at the fairs. Put differently, the analysis gains support from

accounting for the behavior it seeks to explain. Second, the authors argue that “key characteristics” of the “model correspond to practices found at the Champagne fairs. Although merchants at the fairs were not required to query before any contract, the institutions of the fair provided this information in another manner. As noted previously, the fairs closely controlled entry and exit. A merchant could not enter the fair without being in good standing with those who controlled entry, and any merchant caught cheating at the fair would be incarcerated and brought to justice under the rules of the fair. So anyone a merchant met at the fair could be presumed to have a ‘good reputation’ in precisely the sense of our model” (p. 20).

The analysis - using a microanalytic model - identifies a theoretical possibility but does not establish that it corresponds to a historical reality. It devotes little attention to substantiating the relevance of the analysis. The weight of substantiation is on the argument that the model can explain the behavior that motivated its formulation to begin with. But many models can generate this pattern of behavior. As a matter of fact, Milgrom et al. assertion that the authorities at the fairs had the ability to capture one who would then be “incarcerated and brought to justice at the fair”(p. 20) suggests the need to examine the role of coercive power rather than commercial sanctions in the operation of the fairs. Indeed, if one accepts their assertion that the fair’s court could have verified a cheater’s identity and known about his past transgression, a cheater would not have returned to the fair for fear of coercive retribution rather than commercial sanctions. In short, because context and theory are not interactively used to form and evaluate a conjecture, the analysis of MNW is unsatisfactory.

The analysis suffers from three additional problems. First, the historical context is essentially ignored in attempting to identify the relevant institution. As a result, the hypothesis and the model incorporate assumptions that are questionable given our historical knowledge. The model assumes that the identities of traders could have been verified by the court and that merchants traded with their own capital. But just how did the authorities of the fairs verify that a merchant was in good standing? No reliable form of identification was available during that period (there were no picture IDs), and forgeries of documents were common. Moreover, during this period merchants throughout Europe used agents. Merchants could have cheated anonymously by sending agents to trade on their behalf.

Second, the analysis does not make use of relevant historical details. For example, the analysis assumes that there is a group of players, the traders. But traders during the late medieval period were only a subset of the population. This is a relevant aspect of the historical context, because it raises the issue of how the “fly-by-night” problem was mitigated. What prevented a peasant near the fair from coming to it once, taking out a loan, and disappearing forever?

Third, in developing their hypothesis, Milgrom et. al. ignore relevant theoretical insights. For example, game theory highlights the importance of a sufficiently long horizon in sustaining cooperation. (Appendix C, section 2.1.) Given the relatively short life expectancy in the medieval period, claiming that the law merchant system was the institution that governed impersonal exchange among individuals ignores this problem. It is inconsistent with the analysis to argue, as they do, that trade was actually conducted among members of the same families for generations. If this had been the case, trade would not have been impersonal and could have been based on families’ concerns with their reputations.

Theory, then, even theory combined with a microanalytic model, fails to explain convincingly whether an institution supporting impersonal exchange prevailed in premodern Europe and to identify it if it did. As I show here, relying only on induction—observable historical evidence—to identify this institution failed as well.

#### 10.4 The Community Responsibility System

In attempting to identify the institution, if any, that supported impersonal exchange during the late medieval period, it is useful to note first the absence of one institution: a state with a legal system capable of effectively supporting impersonal exchange between individuals from distant localities. Local courts existed throughout Europe and had a legal monopoly over the use of coercive power in rather limited territorial areas. Even within a relatively well-organized political unit, such as England, there was no legal system that could provide the required enforcement.<sup>7</sup>

The law was absent in yet another sense. By and large, local courts were not unbiased agents of a central legal authority or impartial dispensers of justice. More often than not, they were partial; controlled by and reflecting the interest of the local elite. In the countryside as well

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<sup>7</sup> See Plucknett (1949, p. 142), Ashburner (1909), Postan (1973); and *Select Cases Concerning the Law Merchant, A.D. 1239-1633*, vol. 2.

as in cities, local courts were controlled by the local landed or urban elite. An English charter concerning the imperial German city of Lübeck noted, for example, that the city is “governed” by its “burgesses and merchants,” who are responsible for dispensing justice.<sup>8</sup>

According to many economic historians, because no impartial legal system was effective over a large geographical area, personal exchange predominated, and impersonal exchange was either absent or confined to spot exchange supported by local courts (see North 1990). But this conclusion overlooks that European medieval trade was conducted in the social and institutional context of communes, self-governed communities.<sup>9</sup> During the late medieval period, most of the towns west of the Baltic Sea in the North and the Adriatic Sea in the South, acquired this status. Although marked regional differences across communes existed, they shared much in common. As in a community, members of communes knew one another; like states, however, the communes had local enforcement institutions, often based on legitimate use of coercive power.<sup>10</sup> There were entry barriers to communes; gaining affiliation with one was usually a lengthy and costly process. Although local, rural to urban migration, was common, migration from one commune to another meant losing the benefits of citizenship. Throughout Europe immigration was expensive and risky; in the extreme case of Venice, acquiring citizenship meant one had to pay taxes for at least ten years. In Genoa it took three years to acquire.

Is it theoretically possible that despite the partiality of the courts and their limited geographical scope, these communes provided the foundation for an institution that supported

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<sup>8</sup> *Calendar of the Patent Rolls*, 1266-72, pg. 20, 1266. Substantiating the assertion that such courts were partial and that their judgments reflected the interests of the local elite is subtle. Particularly problematic is finding evidence about partiality with respect to foreign merchants, because, as I argue, under the community responsibility system these courts provided—as an equilibrium phenomenon—impartial justice exactly because they were partial. Yet many documents from the period, discussed shortly, reflect distrust of the impartiality of courts. In England local courts provided partial justice to local peasants (Hanawalt 1974); it is reasonable that, in the absence of a countervailing force, they would not have dispensed equal justice to nonlocals. Court deliberations in Italy reflect the fact that the profitability of local businesses, not impartial justice, motivated legal rulings in disputes with nonlocals (English 1988). In Germany nonlocal merchants, peasants, and even lower-ranked nobles were considered foreigners. They were formally called *guests* and were widely discriminated against in courts of law (Volckart 2001).

<sup>9</sup> While some will use the term *commune* to refer to the Italian city-states that were independent, it is also used, as here, to refer to autonomously governed communities in general.

<sup>10</sup> While the communal structure underpinned the community responsibility system, organizations representing the communes, such as guilds, were those actually involved in intercommunal commercial disputes.

intercommunity impersonal exchange characterized by distance between the *quid* and the *quo*? If so, did this institution prevail in late medieval Europe?

#### 10.4.1 A Theory of the Community Responsibility System

The following complete information, repeated-game model indicates that, under certain conditions, a community responsibility system can support, as an equilibrium outcome, impersonal exchange characterized by separation between the *quid* and the *quo*.<sup>11</sup> Consider a game in which  $N_L$  lenders and  $N_B$  borrowers ( $N_L > N_B$ ) are engaged (without loss of generality) in credit transactions. Each player lives for  $T$  periods:  $T-1$  periods of trading and one period of “retirement.” The time discount factor is  $\delta$ . At the beginning of a period, the oldest cohort of borrowers and lenders dies and is replaced. At the beginning of each period a borrower can decide whether or not to travel to trade to initiate exchange with a lender. Every borrower who initiates an exchange is randomly matched with a lender.

A lender who was matched with a borrower can decide whether or not to lend the finite amount  $l$ . A borrower who does not travel receives a payoff of zero and lenders who do not lend receive a payoff of  $r > 0$ . A borrower who receives a loan can repay it or not. If he repays, the lender receives the principle,  $l$ , and an interest of  $i > r$ . The borrower receives goods valued at  $g > 0$ . If the borrower does not repay the loan, the lender receives a payoff of 0, and, because he lost his capital, he leaves the game. The borrower reaps  $G > g$  from not paying and  $G < g + i + l$ . By these assumptions lending is efficient but is profitable to both parties only if the borrower pays his debt. The borrower is better off, however, not paying and cheating is inefficient.

Because we want to capture situations in which there are no expectations for future exchange, assume that the probability of matching between a particular lender and borrower is zero.<sup>12</sup> To capture exchange, which is impersonal in the sense that a lender does not know a borrower’s past conduct nor can he inform other lenders of misconduct, assume that past conduct is private information known only to transacting agents. Whatever transpired between a particular lender and borrower can be observed only by them.

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<sup>11</sup>. Fearon and Laitin (1996) explore how communities can be motivated to discipline their members to achieve interethnic political cooperation.

<sup>12</sup> For the following analysis to hold it is sufficient to assume that the probability of a particular pair re-matching is sufficiently low, relative to the time discount factor and gains from exchange and cheating, to render the bilateral reputation mechanism ineffective.

