INSTITUTIONS AND IMPERSONAL EXCHANGE:

THE EUROPEAN EXPERIENCE

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Abstract

This paper presents an institution - the Community Responsibility System (CRS) – which constitutes a missing link in our understanding of market development. It highlights the importance of contract enforcement institutions combining reputational and legal mechanisms in the rise of modern markets. Throughout pre-modern Europe, the CRS provided the contract enforcement required for intercommunity impersonal exchange characterized by separation between the \textit{quid} and the \textit{quo} over time and space. It induced communities to care about their collective reputation and motivated their partial courts to provide partial justice. Collective responsibility, which supports micro-lending in developing countries, was a central component of the European developmental process. The CRS contributed to the endogenous institutional dynamic that led to the development of an intra-state centralized legal system based on personal legal responsibility that is currently the norm. This development supports the view that long-distance trade impacts economic growth through its influence on intra-state institutional development.

(JEL Classification: N0, N2, C7.)
A central question to economic history and development economics concerns the institutional evolution that enabled increasingly more impersonal exchange in some economies but not in others (see North 1990; Greif 1997a, 1998b, 2000, 2004b; Rodrik 2004; Shirley 2004). We often assert that such evolution facilitates specialization, efficiency, and growth. Yet, we know little about the historical development of the institutional foundations of impersonal exchange.

This paper 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. It focuses on the commercial expansion of the late medieval period (circa 1050 to 1350) during which long-distance trade reemerged after a long period of decline. (Lopez 1976.) Yet, during this period 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 during in this formative period for the rise of markets in Europe? Specifically, were there institutions enabling 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 nor on knowledge of past conduct or the ability to report misconduct to future trading partners.

The theoretical and historical analysis presented here substantiates that in pre-modern 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 (CRS). Central to this system were the particularly European, self-governed communities known as *communes*, which occupy the grey 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, but like states, 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.

Under the CRS, a local, community court held all members of a different commune legally liable for every member’s defaults on 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 to 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 community responsibility system enabled impersonal exchange among traders with finite lifespans in the absence of partial legal contract enforcement. The CRS turned communities into ongoing organizations with infinite lifespans that internalized the cost of a default by each of their members on other members. Furthermore, it motivated the partial communal courts to administer impartial justice.

The CRS also motivated communities to establish the organizational structure enabling one to credibly reveal 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, was sufficient for exchange to be an equilibrium outcome. The informational foundations of the CRS were thus distinct from those emphasized in the literature on reputation-based contract enforcement institutions. (E.g., Greif 1989, 1993; Milgrom et al. 1990; Kandori 1992.)

The CRS constitutes the missing link in our understanding of the institutional development that led to modern markets. Theoretically, the development of law-based institutions supporting impersonal exchange is puzzling. Arguably, reputation-based institutions 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 set-up cost but a low marginal cost for establishing new exchange relationships (Li 1999; Dixit 2004).

The rise of the legal system that fostered impersonal exchange is therefore puzzling. If exchange was initially personal and based on reputation, why was a legal system established to support impersonal exchange despite the high fixed cost, and how was knowledge about the benefits of impersonal exchange generated?1 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 the partial legal systems and reputational considerations of communities. Understanding the historical development of markets

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1 Other factors 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 not to abuse property rights (Greif 1997b, 2004b).
requires recognizing the importance of institutions combining reputational and coercive (legal or not) considerations.

The CRS 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 community responsibility system was declining, due to the impact of trade and urban growth on the very factors that had rendered it an equilibrium outcome. Ironically, the CRS 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 depended on political governance. When and where the appropriate institutional environment prevailed, the demise of the CRS fostered the gradual development of the institutions that supported impersonal exchange based on territorial law and individual legal responsibility that are common today.

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 flows, and their impact on domestic institutions (see Greif 1992; Staiger 1995; Maggio 1999; Grossman and Helpman 2002, 2003). The CRS was a domestic institution that fostered trade across jurisdictional boundaries. Furthermore, the institutional transition that the decline of the community responsibility 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. Indeed, it was the decline of the community responsibility system and the subsequent institutional development that 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 CRS within and across national boundaries, however, rendered state boundaries relevant to trade.

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2. 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 historical analysis presented here particularly draws on the rich historical sources from Florence and England. Together with secondary sources, this is sufficient to establish the centrality of the CRS in Europe as a whole, although much more historical and comparative research has yet to be done. This research is most directly related to the literature that analytically examines the institutions that supported pre-modern European market expansion. By focusing on impersonal exchange in the presence of partial law, this paper complements the study of institutions that supported personal exchange in the absence of the law (Greif 1989, 1993, 1994; Richardson 2002) and in the presence of impartial law (Gonzalez de Lara 2002). It also highlights an institutional overlap between the CRS and the Merchant Guild institution (Greif et. al. 1994), which secured alien merchants’ property rights from coercive power by using the threat of embargo. Under the CRS, abuses such as robbery were prevented, and compensation was provided with the threat of holding a community’s merchants liable for the damage. Finally, this paper complements Milgrom et. al. (1990), which examined institutions that secured impersonal exchange characterized by separation in time (but not space) between the quid and the quo.

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 CRS. They viewed the system as an archaic relic of the past that hindered, rather than advanced trade, citing impounding (arbitrary or related to the CRS) and merchants’ complaints about it as evidence of its barbaric and irrational nature. Lacking a theory regarding its possible functions and the importance of on-the-path-of-play (seemingly wasteful) impounding due to imperfect monitoring in deterring cheating and enabling impersonal exchange, these prominent scholars did not contemplate the system’s potential efficiency contributions in an environment lacking an effective and impartial legal system. Hence, they were unable to accounts for the prevalence of this system for many centuries throughout Europe despite merchants’ bitterness following impounding and the uncertainty it entailed.

The paper proceeds as follows. Section 1 provides historical background. Section 2 presents a theory of the community responsibility system. Section 3 combines theoretical insights and predictions with historical evidence to substantiate that the community responsibility system functioned in Europe. Section 4 discusses the system’s endogenous decline and the subsequent institutional developments.

1 The Problem of Impersonal 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 Revolution, 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 the cargo they shipped overseas.3

What institutions enabled exchange 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 among the interacting individuals or
intermediaries)? 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.

Institutions that support exchange characterized by a separation between the *quid* and the
*quo* over time and space must mitigate the contractual problem intrinsic to it: the 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 as defined here, 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.

In the late medieval period this commitment problem was not mitigated by a state with a
partial legal system capable of effectively supporting impersonal exchange between individuals
from distant localities. Local courts existed throughout Europe, but early in the period considered
here even in a relatively well-organized political unit (e.g., England) there was no centralized
legal system to provide enforcement in disputes among individuals from distant localities.4

The law was absent in yet another sense. By and large, local courts were not impartial
dispensers of justice. More often than not, they embodied local interests and were controlled by
the local landed or urban elite. Substantiating the assertion that such courts were partial and that
their judgments reflected the interests of the local elite, however, is nevertheless subtle. Finding

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3. For a general discussion, see Lopez and Raymond (1955, pp. 157-238) and de Roover (1963, pp.
42-118). For exchange among merchants from distinct parts of Europe, see 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, 1202-1226, vol. 1, no. 524; Guglielmo Cassinese 1190-

4. See Plucknett (1949, p. 142), Ashburner (1909), Postan (1973), and Select Cases Concerning the
Law Merchant, A.D. 1239-1633. 2: Central Courts.
evidence about partiality with respect to foreign merchants is particularly problematic, because, as I argue, under the community responsibility system these courts provided—as an equilibrium phenomenon—impartial justice exactly because they were partial.

Yet, the historical evidence discussed below reflects distrust of the impartiality of courts. Furthermore, 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 that the profitability of local businesses, not impartial justice, motivated legal rulings in disputes with nonlocals (English 1988). In Germany nonlocal merchants, peasants, and some nobles, were considered foreigners. They were formally called guests and were widely discriminated against in courts of law (Volckart 2001).

Because there was no effective, impartial legal system over a large geographical area, the common view in economic history is that personal exchange predominated and impersonal exchange was either absent or confined to spot exchange supported by local courts (North 1990). The rise of impersonal exchange characterized by separation between the quid and the quo over time and space had to wait the centralized states with partial courts.

This conclusion ignores the fact that European medieval trade was conducted in the institutional context of communes, or self-governed communities. 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 there were marked regional differences across communes, they had much in common. As in a community, members were known to each another, but like states, the communes had local enforcement institutions, often based on legitimate use of coercive power. There were barriers to entry to communes, and gaining citizenship was usually a lengthy and costly process; in the extreme case of Venice, paying taxes for 25 years was acquired.

Is it theoretically possible that, despite the partiality of their courts and their limited geographical scope, these communes provided the foundation for an institution that supported intercommunity impersonal exchange characterized by distance between the quid and the quo? If so, did this institution prevail in late medieval Europe?

2. Impersonal Exchange as an Equilibrium Outcome under 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,

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5. The communal structure underpinned the community responsibility system but organizations representing the communes, such as guilds, were the ones actually involved in intercommunal commercial disputes.
impersonal exchange characterized by separation between the *quid* and the *quo*. Consider a stage 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 leaves the game. The borrower reaps $G > g$ from not paying and $G < g + i + l$. These assumptions imply that lending is efficient but is profitable to both parties only as long as the borrower pays his debt. The borrower is better off, however, not paying and cheating is inefficient.