In this game there is no equilibrium with lending on the equilibrium path. The assumption that borrowers have finite life-spans is sufficient for this outcome. A borrower's unique best response in the last period is to cheat, implying that the lender would not lend in this period and the game unravels. Furthermore, even if we were to assume that the players have infinite life-spans, the impersonality of exchange implies that there is still no equilibrium with lending. Because past conduct is private information and repeated interaction is lacking, lenders, as individuals or a group, cannot credibly threaten to punish collectively a borrower who has cheated in the past.<sup>13</sup>

When we add communities to the game, however, an equilibrium with lending can exist despite the borrowers' finite life-spans and the impersonality of exchange. Assume that there are two communities:<sup>14</sup> all borrowers are members of community B, and all lenders are members of community L. Each community has a territory, and all lending and repayment is made in the lenders' territory. Each community has an enforcement institution—a monopoly over coercive power—within its territory. Historically, each self-governed community has its own courts. Accordingly, let the lenders' court denote the lenders' enforcement institution and borrowers' court the borrowers' enforcement institution.

Because these courts represented the interests of each community's members, assume that a community court's payoff is the net present value of the sum of the payoffs of the community's living members (i.e., members of cohorts 0 to T).<sup>15</sup> Two assumptions are implicit in this specification. First, each community member's payoff has an equal weight in the court's objective function. This clearly does not hold at all times and places; it is used here as a

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<sup>13</sup>. Multilateral reputation mechanism (e.g., Greif 1989, 1993; Kandori 1992) can support lending if future lenders can condition their behavior on a borrower's past conduct. In models of incomplete information about traders' type, there are equilibria in which the implied costs of building relationships with a new trader of unknown type sufficiently increases the cost of cheating one's current trade partner to support exchange even in the absence of information about identities and past history. (Ghosh and Ray 1996; Kranton 1996). Consistent with the focus here on exchange that is impersonal in the sense that there is also no expectation of future trade, the low frequency of bilateral interactions assumed here precludes such equilibria. Contagious equilibria (Kandori 1992; Ellison 1994) do not exist in this one-sided prisoner's dilemma game as a cheated player leaves the game. The analysis is also robust in assuming that a borrower can use the capital he embezzled. See Appendix C.

<sup>14</sup>. Assuming more communities does not qualitatively change the analysis as such an assumption does not fundamentally change the strategic interactions between two communities. The community responsibility system provides a disincentive for communities to get involved in a conflict between two foreign merchants. Having more communities increases each community's outside options, however, implying that the necessary conditions for the community responsibility system are less likely to hold. I argue later that increasing number of communes contributed to the decline of the community responsibility system.

<sup>15</sup> The court's value function at the end of a period is the same as at the beginning of the next period.

benchmark case. Second, courts do not care about the welfare of future members or respect the “honor” of the commune. Relaxing this assumption only strengthens the results presented here.<sup>16</sup>

Figure 10.1 presents the time line of actions. Each period,  $t$ , begins with the previous game between borrowers and lenders. A lender can then complain, at personal cost  $c > 0$ , to the lenders’ court that he was cheated. The lenders’ court can verify the validity of the complaints at cost  $C_L$ .<sup>17</sup> The court can also impound the goods of the  $I_B(t)$  borrowers present in its territory.<sup>18</sup> By impounding a borrower’s goods, the lenders’ court gains  $g > 0$ , but impounding causes the goods to lose value, for example, due to the inability to sell them on time or through damage during the storage period. Denote this damage by  $d > 0$ , and assume  $g - d > 0$  to ensure that impounding is profitable. The most a lenders’ court can gain by impounding is therefore  $I_B(t)(g - d)$ . The borrowers’ court can then verify the validity of the complaint at cost  $C_B$ , impose a fine,  $f \geq 0$ , on a borrower who cheated, and transfer the amount  $x$  (which is no larger than the fine collected) to the lenders’ court. (The implicit assumption, relaxed below, is that the probability of disagreement between the lenders’ court and the borrowers’ court is zero.) Finally the lenders’ court decides whether to distribute the proceedings from the impounded goods or the sum provided by the borrowers’ court and to whom.

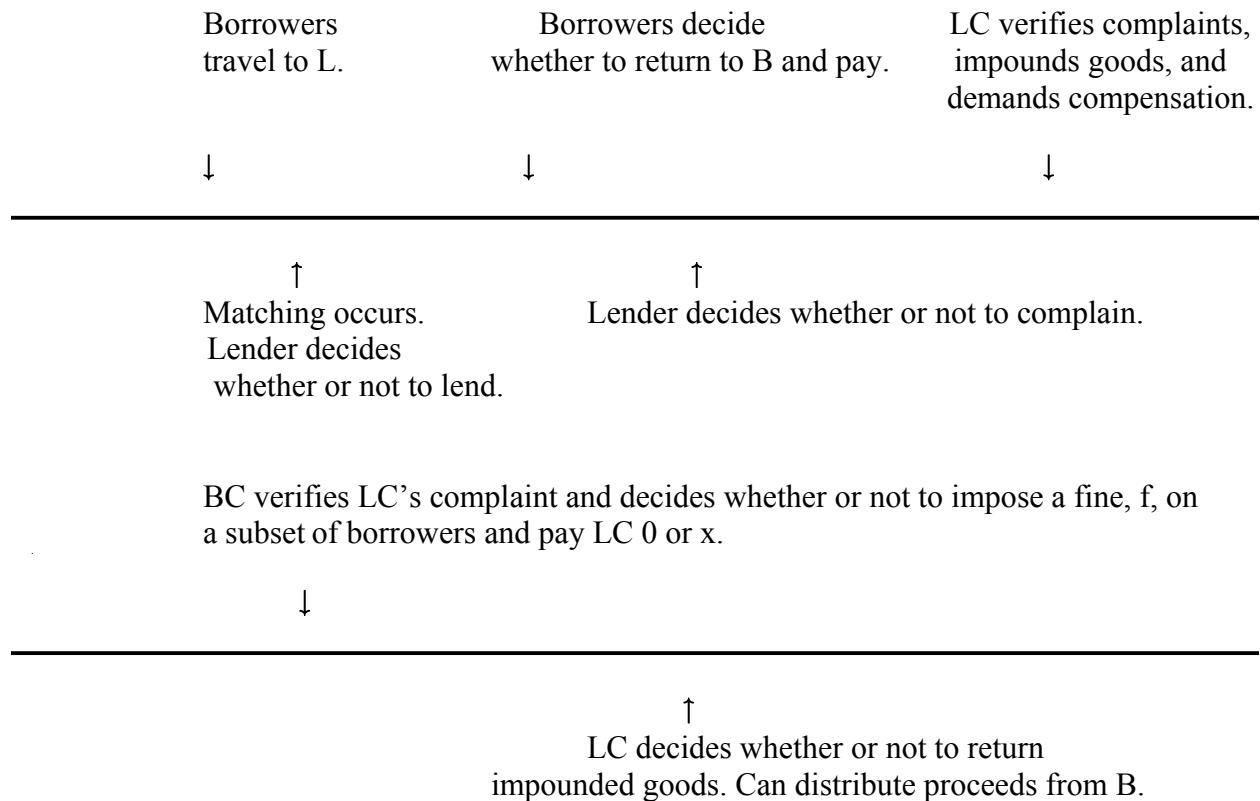
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<sup>16</sup> I assume away the possibility of bribes, because decisions about disputes in intercommunity exchange were made by a community’s representatives and involved many decision makers. In Florence before 1250, for example, initiating actions over disputes in intercommunity exchange was the responsibility of the city administrator and his council. By 1325, in order to take such actions, the city administrator had to make two requests to the commune to get approval. In 1415 the statute detailing the rules for such actions specified that they were under the authority of consuls responsible for crafts and trade and no longer under the authority of the city’s administrator. For these consuls to initiate actions in intercommunity disputes, the actions had to be approved by two additional bodies, the Consuls of the Popolo and the Consuls of the Commune (Santini 1886, pp. 168-72). Bribes arguably made arbitration of disputes problematic.

<sup>17</sup> Historically, courts verified complaints by considering the contracts, questioning witnesses, and approaching the borrower for a proof of payment. In particular, a lender buttressed a claim that a debt was not paid by furnishing the debt contract. Normally the borrower would take possession of the contract when paying the debt.

<sup>18</sup> The terms *to impound* (to take legal or formal possession of goods to be held in custody of the law) and *to confiscate* (to seize by or as if by authority) seem appropriate here. *Distraint* and *witheram* are often used in medieval documents.

**Figure 10.1. Time/action line.**



*Note:* LC denotes the lenders' court; BC the borrowers' court.

A court's actions are common knowledge. Analytically, this assumption is justified because in the equilibrium studied later, lenders and borrowers are motivated to discover the courts' actions.<sup>19</sup> Historically, the courts' actions were made public (in Florence decisions regarding intercommunal disputes were recorded in a publicly displayed book [Vecchio and Casanova, 1894, pp. 137-9, 265]).

The reader may be wondering at this point about the rationale for assuming here that a lender can prove cheating at the court, because a similar assumption was not made in the game without communities. Even in the absence of a court, a lender who was cheated can arguably convey, at some cost, this fact to others. In the game without communities, however, there is no equilibrium in which a lender is motivated to inform others of cheating because he does not

<sup>19</sup> In the perfect monitoring version of the model, cheating does not transpire and hence lenders are not motivated to acquire information but this is no longer the case when (as we will see) the model is expanded to include imperfect monitoring.

recover the cost of doing so. Threatening to reveal cheating to others is not credible. Even if we ignore this strategic consideration in order to deter cheating in the game without communities, a lender must convey the information to a sufficient number of a cheater's future lenders. The cost of doing so was arguably prohibitively high in the late medieval period given the communications and transportation technology, the large number of merchants, and the large geographical area in which they operated.<sup>20</sup> The cost of informing a stationary court, however, was much lower and, as the subsequent analysis establishes, the community responsibility system endogenously motivated a lender to furnish a valid complaint, thereby making the threat to reveal cheating credible.

Is there a subgame perfect equilibrium with lending on the equilibrium path in this game? For one to exist, the appropriate motivation should be provided to the economic agents and the courts. In particular, the penalty for cheating imposed by the borrowers' court should be credible and sufficiently high to deter cheating, and a lender should receive a sufficient reward only for a valid complaint, so that information about cheating is solicited. The borrowers' court should be better off compensating the lenders' court than letting the cheater keep the spoils and forgoing future gains from borrowing. The lenders' court should be better off if lending continues than if it confiscates all goods and forgoes future lending.

The following definitions are helpful in exposing the strategies that provide such motivation and the conditions under which they are equilibrium. The game is in *cooperation state* if there has been no impounding without default; the borrowers' court has never refused to pay compensation after default or paid in the absence of default; and the lenders' court has never failed to verify a complaint, request compensation for a valid complaint, or refused to return impounded goods after receiving compensation from the borrowers' court. If any of these conditions fail to hold, the game is in *conflict state*. Note that because I assume, so far, that all complaints are perfectly verifiable, the probability of disagreement between the lenders' court and the borrowers' court is zero.

*Proposition 10.1:* If (1)  $gN_B \sum_{t=0}^{T-1} (T-t)\delta^{t+1} + I_B(t)(g-d) \geq i + l + c + C_L + C_B$  (the net

present value of the borrowers' court payoff from future trade is higher than the total cost of a

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<sup>20</sup> Information costs were probably low within merchants' communities, but the focus here is on impersonal exchange outside one's community.

dispute), and (2)  $(i - r)N_B \sum_{t=0}^{T-1} (T-t)\delta^{t+1} \geq (g - d)N_B$  (the net present value of the lenders' court

payoff is higher from continuing trade than from impounding all goods), then the following strategy is a subgame perfect equilibrium with lending on the equilibrium path.

In conflict state a borrower neither trades nor returns and pays if given a loan. A lender does not lend or complain. The lenders' court impounds the goods of every lender in its territory and neither validates complaints nor requests compensation. The borrowers' court neither validates complaints nor imposes fines or furnishes compensation.

In cooperation state, a borrower travels, and if offered a loan, he borrows, returns, and pays his debt. A lender lends if he is matched with a borrower and complains if he is cheated. The lenders' court verifies every complaint and, if it is valid, it impounds the goods of all borrowers present in its territory and demands that the borrowers' court pay a compensation of  $x$ . This equals the total cost of default to the lender ( $i + l$ ) plus the cost to the lenders for complaining and verifying ( $c + C_L$ ), that is,  $x = i + l + c + C_L$ . If the borrowers' court provides compensation, the lenders' court compensates the lender who was cheated and returns the impounded goods. The borrowers' court verifies any complaint. If it is found to be valid, the borrowers' court imposes a fine of  $f = x + C_B$  on the defaulter and pays  $x$  to the lenders' court.<sup>21</sup> If either court takes any other action in cooperation state, the game reverts to conflict state.

*Proof of proposition 10.1:* For the above strategies to be an equilibrium, no player should be able to gain from a one-time deviation after any history. If the game is in a conflict state, no player can gain from such a deviation because the strategies constitute a Nash equilibrium in the stage game. In cooperation state, a borrower's best response is to travel, return, and repay. Traveling, borrowing, and paying yields  $g > 0$ , whereas not traveling yields 0 and cheating implies a net penalty of  $-c - C_L - C_B < 0$ .

Because the lenders' court will transfer  $i + l + c$  to a lender who was cheated, complaining is profitable. A lender's best response to cheating is to complain,  $c > 0$  implies that an invalid complaint is not profitable; and because  $g > 0$ , a lender's best response is lending. Inequality (1) implies that the net present values of future lending and of the impounded goods to the living members of the borrowers' community exceed the value of  $x$ , the amount demanded

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<sup>21</sup> Budget constraints are ignored. Bankruptcy under the community responsibility system introduces a difficult state verification problem, which was recognized during this period. Communities had to pay.

by the lenders' court, and the verification cost,  $C_B$ .<sup>22</sup> Hence the borrowers' court cannot gain from taking an action leading to conflict state. Its best response in cooperation state is to verify any complaint, impose a fine on a cheater, and compensate the lenders' court if the complaint is valid. Inequality (2) implies that the lenders' court is better off in cooperation state than in conflict state. Its best response in cooperation state is therefore verifying complaints, returning the impounded goods, paying the lender who was cheated, and not impounding without a valid complaint. Q.E.D.

Theoretically, then, the community responsibility system can support impersonal exchange by endogenously providing all the appropriate incentives. It is optimal for a borrower to repay rather than default even in his last period because defaulting implies punishment by his community court. Anticipating such an outcome, lenders find it optimal to lend. Moreover, anticipating compensation for a valid complaint, a lender is motivated to provide the court with information regarding cheating, making it possible for the court to condition its behavior on this information. Public information is endogenously generated, because a lender who was cheated is motivated to complain, a lender does not benefit from furnishing false claims, and courts are motivated to examine their validity.

The credible threat to have a defaulting borrower punished by his own community is at the crux of the community responsibility system. A community's concern with its reputation motivates its partial court to dispense impartial justice. The community, although it aggregates only the payoffs of its living members, becomes a *de facto* substitute for a single player with an infinite horizon. The end-game problem is mitigated by placing a community's reputation as a bond for the behavior of each of its members. The borrowers' court finds it optimal to punish a cheater, because doing so serves the younger cohorts best. Although an individual borrower cannot be punished by the lenders if he cheats in period (T-1), impounding, as well as the lenders' credible threat not to lend again to the other borrowers, implies that the borrowers' court is better off imposing a fine on the defaulters and compensating the lenders' community.

The community responsibility system simultaneously mitigates the end-game problem implied by the merchants' finite life-spans and the strategic and technological problems of

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<sup>22</sup> If coordinated cheating by all the borrowers is possible, the condition would be  

$$gN_B \sum_{t=0}^T (T-t)\delta^{t+1} \geq N_B(x + C_B).$$

generating information about cheating. An institution based on intracommunity familiarity and enforcement institutions enables intercommunity exchange characterized by separation between the *quid* and the *quo* over time and space. This exchange can also be impersonal in the sense that an individual does not expect to gain from future exchange with his current partner and has neither knowledge of his past conduct nor the ability to report misconduct to future trading partners.

The preceding discussion has ignored an important aspect of the community responsibility system: making a borrower's *communal* and *personal* identity (name) known to a lender. For the system to support exchange, a lender has to know the identity of the borrower so that the court can punish cheaters. In personal exchange, this knowledge is available, by definition, to the economic agents. When trading with strangers in situations in which knowledge of their identity (that is, their name) is crucial for contract enforcement, one cannot rely on them to reveal their identities truthfully. As revelation renders one punishable, a borrower intending to cheat will falsify his identity. A borrower faces the difficulty of credibly revealing his identity so that he can be punished if he cheats. Additional institutional features are required for credibly revealing identity. In the modern economy, this is the role of the driver's license, passport and other forms of identification which rely on printing and photographic technologies that did not exist in the medieval period.<sup>23</sup>

The community responsibility system can theoretically mitigate this problem by relying on intracommunity personal familiarity to enable an individual to reveal his communal identity (affiliation) and personal identity (name) credibly to nonmembers, rendering him vulnerable to punishment. To capture this possibility in the model, assume that the borrowers' community can first establish, at cost  $C_o$ , an organization in the lender's territory. This organization can certify the communal and personal identity of a borrower. Assume that  $gN_B \sum_{t=0}^{T-1} (T-t)\delta^{t+1} \geq C_o$ , namely, the gain from borrowing is more than the cost of establishing a certifying organization. In this case, it is profitable for the borrowers' community to establish a certifying organization. In this

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<sup>23</sup>. For similar reasons, the ability of medieval actors to retaliate collectively against a cheater not personally known to all of them was difficult due to the challenge of describing him to those who were not cheated. A physical description would be of limited use, and new names could be assumed after cheating. Most commoners did not even have last names during this period, and the surnames that did exist were often descriptive (usually reflecting one's physical features or place of birth). See Emery (1952) and Lopez (1954.).

extended game, exchange can be sustained as an equilibrium outcome under the conditions discussed previously. The community responsibility system can endogenously generate the information regarding the *communal* and *personal* identity of the cheater required for its operation. It can support exchange that is impersonal in the sense that the economic agents do not know, prior to the exchange, each other's identities.