Since 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. 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.

In this game there is no equilibrium with lending on the equilibrium path. The assumption that borrowers have finite lifespans 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 lifespans, the impersonality of exchange implies that there is still no equilibrium with lending. That past conduct is private information together with the lack of repeated interaction implies that lenders, as an individuals or a group, cannot credibly threaten to collectively punish a borrower individual who has cheated in the past.  

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6. Fearon and Laitin (1996) explore how communities can be motivated to discipline their members to achieve interethnic political cooperation.

7. 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. If a borrower is matched in high probability with his current lender in future periods, if there is incomplete information regarding borrowers’
When we add communities to the game, however, an equilibrium with lending can exist despite the borrowers’ finite lifespans and the impersonality of exchange. Assume that there are two communities: 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 (that is, members of cohorts 0 to T). Two assumptions are implicit in this specification. The first is that 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 benchmark case. The second assumption is that 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 below.

Figure 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 $C_L$. Types, and if lenders can lend less than $l$, then lending can be an equilibrium, based on the endogenous cost of building relationships (demonstrating one’s type) with a lender (e.g., Ghosh and Ray (1996) and Kranton 1996). Contagious equilibria (Kandori 1992; Ellison 1994) do not exist in this one-sided prisoner’s dilemma games as a cheated player leaves the game. The analysis is also robust to assuming that a borrower can use the capital he embezzled.

8. 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 CRS are less likely to hold. I argue below that increasing number of communes contributed to the decline of the CRS.

9. The court’s value function at the end of a period is the same as at the beginning of the next period.

10. I assume away the possibility of bribes, because decisions about disputes in intercommunity exchange were made by a community’s representatives and involved many decisionmakers. 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.
The court can also impound the goods of the $I_b(t)$ borrowers present in its territory. 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, $f$, 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 impound goods or the sum provided by the borrowers’ court and to whom.

A court’s actions are common knowledge. Analytically, this assumption is justified because in the equilibrium studied below, lenders and borrowers are motivated to discover the courts’ actions. Historically, indeed, 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 the rationale for assuming here that a lender can prove cheating at the court while 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 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 sufficiently many 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

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

12 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 done below) the model is expanded below to include imperfect monitoring.
which they operated. The cost of informing a stationary court, however, was much lower and, as
the analysis below establishes, the CRS 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, while a lender should receive a sufficient reward for a
valid complaint (only), 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 complaints, or refused to return
impounded goods after receiving compensation from the borrowers’ court. If any of these
conditions do not hold, the game is in conflict state.

Proposition 1: If (1) $gN_B \sum_{t=0}^{T-1} (T-t)\delta^{t+1} + I_B(t)(g-d) \geq l + c + C_l + C_b$ (the net
present value of the borrowers’ court payoff from future trade is higher than the cost of settling a
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 fine or furnishes compensation.

In cooperation state, a borrower travels, and if he is given 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

13. Information costs were probably low within merchants’ communities but the focus here is on
impersonal exchange outside one’s community.
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.\(^1\) If either court takes any other action in cooperation state, the game reverts to a conflict state.

**Proof of proposition 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 \( g > 0 \), while 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 by the lenders’ court, and the verification cost, \( C_B \).\(^1\) Hence, the borrowers’ court cannot gain from taking an action leading to a 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. QED.

Theoretically, then, the CRS can support impersonal exchange. 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 that this will be the case, lenders find it optimal to lend. Moreover, anticipating compensation for a valid complaint, a lender is motivated to

\(^{14}\) Budget constraints are ignored here. Bankruptcy under the community responsibility system introduces a difficult state verification problem, which was recognized during this period. Communities had to pay.

\(^{15}\) If coordinated cheating by all the borrowers is possible, the condition would be

\[ gN_B \sum_{t=0}^{T} (T - t) \delta^{t+1} \geq N_B (G - g) \].

The net present value of future borrowing is larger than the gains from collectively cheating. As done with respect to \( g \), it is assumed that borrowers do not gain future income from \( G - g \).
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 core of the CRS is making the threat of punishing a borrower who defaulted by his own community credible. 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 the reputation of the community 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, and 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 CRS simultaneously mitigates the end-game problem implied by the merchants’ finite lifespans and the strategic and technological problems of 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, has no knowledge of his past conduct or the ability to report misconduct to future trading partners.