#### **10.4.2 The Historical Evidence on the Community Responsibility System**

Theoretically the community responsibility system can foster intercommunity impersonal exchange. This possibility, however, does not imply that such an outcome had occurred during the late medieval period. Historical evidence, however, supports the claim that the community responsibility system prevailed throughout Europe.<sup>24</sup>

The strategy of holding every member of a community liable for each member's default in intercommunity exchange is apparent even in documents related to intercommunity exchange within the same political unit. In a charter granted to London in the early 1130s, King Henry I announced that "all debtors to the citizens of London discharge these debts, or prove in London that they do not owe them; and if they refuse either to pay or to come and make such proof, then the citizens to whom the debts are due may take pledges within the city either from the borough or from the village or from the county in which the debtor lives."<sup>25</sup>

This charter is representative; evidence from other charters, treaties, and regulations reveals that the community responsibility system was the law of the land in England. Charters for English towns reveal that by 1256 cities that were home to 65 percent of the urban population had clauses in their charters allowing for and regulating "distraint" (impounding) of goods under the community responsibility system.<sup>26</sup> The centrality of the community responsibility system in supporting English trade among members of various towns is also revealed in the surviving

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<sup>24</sup> Yet to be established are what other institutions, if any, may have also facilitated exchange that was impersonal to some degree and their relative importance. (In later periods intermediaries were widely used. See Hoffman et al. (2000.) The community responsibility system was also used to protect a community's merchants from abuse abroad (e.g., from robberies and tolls). It thus complemented the merchant guild examined in Greif et al. (1994). I ignore this issue here.

<sup>25</sup> *English Historical Documents*, vol. II: 1012-13, see discussion by Stubbs 1913.

<sup>26</sup>. This is a lower bound. There were about 500 chartered towns in England by the end of the thirteenth century (Beresford and Finberg 1973); 247 charters from the twelfth and thirteenth centuries have survived (Ballard and Tait 1913, 1923). The preceding calculations are for cities with populations of at least 5,000 people by 1300, the year for which we have population figures (Bairoch et al. 1988). A learning process is suggested by the observation that charters of 35 cities explicitly refer to the earlier charter of Lincoln.

correspondence of the mayor of London for the years 1324–33. In this correspondence, 59 of the 139 letters dealing with economic issues (42 percent) explicitly mention community responsibility.<sup>27</sup> They indicate that the mayor was motivated and expected the authorities of other towns to be motivated by the threat that all members of a community would be held liable if certain actions were not taken.

Charters regulating the relationships between English communities and their main international trading partners also reflect the strategy of holding community members liable for a member's default in intercommunity exchange. Charters reveal that the community responsibility system governed exchange between English merchants and merchants in Germany, Italy, France, Poland, and Flanders (whose cities were England's largest trade partners).<sup>28</sup> Similar evidence is reflected in the same 139 letters of the mayor of London's 50 extant letters dealing with international commercial matters, and of these 15 (30 percent) refer to the strategy of the community responsibility system.

Thirteenth-century treaties between Flanders, German towns, and the Hanseatic League also reflect the importance of holding community members liable for a member's default in intercommunity exchange (Verlinden 1979, p. 135; Dollinger 1970, pp. 187-8; Planitz 1919; Volckart 2001). Florentine historical records provide ample evidence of agreements and treaties regulating the community responsibility system, reflecting its role as the default arrangement in Italy during the twelfth and thirteenth centuries. The earliest preserved Florentine commercial treaties are from the early twelfth century. From then until 1300, thirty-three of the forty-four surviving treaties (75 percent) mention the strategies associated with the community responsibility system and regulate its operation. In addition to Florence, the treaties mention at least twenty-three other Italian towns as ones in which the system prevailed. These treaties and other sources include references to all the large Italian cities (Genoa, Venice, Milan, Pisa, Rome)

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<sup>27</sup>. *Calendar of Plea and Memoranda Rolls*, vol. 1. A quarter of these letters relate to commercial transactions. The rest relate to stolen goods or disputes over the legality of tolls.

<sup>28</sup>. The following sources provide additional independent evidence that the strategy associated with the community responsibility system governed the relationships between English and non-English communes: *Calendar of the Patent Rolls*, 20: 1266-72 (regarding Lübeck) and 460: 1232-1339 (regarding Ypres); Vecchio and Casanova (1894) (court cases in various Italian cities). See also *Calendar of Plea and Memoranda Rolls*, vol. 1.

as well as to numerous smaller ones (Siena, Padua, Cremona, Lucca, St. Miniato, Montepulciano, Montalcino, Prato, Arezzo, and Massa Trebaria).<sup>29</sup>

Evidence also reflects the strategy of holding an individual liable for the cost his default in intercommunity exchange imposed on his community. Internal regulations in Florence from the late thirteenth century reveal that the commune intended to make a merchant pay the damages when found guilty of cheating a member of another community (Santini 1886, p. 166). It had the right to sell the property of a merchant who refused to pay and to banish him from the commune (Vecchio and Casanova 1894, pp. 248-9).

In England the charters of Pontefract (1194), Leeds (1208), and Great Yarmouth (1272) explicitly specified that if the default by one community member caused the goods of another member to be impounded, the party at fault had to compensate the injured party. If he did not, his property would be confiscated and he would be expelled from the community (Ballard and Tait 1913, 1923). In various English boroughs, once a foreign creditor established that a member of the borough had failed to repay a debt, the borough would compensate him with its own funds and seek double indemnity from the debtor (Plucknett 1949, p. 137).

Evidence from charters, treaties, and regulations support the claim that the strategies associated with the community responsibility system were *supposed* to be followed. But did the community responsibility system involve more than rules and regulations? Did belief in the causal relationships captured by the model and behavior in various circumstances, prevail as well? Were these rules and regulations expected to be followed and did they influence behavior? Was the community responsibility system indeed an institution? The historical evidence indicates that it was.

To buttress the claim that the community responsibility system was a relevant contract enforcement institution, it is useful to extend the model to capture explicitly that commercial disputes can arise, that courts have only a limited ability to verify past actions, and that different courts can reach different conclusions based on the same evidence.

Assume that lender-borrower relations are characterized by imperfect monitoring, that is, the lender receives a signal that is a random variable that depends on the action taken by the borrower. Even if cheating has not occurred, the lender's signal may indicate that he was

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<sup>29</sup>. See Arias (1901) and Vecchio and Casanova (1894) regarding these treaties. Regarding Italy, see Wach (1868).

cheated.<sup>30</sup> Further assume that each court has independent imperfect monitoring ability; verifying complaints implies receiving a publicly observed signal indicating whether cheating occurred.

The signals are not perfectly correlated implying that courts can sincerely disagree about whether cheating took place.<sup>31</sup>

Under conditions intuitively similar to those examined in the perfect monitoring case, there is a perfect Bayesian equilibrium with lending. Two additional characteristics of this equilibrium, however, are that disputes about past conduct will occur, and that they will be followed by conflicts of finite durations. During conflict, impounding will occur and lending will cease. This retaliation will be finite in length; once it is over, lending will resume.

The intuition behind these results is well known.<sup>32</sup> Although on the equilibrium path no cheating occurs (in the sense that a borrower chooses not to pay), finite periods of conflict are required to provide communities and contracting individuals with the appropriate incentives. If the borrowers' court's strategy calls for compensating the lender, even if it concludes that cheating did not occur, the lenders' court's best response is to claim that a dispute occurred even if it did not. Similarly, if the lenders court's strategy calls for not confiscating property when it maintains that cheating occurred, the borrowers' court's best response is not to furnish compensation even if its signal indicates that cheating occurred, thereby motivating borrowers' to cheat. Misrepresenting information has to be costly; forgone gains from exchange are the means of generating these costs.

If the community responsibility system prevailed, we should find court cases and other sources reflecting the strategy of holding community members liable; confiscating their property;

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<sup>30</sup> The historical records suggest that disputes were more likely to occur when one of the contracting parties died, the debt was old, the contract was not clearly defined, or the contracting obligations were allegedly fulfilled by the agents of one of the parties rather than by one of the principals.

<sup>31</sup> Technically, the main assumptions are as follows: Let  $\alpha_{B(t)}$  denote a borrower's action in period  $t$  with  $\alpha_{B(t)} \in \{R, D\}$  where  $R$  denotes repay and  $D$  denotes not repaying. Let  $\alpha_j(t) \in \{RC, NRC\}$  denote agent  $j$ 's action in period  $t$ , where  $j \in \{\text{lenders' court, borrowers' court}\}$  and  $RC$  and  $NRC$  denote requesting and not requesting compensation, respectively. Let  $\theta_L(t)$ ,  $\theta_{LC}(t)$ ,  $\theta_{BC}(t)$  denote three random variables, each representing a signal about a borrower's action in period  $t$  (to the lender, the lenders' court, and the borrowers' court respectively). Each of them could be  $R$  or  $D$ . Conditional on a borrower's action,  $\theta_L(t)$ ,  $\theta_{LC}(t)$ , and  $\theta_{BC}(t)$  are iid across time and transactions.  $\theta_L$  is observed only by  $L$ .  $\theta_{LC}$  and  $\theta_{BC}$  are publicly observed.  $N_L = N_B = 2N$ . I do not explicitly present this extension of the model because the additional insights are well known as discussed below.

<sup>32</sup> These results are generic in imperfect monitoring models (Green and Porter 1984; Abreu, Pearce, and Stacchetti 1990).

and, in case of disagreement over whether a default had occurred, ceasing to trade for a finite period of time. Such evidence is available, from England, Italy, and elsewhere.<sup>33</sup> In Florence alone, between 1280 and 1298 (a period for which we have particularly good data), we know of thirty-six cases of dispute, confiscation, or trade cessation involving as many as twenty-five different cities. Later court cases involved Spain (Aragon) and England. Another indication that disputes were common is that even university students, who were not directly involved in credit transactions, were held liable for default by members of their community. Students asked the authorities for immunity from confiscation as early as 1155 in Bologna and 1171 in Florence.<sup>34</sup>

To illustrate such cases, consider the request by one Beatrice, who in 1238 asked the Florentine court for retaliation against the Commune of Pisa for a sum she claimed was owed to her by the heirs of Ubaldo Viscount. Her request was granted after the Commune of Pisa denied payment. Such a denial, according to the model, would occur when the two courts differed in their assessment of the situation. Various commercial treaties indeed reflect that contemporaries considered retaliation unavoidable in cases of disagreements between courts. A treaty between Pisa and Florence signed in 1214 specifies that retaliation would follow if the judges were unable to settle the dispute (Santini 1886, pp. 165-8).<sup>35</sup>

That retaliation was a calculated response aimed at providing proper incentives and fostering exchange rather than an act of revenge is suggested by attempts to confine retaliatory acts to intercommunity commercial matters and by the fact that retaliation lasted for a finite number of periods, after which a “suspension” was announced and trade resumed, without making this suspension conditional on full compensation.<sup>36</sup> Theory highlights the logic behind

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<sup>33</sup> See Moore (1985), Plucknett (1949) regarding England; Santini (1886), Vecchio and Casanova (1894), Catoni (1976) regarding Italy; and see Pro SC 2/178/93: 14 May 1270, published in *Select Cases Concerning the Law Merchant: A.D. 1270-1638*, 1: *Local Courts*, 8-10 regarding Flanders.

<sup>34</sup> Data for 1280–98 were collected from the documents contained in Santini (1886). See Vecchio and Casanova (1894) regarding the operation of the community responsibility system in the relations between Florence, England, and Spain. See Munz (1969, p. 77) and Santini (1886, pp. 20-4) regarding students’ request.

<sup>35</sup> As this case illustrates, a legal procedure generally preceded the impoundment of goods. Vecchio and Casanova (1894) and Arias (1901) discuss this process in Italy, Maitland and Bateson (1901, pp. 14-15) in England.

<sup>36</sup> A Florentine statute from 1325 identified losses in currency or goods, damage to property, tax extortion, and personal detention as cases in which it was appropriate to grant retaliation (Santini 1886). No retaliation was allowed in cases involving bodily offenses.

this practice: retaliations arguably lasted long enough to make misrepresenting information sufficiently costly to make misrepresentation of information unprofitable.<sup>37</sup>

That the community responsibility system was aimed at fostering exchange gains further support by observing that in commercial matters it could have been legally applied only when it could theoretically be effective, namely, when default could be verified. Verification is easier in transactions in which one party assumes a specific obligation (such as repaying a debt); it is more difficult to show in transactions in which one party has wide latitude in choosing actions (e.g., as in agency relationships). I find no evidence that the community responsibility system governed such transactions.

The conjecture about the importance of the community responsibility system gains support from its ability to account for puzzling organizational details of premodern trade. Consider, for example, the Champagne fairs, the main international fair in Europe at the time. The fairs were not organized as a meeting place for individual merchants from different localities but as a meeting place for traders from different *communities*, which often had their own places of residence, storage facilities, permanent representatives, scribes, and a consul who had legal authority over members of its own community at the fairs. Although the authorities of the fairs contracted with rulers in the surrounding areas to secure the right of passage for merchants and safeguarded their property rights at the fair, they relinquished legal rights over the merchants once they were there. One was subject to the laws of his community, not the laws of the locality in which a fair was held. Law was personal rather than territorial.

The rationale behind these arrangements is clear once one recognizes that they were part of the organizational features of the community responsibility system. These arrangements enabled a trader to establish his communal and personal identity in interactions with merchants who did not know him personally. Living in the quarters of a particular community represented a way of demonstrating ones' communal identity. A contract written by the scribe of a particular community was proof that a member of that community assumed an obligation in intercommunity exchange.<sup>38</sup>

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<sup>37</sup> See Arias (1901, pp. 177-88); Santini (1886, p. 165); and Vecchio and Casanova (1894, pp. 216-23, 237-42).

<sup>38</sup> We have only one piece of evidence about the content of these scribes' cartularies (Verlinden 1979). The fifteen contracts, written by an Italian scribe in 1296, mention individuals from twelve communities,

If a community is held liable for the actions of its members, it has to be able to verify who its members are and to discipline them when necessary. Personal law was compatible with the community responsibility system. Similarly, the fairs' authorities had to have the ability to identify members of a particular community and its representatives in order to approach them when necessary. Indeed, the Florentine statutes very often explicitly warned merchants attending the fairs not to act in way that would invoke a dispute and a reprisal (Vecchio and Casanova 1894, pp. 248-9).

That the community responsibility system prevailed in the fairs is also clear from regulations passed in 1260 that empowered the fairs' authorities to pronounce a sentence of exclusion from the fairs following a default. This exclusion was extended to the defaulter's compatriots if the judicial authorities of their own towns or principalities did not compel them to fulfill their obligations. Later in the century the king of France transferred legal authority at the fairs to royal bailiffs. In 1326, however, he concluded that doing so had led to a decline in trade and restored the community responsibility system at the fairs (Thomas 1977).

In smaller fairs and within cities, less extensive arrangements provided the means to identify one's communal and personal identity. Certifying organizations, in terms of the theoretical analysis, were common. Merchants of the same community traveled together, lodged together (often in their own special residences), and witnessed one another's contracts.<sup>39</sup> Communal identification was facilitated by the fact that even within the same political entity members of distinct communities had different dialects and customs. Contracts and court cases reflect the large extent to which medieval merchants knew one another's communal affiliations.

In regions with a relatively strong central political system, a fair's authorities were motivated to follow the procedures of the community responsibility system so that they would not be sued in the courts of the central authorities if they broke the rules.<sup>40</sup> More generally, however, authorities at fairs were arguably motivated to follow the strategy of a lenders' court—holding a community liable for the contractual obligations of each of its members—because

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revealing that communal affiliation was important to the contracting individuals and suggesting that there was an institutionalized way to verify it.

<sup>39</sup> Communal lodging facilities for foreign merchants were a feature of premodern trade (e.g., Constable 2003). Bruges was an exception. Merchants rented houses and landlords were liable for their tenant's contractual obligations (de Roover 1948).

<sup>40</sup> For an example involving an Englishman and merchants from Brussels at the fair of St. Botolph in England, see *Selected Cases Concerning the Law Merchant*, vol. 2, no. 7: 11-12.

running a successful fair was a profitable business. Providing intercommunity impersonal contract enforcement increased the fair's attractiveness, and the ability to do so critically depended on the community responsibility system, without which fair authorities were unable to extend their reach beyond their limited geographical areas. The threat of excluding a particular individual from the fair was ineffective, because it could not deter cheating in old age or cheating and then trading through agents or family members.

Incentives provided by the community responsibility system shaped the characteristics of pre-modern international trade centers, particularly fairs, because they impacted comparative advantage in contract enforcement. Theoretically, under this system, trade centers without affiliated trading communities have an advantage over trade centers with such communities. In trade centers with affiliated trading communities, incentives to provide intercommunity enforcement are weakened, because the community's own merchants may have to bear the cost of retaliation in case of intercourt disputes. If a merchant from community A sued a member of community B in the court of community C, the resulting dispute would hurt the merchants from community C when visiting community B. Community C could thus lose from adjudicating such disputes. This is not the case in trade centers that do not have an affiliated community of long-distance traders, implying that they have an advantage over trade centers that have such a community in providing contract enforcement in impersonal exchange.