The above discussion has ignored an important aspect of the CRS; making a borrower’s *communal* and *personal* identity (name) known to a lender. For the CRS 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 is crucial for contract enforcement, one cannot rely on them to truthfully reveal their identities. As revelation renders one punishable, a borrower who intends 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 drivers’ licenses, passports, and other forms of ID but these did not exist in the medieval period.16

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16. For similar reasons the ability of medieval actors to collectively retaliate against a cheater who is not personally known to all of them was difficult due to the difficulty in describing him to those who were not cheated. Photography was nonexistent and new names could be assumed after cheating. Most
The CRS can theoretically mitigate this problem by relying on intra community personal familiarity. It can rely on this familiarity to enable an individual to credibly reveal his communal and personal identity to non members, rendering him vulnerable to punishment. To capture this possibility in the above 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 extended game, exchange can be sustained as an equilibrium outcome under the conditions discussed above. The CRS 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 others’ identities.

3 The Historical Evidence on the Community Responsibility System

Theoretically the CRS can foster intercommunity impersonal exchange. This does not imply, however, that this had been the case during the late medieval period. Historical evidence, however, supports the claim that the CRS prevailed throughout Europe. What were, if any, other institutions that may have also facilitated exchange that was impersonal to some degree and their relative importance is yet to be established. (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 (from robberies and tolls, for example). It thus complemented the merchant guild examined in Greif et al. (1994). I ignore this issue here.

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). (Emery 1952 and Lopez 1954.)

17. For additional historical evidence, see Greif (2004).

18. What were, if any, other institutions that may have also facilitated exchange that was impersonal to some degree and their relative importance is yet to be established. (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 (from robberies and tolls, for example). It thus complemented the merchant guild examined in Greif et al. (1994). I ignore this issue here.

19. English legal documents indicate that one’s merchant guild — which in many cases was also the governing body of the borough — was his relevant community (Maitland 1889, p. 134). Yet the charter suggests that a community de facto was the smallest unit (borough, village, or county) that could be pressed to penalize a culprit.
This charter is representative; evidence from other charters, treaties, and regulations reveals that the CRS 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 “distrain” (impounding) of goods under the CRS. The centrality of the CRS in supporting English trade among members of various towns is also revealed in the surviving 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. 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 reflect the strategy of holding community members liable for a member’s default in intercommunity exchange. The CRS governed exchange between English merchants and merchants in Germany, Italy, France, Poland, and Flanders (whose cities were England’s largest trade partner). Similar evidence is reflected in the above correspondence of the mayor of London. In it, 15 of the 50 extant letters dealing with international commercial matters (30 percent) refer to the strategy of the CRS.

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 CRS, 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, 33 of the 44 the surviving treaties (75 percent) mention the

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20. 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 above 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.

21. Calendar of Plea and Memoranda Rolls Preserved among the Archives of the Corporation of the City of London at the Guild Hall (vol. 1). A quarter of these letters relate to commercial transactions. The rest relate to stolen goods or disputes over the legality of tolls.

22. 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 Preserved in the Public Record Office, 20: 1266-1272 (regarding Lübeck); Calendar of the Patent Rolls Preserved in the Public Records Office, 460: 1232-1339 (regarding Ypres); Vecchio and Casanova 1894 (court cases in various Italian cities). See also Calendar of Plea and Memoranda Rolls Preserved among the Archives of the Corporation of the City of London at the Guild Hall, vol. 1.
strategies associated with the CRS and regulate its operation. In addition to Florence, the treaties mention at least 23 other Italian towns as ones in which the CRS prevailed. These treaties and other sources include references to all the large Italian cities (Genoa, Venice, Milan, Pisa, Rome) as well as to numerous smaller ones (Siena, Padua, Cremona, Lucca, St. Miniato, Montepulcino, Montalcino, Prato, Arezzo, and Massa Trebaria).23

Evidence also reflects the strategy of holding an individual liable for the cost his default in intercommunity exchange imposed on his community. The Discorso intorno al governo di Firenze dal 1280 al 1292, written at the time, notes that the Commune of Firenze intended to make a merchant accused of cheating a member of another community pay the damages (Santini 1886, p. 166). The commune 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 the strategies associated with the CRS were supposed to be followed. But was the CRS more than rules and regulations? Were these rules and regulations indeed followed and did they influence behavior? Was the CRS indeed an institution? The historical evidence indicates that it was.