Indeed, historically, trade centers with a community of long-distance traders adjudicated only disputes between one of their members and a foreign trader, not disputes between foreign traders. Trade centers without such communities, however, did adjudicate disputes between foreign traders. Under the English charters, a town was allowed to impound goods only in cases involving local citizens. Court cases from English fairs, which did not have a community of long-distance traders, however, reflect the impoundment of goods belonging to members of various communities (Moore 1985). This state of affairs is not unique to England, suggesting that it did not reflect royal discretion. In Florence, only Florentines had the right to ask a Florentine court to impound the goods of foreign merchants (Vecchio and Casanova 1894, pp. 14-15). The courts of the Champagne fairs, which did not represent any community of long-distance traders, adjudicated disputes between any foreign merchants.

More generally, the comparative advantage in contract enforcement entailed by the community responsibility system provides a rationale behind a puzzling phenomenon: the fact that, by and large, the main medieval fairs did not have affiliated communities of long-distance traders (i.e., the localities in which the fairs were held did not have a domestic community of long-distance traders). The merchants of the communities in which large fairs, such as the Champagne fairs, were held were mainly local traders who did not travel to other trade centers.

If the community responsibility system governed intercommunity exchange, we would expect organizational details and rules to change to facilitate it in a manner consistent with the functioning of this institution. In particular, we would expect that it would respond to opportunities to avoid the wastefulness associated with impounding goods. In the perfect monitoring case, the role of impounding is captured in condition 1 (proposition 10.1). This

condition was that  $gN_B \sum_{t=0}^{T-1} (T-t)\delta^{t+1} + I_B(t)(g-d) \geq i + l + c + C_L + C_B$  : for the borrowers' court

to be motivated to compensate following a default, the net present value of future trade and the impounded goods should be higher than the cost of verifying the complaint and compensating if it is valid. Theoretically, as long as trade is limited, impounding goods may be necessary for this condition to hold. As trade expands—as the size of the borrowers' community increases—the net present value of future trade is sufficient to provide the appropriate incentives.<sup>41</sup>

Consistent with this theoretical prediction, evidence from twelfth- and thirteenth-century Italy and Germany reflects a transition away from impounding. Treaties from twelfth-century Florence include the threat of impounding goods. By the early thirteenth century, members of one community were often allowed to leave the other community during a grace period between the time the right to confiscate was granted and the time it was executed. (E.g., Arias 1901, p. 52). By the early fourteenth century, there was a grace period of one month, during which merchants were allowed to leave after the right to confiscate was granted; this became the default, at least in Florence (Santini 1886, pp. 68-72, 165). A German law of 1231 established a

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<sup>41</sup>. In this case, it is also sufficient for equilibrium with exchange that first only the borrowers' court verifies complaints, and only if cheating isn't discovered then the lenders' court independently verifies as well. Historically, as discussed later, when communities agreed not to impound goods following a complaint but to verify it first, they also agreed that verification will first be done by the borrowers' court.

mandatory grace period throughout the Holy Roman Empire, reflecting the broad transition away from confiscation (Planitz 1919, p. 177).

That the community responsibility system was regulated by an imperial law in Germany suggests that it predominated in that region of Europe as well. More generally, the evidence presented in this chapter indicates that by the thirteenth century the community responsibility system prevailed in the most heavily populated and commercial areas of Europe (Italy and Flanders), in the better organized monarchies of Europe (such as England), and in the largest political units (France and the Holy Roman Empire).

The origin of the system is unknown: it has neither a clear Roman law nor customary Germanic law antecedents (Wach 1868).<sup>42</sup> It may be best explained as response to the absence of a state with an effective legal system. The particularities of this response reflect the combined impact of institutional elements inherited from the past and interests of communities' members. Specifically, they were the self-governance of cities by their mercantile elite, the European legal tradition of man-made (rather than divine) law, and the Roman legal tradition that did not rule out corporate liability. Whether the community responsibility system rose spontaneously or was designed, it clearly became explicit, well regulated, and an integral part of formal legal procedures.

## **10.5 Institutional Decline and Transition: Toward Individual Legal Responsibility**

The community responsibility system enhanced efficiency by supporting intercommunity impersonal exchange. Why, then, do thirteenth-century records at least from Italy and England, provide abundant evidence of attempts to abolish the system rather than limit the harmful effects of disputes as was done previously?<sup>43</sup> The decline of the system in the late thirteenth century is puzzling, given that it transpired in various European regions in the absence of common, social, political, or economic upheavals. What led to the decline of the community responsibility system?

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<sup>42</sup>. The legality of collective responsibility was deliberated in premodern European legal treatises from as early as Monk Bartolommeo (d. 1347) to Giovanni De Brelgel (d. 1778).

<sup>43</sup> Historical documents from before the thirteenth century indicate changes and refinements in the community responsibility system. The thirteenth century seems nevertheless to have been a turning point. For the first time wholesale attempts were made to abolish the system and, at least within some territorially large political units, to provide a relatively effective alternative.

Addressing this question suggests that the system was self-undermining. The same processes it fostered—an increase in intercommunity interaction, the number and size of communities, and intracommunity heterogeneity—diminished the system’s effectiveness, increased its economic costs, and undermined its intracommunity political viability.<sup>44</sup>

In particular, theory suggests that processes fostered by the community responsibility system would reduce the range of situations in which it enabled commitment and increased the frequency and cost of intercommunity conflicts.<sup>45</sup> Growth in the number of traders and communities, the locations of trade, and intercommunity interactions reduce the cost of falsifying one’s community affiliation and increase the cost of verifying one’s identity. This was the case because members of one community learn about other communities, and members of the same community are less likely to know each other. Furthermore, an increase in trade makes it more likely that disputes will transpire, leading to more—and potentially more costly—trade cessations. More trade also increases the costs of traders’ strategic responses to expected disputes: because courts can impound goods only from traders present in their jurisdictions, merchants will respond to expected disputes by ceasing trade.

By the second half of the thirteenth century, the ease of falsification and the difficulty of verification seem to have hindered the operation of the community responsibility system in England. Based on evidence from the important English fair of St. Ives, Moore (1985) concludes that during the thirteenth century the community responsibility system “worked well enough in many cases, but it could be cumbersome and time consuming, both for the creditor and the court: it usually seems to have involved long disputes over whether or not the original debtor and/or the men actually being sued for the debt were truly members of their town, community or guild, with everyone scurrying to disclaim responsibility for the obligation” (p. 119). Plucknett (1949) notes that the growth of English towns reduced the costs of falsification. The legal authority of these towns did not extend to the adjacent countryside. People living near towns were apparently able to present themselves as being members of the town when dealing with nonmembers, cheat their trading partners, and leave the town’s jurisdiction. During the thirteenth century “there seems to have been much trafficking between foreign merchants and natives whose mercantile status was

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<sup>44</sup> This growth is very well documented (see Bairoch et al. 1988 and Beresford and Finberg 1973).

<sup>45</sup> This discussion is intuitively based on the model presented in the text. Extending it to incorporate these considerations explicitly is possible. For simplicity it is not done here.

doubtful, and whose assets and persons were by no means entirely within the territorial jurisdiction of a local court" (pp. 137-8).<sup>46</sup>

Decreasing falsification costs and increasing verification costs imply that the community responsibility system could support exchange in fewer situations. That this was increasingly the case is suggested by evidence from the English Close Rolls. Throughout the period under consideration, English merchants could have chosen to register debts in these chancery rolls, thereby placing their transactions under the jurisdiction of the common law. Doing so would have implied that property and goods could have been placed as bonds for repaying debts (Moore 1985, n.105). Registration, however, was costly, and before 1271 few if any debts were enrolled. As long as the community responsibility system functioned well, traders could avoid the cost of registration. Between 1257 and 1271, however, the number of registered debts increased by a factor of forty-three, suggesting that the system may have been failing.<sup>47</sup>

Evidence from Italy suggests that increasing social mobility between communities undermined the effectiveness of the community responsibility system, which critically depends on a community's ability to locally punish its members. Treaties from late thirteenth-century Florence reflect that in Italy this ability had been eroding and defaulters were fleeing their communities.<sup>48</sup> The response was to move away from personal law and toward territorial law. Between 1254 and 1298, Florence entered into at least twelve treaties with other Italian cities in which each commune ceded to the other the right to detain any of its merchants who were fleeing

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<sup>46</sup> One example of the ability to falsify communal identity and its strategic use is reflected in a case brought before the court of the St. Ives fair (1275). Merchants from the community of Leicester were summoned to the court and held liable for the debt of Thomas Coventry of Leicester. They argued, however, that "the said Thomas Coventry was never peer of theirs or a member of the commonality of Leicester." Shortly after the court hearing, Thomas Coventry appeared at the fair, admitted that he was from Leicester, and sued the original plaintiffs, arguing that their false accusation caused him "no small damage." The original plaintiffs could not defend themselves but claimed not to be under the jurisdiction of the court since they were from London (which by that time had gained an exemption from the community responsibility system). This court case is contained in Pro. SC 2/178/94: 8 May 1275. Parts of the document appeared in the *Select Pleas in Manorial and Other Seigniorial Courts, Reigns of Henry III and Edward I*, 155: 145-6, edited by Maitland, 1889.