To support this claim, it is useful to extend the model to explicitly capture 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. The lender receives a signal, 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 cheated.24 Further assume that each court has independent imperfect monitoring ability; verifying a complaints implies receiving a publicly

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23. See Arias (1901) and Vecchio and Casanova (1894) regarding these treaties. Regarding Italy see Wach (1868).
24. 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.
observed signal indicating whether cheating occurred. The signals are not perfectly correlated implying that courts can sincerely disagree about whether cheating took place.\textsuperscript{25}

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 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 beyond these results is well known.\textsuperscript{26} Although on the equilibrium path no cheating occurs, 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 CRS prevailed, we should find court cases and other sources reflecting the strategy of holding community members liable, confiscating their property, and, in case of disagreement over whether a default had occurred, cessation of trade for a finite period of time. Such evidence is plentiful, from England, Italy, and elsewhere.\textsuperscript{27} In Florence alone, between 1280 and 1298 (a period for which we have particularly good data), we know of 36 cases of dispute, confiscation, or trade cessation involving as many as 25 different Italian cities. Disputes extended as far as

\textsuperscript{25} Technically, the main assumptions are as follows: Let \( b_{01} \) denote a borrower’s action in period \( t \) with \( b_{01} \in \{ R, D \} \) where \( R \) denote repay and \( D \) denote not repaying. Let \( j(t) \in \{ RC, NRC \} \) denote agent \( j \)’s action in period \( t \), where \( j \in \{ L, \) Lenders’ court, Borrowers’ court\} and \( RC \) and \( NRC \) denote requesting and not requesting compensation, respectively. Let \( 2_{L}(t), 2_{LC}(t), 2_{BC}(t) \) 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, \( 2_{L}(t), 2_{LC}(t), \) and \( 2_{BC}(t) \) are iid across time and transactions. \( 2_{L} \) is observed only by \( L \). \( 2_{LC} \) and \( 2_{BC} \) are publicly observed. \( N_{L} = N_{R} = 2N \). I do not explicitly present this extension of the model because the additional insights are well known as discussed below.

\textsuperscript{26} These results are generic in imperfect monitoring models (Green and Porter 1984; Abreu, Pearce, and Stacchetti 1990).

\textsuperscript{27} 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: 9-10 regarding Flanders.
Spain (Aragon) and England and got even university students involved as reflected in their requests for immunity from confiscation as early as 1155 in Bologna and 1171 in Florence.  

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).  

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. Theory highlights the logic behind this practice: retaliations arguably lasted long enough to make misrepresenting information sufficiently costly to make misrepresentation of information unprofitable. 

That the CRS was aimed at fostering exchange gains further support from observing that in commercial matters it was legally applied only when it can theoretically be effective, namely, when default can 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 (as in agency relationships, for example). I find no evidence that the CRS governed such transactions.

The conjecture about the importance of the CRS 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

28. Santini (1886) (data for 1280–98); Vecchio and Casanova (1894) (relations between Florentine, England, and Spain); Munz (1969, p. 77) and Santini (1886, pp. 20-4) (students’ request).
29. As this case illustrates, a legal procedure preceded the impoundment of goods. For details of these processes see Vecchio and Casanova (1894) Arias (1901), Wach (1868), Bateson (1901, pp. 14-5).
30. 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).
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. Law was 
personal rather than territorial. One was subject to the laws of his community, not the laws of the 
locality in which a fair was held.

The rationale behind these arrangements is clear once one recognizes that they were part 
of the organizational features of the CRS. 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 one’s 
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.\(^3^2\)

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 CRS. 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 CRS 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 principalities didn’t 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 caused trade to decline and restored the CRS at the fairs (Thomas 1977; 
and see Patounel 1937 regarding the CRS in France).

In smaller fairs and within cities, less extensive arrangements provided the means to 
identify one’s communal and personal identity. Certifying organizations, in the terms of the 
theoretical analysis, were the rule. Merchants of the same community traveled together, lodged 
together (often in their own special residences), and witnessed one another’s contracts.\(^3^3\)
Communal identification was facilitated by the fact that even within the same political entity

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\(^3^2\). We have only one piece of evidence about the content of these scribes’ cartularies (Verlinden 
1979). The 15 contracts, written in 1296, mention individuals from 12 communities indicating that 
communal affiliation was important to the contracting individuals and there was an institutionalized way to 
verify it.

\(^3^3\). Communal lodging facilities for foreign merchants were common. Bruges was an exception. 
Merchants rented houses and landlords were liable for their tenant’s contractual obligations (De Roover 
1948).
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 CRS so that they would not be sued in the courts of the central authorities if they broke the rules. More generally 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 running a 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 CRS, 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 CRS shaped the characteristics of pre-modern international trade centers, particularly fairs. Theoretically, the CRS implies that trade centers without affiliated trading communities have a comparative advantage in contract enforcement over trade centers with such communities. In trade centers with affiliated trading communities, incentives to provide intercommunity enforcement are weakened, since 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.

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. 14-5). The courts of

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34. For an example involving an Englishman and merchants from Brussels at the fair of St. Botulph in England, see Selected Cases Concerning the Law Merchant, vol, II, no. 7: 11-12.
the Champagne fairs, which did not represent any community of long-distance traders, adjudicated disputes between any foreign merchants.

Understanding the importance of the CRS in fostering trade thus reveals the rationale behind a puzzling phenomenon: the fact that by and large, the main medieval fairs did not have affiliated communities of long-distance traders (that is, the localities within which the fairs were held did not have a domestic community of long-distance traders). The merchants of the communities within which large fairs, such as the Champagne fairs or the English fair of St. Ives, were held, were mainly local traders who did not travel to other trade centers.

If the CRS 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 incentive role of this wasteful impounding is captured in condition 1 (proposition 1). 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.35

Consistent with this prediction, evidence from twelfth and thirteenth century Italy and Germany reflects a transition away from impounding. Florentine twelfth century treaties 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 order to confiscate was granted and the time it was executed (e.g., Arias 1901, p. 52). By the early fourteenth century, grace periods of one month became the default. (Santini 1886, pp. 68-72, 165). A German law of 1231 established a 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 its generality in that region of Europe. More generally, the evidence presented above indicates that by the thirteenth century, the community responsibility system prevailed in commercial areas of Europe (Italy and Flanders), in the best-organized country in Europe (England), and in the largest political units (France and the Holy Roman Empire).

35. In this case, it is also sufficient for equilibrium with exchange that first only the borrowers’ court verifies complaints and only if it does not discover cheating, the lenders’ court verifies as well. Historically, as details below, when impounding was no longer done when complaint was submitted, complaints were first verified by the borrowers’ court.
The origin of the system is unknown: it has neither a clear Roman law nor customary Germanic law antecedents (Wach 1868).\textsuperscript{36} 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 interest. Specifically, 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 CRS rose spontaneously or was designed, it clearly became explicit, well regulated, and an integral part of formal legal procedures.

\section*{4 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 from Italy, England, Germany, and France reflect attempts to systematically abolish the system rather than regulate it to limit the harmful effects of disputes as was done previously?\textsuperscript{37} The decline of the system in the late 13\textsuperscript{th} century is puzzling given there are no particular social, political, or economic upheavals that could have led to such change. What led to the decline of the community responsibility system?

Addressing this question requires examining the costs and limitations of the system and its interrelations with economic, social, and political processes. This analysis suggests that the same processes that the system 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.\textsuperscript{38} The ability of various regions in Europe to advance an efficiency-enhancing institutional alternative depended on their political situations. But even where the appropriate conditions prevailed, as they did in England, a transition to a centralized, law-based system with individual responsibility and territorial law was a lengthy process. Considering the endogenous decline of the system also sheds light on its working and provides further evidence of its operation.

Theoretically, the processes that the CRS fostered could have undermined it. They reduce the range of parameters in which it enables commitment and increases the frequency and cost of

\textsuperscript{36} 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).

\textsuperscript{37} Changes and attempt to abolish the system occurred prior to the thirteenth century. But this century seems 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.

\textsuperscript{38} This growth is very well documented (see Bairoch et al. 1988 and Beresford and Finberg 1973).
intercommunity conflicts. Growth in the number of traders, communities, trader locations, and intercommunity interactions reduce the cost of falsifying one’s community affiliation and increase the cost of verifying it. An increase in trade makes it more likely that disputes will transpire, leading to trade cessation while more trade 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 indeed hindered the operation of the CRS in England. Moore (1985), based on thirteenth century evidence from the important English fair of St. Ives, concludes that the 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. People living near towns presented themselves as being members of the town when dealing with nonmembers, cheat their trading partners, and left the town’s jurisdiction. During the thirteenth century “there seems to have been much trafficking between foreign merchants and natives whose mercantile status was doubtful, and whose assets and persons were by no means entirely within the territorial jurisdiction of a local court” (pp. 137-8).

A decrease in falsification costs and an increase in verification costs imply that the CRS can 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, was costly, and before 1271, few debts were enrolled. When CRS functioned well,


40. 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. 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.
traders could avoid the cost of registration. Between 1257 and 1271, however, the number of registered debts increased by a factor of 43, suggesting that the CRS may have been failing.41

Evidence from Italy suggests that increasing intercommunity social mobility undermined the CRS, which critically depends on a community’s ability to punish its members. Treaties from late thirteenth century Florence suggest that this ability had been eroding and defaulters were fleeing their communities. The response was to move away from personal law and toward territorial law. Between 1254 and 1298, Florence entered into at least 12 treaties with other Italian cities in which each commune ceded to the other the right to detain any of its merchants who were fleeing the community to avoid paying a penalty under the CRS (Arias 1901).

By the end of the thirteenth century, the number of disputes in Florence was high. Between 1302 and 1314, Florence granted at least 36 concessions (rights to impound) and at least 13 suspensions (moratoria on impoundment), and it was subject to at least 6 retaliations (cases in which the other community responded to impoundment in kind). At least 30 other communities or polities were involved.42 The number of disputes increased between 1302 and 1314 but we have no data to determine whether disputes were less common prior to 1302.