<sup>47</sup> This data is based on all the available records in the *Close Rolls of the Reign of Henry III*, 155, pp. 145-6, 1227-72. There is only one entry for 1257, four for 1269, and forty-three for 1271. See Plucknett (1949, p. 137) on the cost of using the common law. The rising cost of commercial disputes is also suggested by evidence of a transition in Italy from the use of impoundment to the imposition of a toll, which allowed trade to continue during disputes and reduced uncertainty. (Vecchio and Casanova 1894).

<sup>48</sup> It is not likely that this reflects lax punishment of defaulters prior to that period. Had this been the case, lenders would not have lent, and potential debtors would have had no need to flee.

the community to avoid paying a penalty under the community responsibility system (Arias 1901).

By the end of the thirteen century the number of disputes in Florence was high. Between 1302 and 1314, Florence granted at least thirty-six concessions (rights to impound) and at least thirteen suspensions (moratoria on impoundment), and it was subject to at least six retaliations (cases in which the other community responded to impoundment in kind). At least thirty other communities or polities were involved.<sup>49</sup> The number of disputes increased between 1302 and 1314, but we have no data to determine whether disputes were less common prior to 1302.

That the community responsibility system may have become less efficient and more costly would not necessarily have led to its decline. What seems to have induced attempts to abolish the system was the reduction in its intracommunity political viability. The intracommunity social and economic heterogeneity to which the community responsibility system contributed implied that within a community the costs and benefits of the community responsibility system became less evenly distributed. Those who had negative gain from the system sought to abolish it.

This assertion has three implications that we can bring to the evidence. First, larger—and hence arguably more heterogeneous—communities are more likely to attempt to abolish the community responsibility system. The community's nonmercantile population will favor abolishing the system, because it bears the cost of conflicts (which leads to an absence of foreign merchants) but does not directly gain from the system. Furthermore, in larger cities, the net economic benefit of the system may be negative, due to the high frequency of disputes. Second, rich, well-established merchants — members of the mercantile elite—are likely to attempt to abolish the system for governing exchange. These merchants gain relatively little, if anything, from it because they have the connections, reputations, and wealth to conduct trade based on their personal reputation and collateral abroad. However they bear the system's cost because they have wealth abroad that can be impounded. Third, because wealthy merchants have goods abroad, they are likely to attempt to retain the community responsibility system in governing the security of foreign merchants' property rights. They will seek to continue the system to protect their property rights abroad from abuses through robberies, excess taxation and the like.

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<sup>49</sup> Calculations are based on evidence from Barbadoro (1921).

The historical evidence is consistent with these predictions. The Italian cities grew larger earlier than the English towns, and treaties of Florence reflect an attempt to abolish the community responsibility system early in the thirteenth century (Arias 1901). During this time, charters routinely authorized the smaller towns in England to employ the system. The largest English city, London, however, was an exception. In the 1130s its merchants were exempted from the system although the city retained the right to impound non-Londoners' goods. Flemish towns, which were also larger than English towns, seem to have gained an exemption from the community responsibility system in England: between 1225 and 1232, the king assured the merchants of Ypres, the largest city in Flanders, that none of them "will be detained in England nor will they be partitions for another's debts."<sup>50</sup> Larger cities attempted to abolish the community responsibility system early.

Italian historical records reveal a reduction in the intracommunity political viability of the community responsibility system due to the different gains and losses to various segments of the population within a commune. In 1296 some Florentine merchants appealed to the city authorities about a conflict with Bologna. The livelihoods of these merchants depended on being able to pass through Bologna. They proposed setting up a toll (*pedaggio*) to be levied almost exclusively on their goods, just to settle a dispute in which they were probably not directly involved (Arias 1901, p. 165). The city as a whole did not seem to have been interested in paying for resolving the dispute. Similarly, distinct interests of different segments of the population are reflected in a Florentine regulation from 1415 that forbade retaliation against foreign rectors, officials, or traders selling edibles (Santini 1886, pp. 168-72).

The desire of the wealthy merchants to abolish the system is reflected in the political economy of the community responsibility system in Florence. During the thirteenth century, affluent Florentine merchants, known as *mercatores* conducted business throughout most of Europe. While they may have had the ability to exchange based on their own reputations, they had a great deal to lose from retaliations. Indeed, once they secured political control over Florence in the second half of the thirteenth century, they entered into a sequence of treaties aimed at moving Florence away from the community responsibility system. In 1279, not only in Florence but in Venice, and Genoa, as well as most of the cities of Tuscany, Lombardy,

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<sup>50</sup> See *English Historical Documents*, vol. 2, no. 270: 1012-3 regarding London and *Calendar of the Patent Rolls*, pp. 1012-3, 460: 1232-1339 regarding Ypres.

Romagna, and Marca Trivigiana, agreed to its abolition (Arias 1901, pp. 170-6; 400-1). Similar factors probably contributed to the decline of the community responsibility system in various parts of Europe.<sup>51</sup>

The ability to devise an alternative system depended on the institutional environment, particularly that of political institutions. In Italy, no third party—such as a king—existed to devise an impartial legal system. Consistent with the theoretical prediction, however, retaliations continued in Italy for centuries, but mainly in cases involving the abuse of property rights rather than commercial disputes (Vecchio and Casanova 1894; Barbadoro 1921). As the Italian communes were shifting from republics to oligarchies, their institutions were altered to serve different interests. A community responsibility system securing property rights abroad was valuable for the wealthy merchants; one that enabled less fortunate merchants to enter into impersonal exchange was not. At the same time, the wealthy Italian merchants began relying on large-scale family firms with collateral abroad to better commit to their contractual obligations. It is no coincidence that large firms with branches abroad emerged during the late thirteenth century when the community responsibility system was declining.

The disintegration of the empire in Germany during the thirteenth century also meant that there was no central ruler with the power to provide an effective alternative to the community responsibility system. As late as the fifteenth century, collective responsibility was still widely practiced, despite attempts dating back to the thirteenth century to abolish it (Planitz, 1919, pp. 176ff). The lack of local monopoly over coercive power enabled the simultaneous operation of a “feud system”; until at least the sixteenth century, a merchant would hire a feudal lord with a mercenary army to force a community to compensate him for defaults. Frankfurt-am-Main, which held a major annual international fair, was involved in at least 229 such feuds between 1380 and 1433. Between 1404 and 1438, the important city of Nuremberg was involved in no

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<sup>51</sup>. In England and France we find similar but less clear evidence. In England, in the second half of the thirteenth century there “was an increasing number of individuals able to respond to suits by producing royal licenses of immunity from prosecution for any debts [under the community responsibility system] except those for which they were principal debtors or pledges” (Moore 1985, p. 119). Arguably, wealthy merchants bought immunities. Thomas (1977) provides similar evidence regarding France. This evidence is also consistent with an attempt to free-ride on the community responsibility system.

fewer than 200 feuds (Volckart 2001). It was a costly system in terms of *ex ante* incentives and the *ex post* cost of disputes.<sup>52</sup>

In England, by contrast, the state facilitated the replacement of the community responsibility system with one based on individual legal responsibility and the coercive power of the state. When, toward the end of the thirteenth century, the community responsibility system was declining, the political power of the commercial urban sector was on the rise, as reflected in the transfer in 1295-7 of the right to approve taxes from the Great Council (which represented the nobles) to a parliament with representatives from the urban commercial sector. The increase in wealth, population, and military importance of the urban commercial sector that this transition reflects and the political representation it entailed implied that the commercial sector had the voice required to coordinate the institutional transition, mitigate the collective action problem, and enable the Crown to commit not to abuse property rights through the legal system (Greif 2004b). Existing institutions enabled, guided, and motivated the ruler to pursue welfare-enhancing policy.

The Statute of Westminster I (1275) officially abolished the community responsibility system in England with respect to debt. Subsequent statutes recognized that this led to a decline in commerce because “merchants who in the past have lent their substance to various people are impoverished because there was no speedy law provided by which they could readily recover their debts on the day fixed for payment” (Statute of Acton Burnell 1283). Such statutes gradually articulated on an alternative contract enforcement institution based on territorial law, individual responsibility, central administration of justice, and collateral.<sup>53</sup>

The corresponding contract enforcement institution based on individual responsibility, however, developed slowly and became effective gradually, as participants learned about its deficiencies and invented new ways to improve it, particularly by learning how to control agents

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<sup>52</sup> The Hundred Year’s War (1337–1453) and the earlier wars with England and Flanders meant that the political situation in France during this period was not conducive to providing impartial justice. Raising revenues was probably a top priority for the Crown.

<sup>53</sup> See the statute of Westminster I in *English Historical Documents* Vol. 3:404 and the decline in trade in the Statute of Acton Burnell (1283), *ibid*, vol. 3, no. 54:420-22. The alternative contract enforcement institution established by the king is described in the Statute of Acton Burnell. The Statute of Westminster II (1285), *ibid*, vol. 3, no. 57:428-57 (see in particular c. 18); the Statute of Merchants (1285), *ibid*, vol. III, no. 58:457-60; Plucknett (1949, pp. 138-50); and Moore (1985, p. 120) provide a discussion. The English Crown may have been imitating the French system. See the discussion of Patourel (1937, p. 97).

of the state more effectively.<sup>54</sup> Indeed, some royal charters granted after 1275 still allowed towns to impound goods based on collective responsibility.<sup>55</sup> We have already seen that the correspondence of the mayor of London from 1324 to 1333 reflects the use of the strategies associated with the community responsibility system. A comparable set of letters is also available for 1360–70. In this source, 55 of 159 of the mayor’s domestic and international economic letters (35 percent) reflect the operation of the community responsibility system, and half of these cases are about contract enforcement.