The rising cost of commercial disputes is suggested by institutional changes aimed at containing them. By the second half of the thirteenth century, many cities were granting a grace period between the authorization of impoundment and the actual impoundment of goods. In Italy there was a transition toward replacing impoundment with the imposition of a toll, so that trade could continue during disputes and uncertainty would be reduced (Vecchio and Casanova 1894).

That the CRS may have became 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 CRS contributed implied that within a community the costs and benefits of the CRS became less evenly distributed. Those who gained relatively little 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 CRS. The community’s nonmercantile population will favor abolishing the CRS, since they bear the costs of conflict (due to the absence of foreign merchants) but do not directly gain from the system. Furthermore, as cities grow larger, the net economic benefit of the CRS may be negative, due to the high frequency of disputes. Second, rich, well-established merchants are likely to

41. This data is based on all the available records in the Close Rolls of the Reign of Henry III: 1227-1272. 14 Vols. London. His Majesty's Stationery Office, years 1256-1272. There is only 1 entry for 1257, 4 for 1269, and 43 for 1271. See Plucknett (1949, p. 137) on the cost of using the Common Law. 42. Calculations are based on evidence from Barbadoro (1921).
attempt to abolish the CRS in governing exchange. These merchants gain relatively less from the CRS than other traders, because they have the connections, reputations, and wealth to conduct trade based on their personal reputation and collateral aboard, but they bear more of its cost because they have more wealth abroad that can be impounded. Third, because wealthy merchants have goods abroad, they are likely to attempt to retain the CRS in governing the security of property rights of foreign merchants. They would seek to continue using the CRS to protect their property rights abroad from abuses through robberies, excess taxation, etc..

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

Italian historical records reveal a reduction in the intracommunity political viability of the CRS due to the different gains and losses to various segments of the population. 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).

While similar factors probably contributed to the decline of the CRS in various parts of Europe, the ability to devise an alternative system depended on the institutional environment, particularly political institutions. In Italy no third party—such as a king—could have devised an impartial legal system. Indeed, an early attempt to abolish the CRS in Italy in the early thirteenth century failed. (Arias 1901.) By the mid-thirteenth century, the treaties reviewed above were

signed regulating the operation of the CRS and attempting to improve its function by instituting various changes which were already mentioned above.

By the late thirteenth century, treaties to abolish the system in Italy were signed once again although, in the absence of an impartial third party, no alternative system was provided. If the experience of Florence is representative, these treaties were entered into when the mercantile elite obtained political control. 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 CRS. In 1279, for example, the cities of Florence, Venice, and Genoa, as well as most of the cities of Tuscany, Lombardy, Romagna, and Marca Trivigiana, agreed to abolish the CRS (Arias 1901, pp. 170-6; 400-1). 44

Consistent with the theoretical prediction, retaliations, however, 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 CRS securing property rights abroad was valuable for the wealthy merchants; a CRS enabling 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 the rise of large firms with branches abroad occurred during the late thirteenth century when the CRS was on decline.

The disintegration of the Empire in Germany also meant that there was no central ruler with the ability to replace the CRS. As late as the fifteenth century, collective responsibility was still widely practiced (Planitz, 1919, pp. 176 ff). 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 a default. Frankfurt-on-the-Main, which held an important annual international fair, was involved in at least 229 such feuds between 1380 and 1433. Between 1404 and 1438, the

44. 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 CRS] except those for which they were principal debtors or pledges” (Moore 1985, p. 119). Aguably, wealthy merchants bought immunities. Thomas (1977) provide similar evidence regarding France. This evidence is also consistent with an attempt to free ride on the community responsibility system.
important city of Nuremberg was involved in no fewer than 200 feuds (Volckart 2001). It was a costly system in terms of ex ante incentives and the ex post cost of disputes.45

In contrast, in England the state facilitated the replacement of the CRS with one based on individual legal responsibility and the coercive power of the state. When, toward the end of the thirteenth century, the CRS was declining, the political power of the commercial urban sector was on the rise, as reflected in the transfer in 1295-97 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).

The Statute of Westminster I (1275) officially abolished the CRS 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, English Historical Documents, vol. III [54], pp. 420-2). The Crown gradually established an alternative contract-enforcement institution based on territorial law, individual responsibility, central administration of justice, and collateral.46

A contract enforcement institution based on individual responsibility, however, developed slowly and became effective only gradually, as participants learned about its deficiencies and invented new ways to improve it particularly by learning how to better control agents of the state.47 Indeed, some royal charters granted after 1275 still allowed towns to impound goods based on collective responsibility and we already seen that the correspondence of

45. In France, due to the Hundred Year’s War (1337–1453) and earlier wars with England and Flanders meant that the political situation was not conducive to providing impartial justice. Raising revenues was probably a top priority for the Crown.

46. See the statute of Westminster I in English Historical Documents Vol. III: 404 and the Statute of Acton Burnell (1283), English Historical Documents, vol. III (54): 420-2 (which also describe the alternative contract-enforcement institution). See also the Statute of Westminster II (1285), English Historical Documents, vol. III (57): 428-57 (see in particular c. 18); the Statute of Merchants (1285), English Historical Documents, vol. III (58): 457-60; Plucknett (1949, pp. 138-50); and Moore (1985, p. 120). The English Crown may have been imitating the French system. See the discussion in Patourel (1937, p. 97).

47. For administrative changes to curtail corruption, see the Statute of Merchants (1285), English Historical Documents, vol. III (58): 457-60. In 1352 common creditors were ranked with the crown’s creditors insofar as imprisonment of the defaulted debtors were 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.
the Mayor of London from 1324 to 1333 reflects the operation of the CRS. 48 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 CRS, and half of these cases are about contract enforcement. 49

Interestingly, while in the early period the number of domestic and international cases was almost the same, the later data set included 45 percent more international cases. The institutional distinctions between national and international trade seem to have been in the process of emerging.

5 Concluding Comments

Comparative and historical analysis of the nature and dynamics of contract enforcement institutions that supported exchange which 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 reputation. Noncontractual, joint communal liability and communal reputation endogenously motivate 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 turned communities into ongoing organizations with infinite lifespans that 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. 50 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

48. This was true in the charters of Rhuddlan (1284) and Blakewell (1286) (Ballard and Tait 1923).

49. 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).

50. See Bull (1987), Cremer (1986), Kreps (1990), and Tadelis (1999, 2002) on the roles of ongoing organizations in fostering cooperation among agents with finite lifespans 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.
ability to transmit information about a merchant’s conduct to future trading partners, or would a-
priori know the personal identity of the 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 clearly
define communal membership, establish the organizations required to indicate who their members
were to the rest of the society, and strengthen their intracommunity enforcement institutions.

In the long run, however, the CRS declined due to the growth of long-distance trade and
the increase in the size, number, and heterogeneity of communities. These changes reduced the
system’s effectiveness, economic efficiency, and intracommunity political viability. They made it
easier, for example, to falsify one’s community affiliation, hindered verification of affiliation,
reduced the cost of intercommunity mobility, and made some members of the community worse
off than they otherwise would have been. By the late thirteenth century, wealthy members of
communities sought exemptions from the CRS and communities were laboring to avoid it.

The ability to replace the CRS with an alternative institution depended on the institutional
environment. 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 effectively
provide an alternative, economic institutions moved closer, albeit slowly, to the 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 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 (see, for example, North 1990). 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 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, since 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 and the prevailing religious law rejected the notion of
collective responsibility. 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 CRS demonstrates the dynamic causal relationship between institutions and international trade. 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. 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 CRS supports the 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 channel between trade and growth.

The CRS also highlights the importance of some neglected aspects of the microfoundations 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). It also highlights the importance of departing from the assumption common in analyses of reputation mechanisms that identities are common knowledge and recognizing the importance of the related institutions. One of the central components of the CRS was the mechanism for credibly revealing one’s personal and communal identity. The CRS 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 CRS 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.

More generally, collective responsibility have only recently gained attention. 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

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51. 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.
52. Regarding the sovereign’s debt problem, see, for example, Bulow and Rogoff (1989) and Wright (2002).
53. 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).
54. For theoretical analyses, see Varian (1990), Tirole (1996), and Ghatak and Guinnane (1999).
century German cooperatives (Guinnane 1997) illustrate the importance of collective responsibility in the development of industrial economies. Indeed, the CRS 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 responsibility in modern market economies. The community responsibility system suggests that an important role of modern firms is to provide collective responsibility. The contemporary Western reliance on individual legal responsibility (or contractual joint liability) reflects a long process of institutional evolution. It may not be optimal, however, in places where a similar process did not occur (Levinson 2003).

Be it as it may, the community responsibility system reveals the importance of the social and political context 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.
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Each borrower decides whether to travel to L and initiate trade. Each borrower decides whether to return to B and pay. LC can verify complaints, impound goods, and demand compensation.

Matching occurs. Lender decides whether or not to complain.

BC can verify LC’s complaint, decide whether or not to impose a fine, $f$, on any borrowers and pay LC $0$ or $x$.

LC decides whether or not to return impounded goods. Can distribute proceeds from B.

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