Interestingly, in the early period the number of domestic and international cases was almost the same, although more were domestic than international. Later this was not the case as a subsequent data set has forty-five percent more international cases. An institutional distinction between trade inside and outside national boundaries was in the process of emerging.<sup>56</sup> International trade was born.

## 10.6 Concluding Comments

Impersonal exchange characterized by a separation between the *quid* and the *quo* over time and space are the hallmark of the modern market economy. Comparative and historical analysis of the nature and dynamics of contract enforcement institutions that supported exchange that was impersonal to various degrees in different economies is likely to enhance our understanding of the historical process of economic development and contemporary impediments to the expansion of markets.

Neither a law-based institution provided by an impartial third party nor one based on the interacting parties concerned with maintaining their personal reputation supported such exchange during the late medieval period. Instead, impersonal exchange was supported by an institution central to which were self-governed communities, intracommunity (partial) courts, and collective

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<sup>54</sup>. For administrative changes to curtail corruption, see the Statute of Merchants (1285), *English Historical Documents*, vol. 3, no. 58:457-60. In 1352 common creditors were ranked with the Crown’s creditors insofar as imprisonment of the defaulted debtors was concerned, and outlawry covered debt and actions of account (Plucknett 1949, pp. 324-26, 343). Administrative procedures and cross-checks were used to reduce corruption and bribery; legal procedures and sanctions were slow to be developed and made more effective.

<sup>55</sup> This was true in the charters of Rhuddlan (1284) and Blakewell (1286) (Ballard and Tait 1923).

<sup>56</sup> *Calendar of Letters from the Mayor and Corporation of the City of London*. More evidence of the continuation of the system is reflected in a long series of reprisals between England and Florence that last until 1460 (Vecchio and Casanova 1894, p. 262).

reputation. Noncontractual, joint, communal liability and communal reputation endogenously motivated partial courts to provide impartial justice.

The community responsibility system was a self-enforcing institution; all incentives—to individual traders and their communal courts—were provided endogenously. Beliefs regarding communes' responses to cheating and beliefs in the value of future trade turned each community into an ongoing organization with an infinite life-span. Each community internalized the cost of a default by each of its members on other members and whose future trade served as a bond for contractual performance.<sup>57</sup> Communal liability, which was neither contractual nor voluntary for an individual merchant, supported intercommunity impersonal exchange. Exchange did not require that the interacting merchants have knowledge about past conduct, share expectations about trading in the future, have the ability to transmit information about a merchant's conduct to future trading partners, or would *a-priori* know the personal identity of each other.

Initially, the community responsibility system was a self-reinforcing institution, in that it led to processes that increased the range of parameters within which it was self-enforcing. It reinforced the communal structure on which it was based, motivating communities to define communal membership clearly, to establish the organizations required to indicate who their members were to the rest of the society, and to strengthen their intracommunity enforcement institutions.

In the long run, however, the community responsibility system was undermined by the growth of long-distance trade and the increase in the size, number, and heterogeneity of communities. The ability to replace the community responsibility system with an alternative institution depended on the institutional environment, particularly on political institutions. In England the political system was conducive to a transition to legal contract enforcement based on individual legal responsibility. Where the state stepped in to provide an effective alternative economic institutions moved closer, albeit slowly, to the enforcement system that prevails today, in which individual liability is the rule, much impersonal exchange is supported by the legal system, and collective responsibility is consensual and contractual. The asymmetry in the ability

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<sup>57</sup> See Bull (1987); Cremer (1986); Kreps (1990b); and Tadelis (1999, 2002) on the roles of ongoing organizations in fostering cooperation among agents with finite life-spans and how the separation between personal and economic identities mitigates the unraveling problem. The analysis of the community responsibility system highlights the importance of an ongoing organization in mitigating the unraveling problem and supporting cooperation between its members and nonmembers.

to provide alternative institutions within and outside polities created the institutional distinction between national and international trade.

This history calls into question the conventional wisdom that the rise of the European state was a precondition for the rise of markets. The community responsibility system suggests the importance of the opposite line of causation: the institutional demand created by the market influenced the development of state-governed, law-based institutions. When and where the state could respond to this challenge while being constrained from abusing rights, markets subsequently prospered.

The influence of the community responsibility system on the development of contractual and organizational forms in Europe, how and to what extent it evolved differently in various European areas, and what these distinctions implied for subsequent market expansion are yet to be examined. Similarly, the extent to which institutions similar to the community responsibility system prevailed in other premodern societies has not yet been examined. It may well be that the system was unique to Europe, because it rested on two pillars—self-governed communities and man-made law—that were not common in other premodern market societies. In the Muslim world, for example, communities were not self-governed (e.g., Cohen 1990, p. 520) and the prevailing religious law rejected the notion of holding a Muslim community collectively responsible for the actions of one of its members (e.g., Schacht 1982, p. 125). If the community responsibility system was unique to Europe, it is likely to have been among the factors accounting for Europe’s subsequent commercial development.

The community responsibility system demonstrates the dynamic causal relationship between institutions and international trade.<sup>58</sup> A multitiered, interjurisdictional (and, in this sense, international) institution provided both individuals and domestic legal jurisdictions with the appropriate incentives. On the one hand, like institutions mitigating a sovereign’s debt problem, the community responsibility system was a precondition for exchange.<sup>59</sup> In both cases, institutions that induce those with domestic legal authority to enforce or follow international contractual obligations are crucial. On the other hand, the community responsibility supports the

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<sup>58</sup> Interestingly, collective responsibility is not practiced in contemporary international trade. Only the assets of the individuals (or corporations, including the state) who defaulted can be captured.

<sup>59</sup> Regarding the sovereign’s debt problem, see, for example, Bulow and Rogoff (1989) and Wright (2002).

conjecture about the importance of studying the reverse causality from international trade to the development of domestic institutions. Its history reflects the fact that institutional change is an important causal link between trade and growth.

The community responsibility system also highlights the importance of some neglected aspects of the micro-foundations of contract enforcement institutions. It combined aspects of law-based and reputation-based institutions, revealing the importance of enforcement institutions combining coercive power and reputation (Greif and Kandel 1995; Dixit 2004).<sup>60</sup> It also highlights the importance of departing from the assumption common in analyses of reputation mechanisms that identities are common knowledge. One of the central components of the community responsibility system was the mechanism for credibly revealing one's personal and communal identity. Arguably, an important part of a society's contract-enforcement institutions consist of the ways in which people can credibly commit to transmit information about their identity. The community responsibility system also highlights the importance of departing from focusing on reputation-based institutions in which behavior is conditioned on *ex ante* (before transacting) information about past conduct. Underpinning the community responsibility system was the ability to substantiate *ex post* that one had been cheated by a particular person rather than verifying that this particular person had never cheated before.

Only recently have the economic implications of collective responsibility gained attention.<sup>61</sup> In contemporary economies, collective responsibility plays a role in microfinance in developing countries (Besley and Coate 1995; Bouman 1995) and in business associations with joint and unlimited liability (Bernstein 1992). The community responsibility system and the nineteenth-century German cooperatives (Guinnane 1997) illustrate the importance of collective responsibility in the development of industrial economies. Indeed, the community responsibility system reveals that collective responsibility was central to the functioning of European markets in the past, calling attention to the possibly important, yet neglected, role of collective

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<sup>60</sup> In studying the institutional foundations of exchange, economists have concentrated on those based on impartial third-party enforcement in the form of the law or those based on individuals' concern with their economic reputation (see surveys in Greif 1997b, 2000, and McMillan and Woodruff 2000). For the interrelationships between legal and reputation-based institutions, see Greif (1994a); Kranton (1996); and Johnston et al. (2002).

<sup>61</sup> For theoretical analyses, see Varian (1990); Tirole (1996); and Ghatak and Guinnane (1999).

responsibility in modern market economies. The community responsibility system suggests that an important role of modern firms is to provide collective responsibility.

The centrality of collective responsibility in premodern Europe underscores the fact that the contemporary tendency to consider only individual legal responsibility (or contractual joint liability) as morally and legally acceptable means imposing the result of a long process of European institutional evolution in places where a similar process did not necessarily occur (Levinson 2003). The community responsibility system reveals how important the social and political context is in determining the set of feasible, efficiency-enhancing institutions. Institutional policy has to take account of the fact that, while all institutions supporting impersonal exchange have to mitigate the same contractual problem, the institutions most appropriate for doing the job differ across settings. They depend on the institutional environment and the institutional elements inherited from the past.