

Institutions and Impersonal Exchange: The European Experience

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Abstract

The division of labor is limited by the extent of the market, which, in turn, is limited by the extent of impersonal exchange. Institutions enabling impersonal exchange are thus crucial for advancing the division of labor and economic efficiency. Historically, if exchange began based on personal relationships within relatively small groups, the emergence of the impartial legal system that facilitates impersonal exchange in the contemporary developed economies presents a puzzle. Effective impartial law entails large fixed investment and low marginal costs of conducting impersonal exchange. Why was a legal system supporting impersonal exchange established if the volume of impersonal exchange was initially low?

This paper addresses this question by examining the European experience. The transition to impersonal exchange based on a centralized, impartial law was facilitated by the Community Responsibility System (CRS). The CRS enabled exchange characterized by separation between the *quid* and the *quo* over time and space that was impersonal, up to one's community affiliation. It built on self-governed communities, intra-community (partial) enforcement institutions, and non-contractual joint communal liability in inter-community disputes that induced communities to care about their collective reputations. The CRS prevailed throughout Europe during the pre-modern period and although it was self-enforcing, it was also a self-undermining. It entailed processes that reduced its economic efficiency and intra-community political viability. The ability to supply centralized, impartial contract enforcement in various regions of Europe, however, was dependent on political development at that particular point.

This analysis touches upon issues central to institutional analysis in general: self-governed communities that fall between the ways in which we model the state and communities; institutions that combine reputational considerations and coercive power; the endogenous elicitation of impartial justice; the importance of the distinction between personal and communal identities; the substitutability between knowing a person's identity or his past actions; and the importance of over-lapping generations' organizations, such as communities, in facilitating inter-organizational impersonal exchange despite each individual's finite life span.

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Introduction:

Impersonal exchange is central to economic growth; yet, we know surprisingly little about the historical development of the institutions that supported it (North 1990). In considering the institutional foundations of exchange, the economic literature has emphasized the importance of either reputation-based personal exchange or impersonal exchange based on legal contract enforcement. Reputation-based institutions support personal exchange by enabling repeatedly interacting economic agents to ex ante commit to adhere to contractual obligations ex post, based on the (correct) expectations that misconduct will lead to a loss of future gains from exchange. Legally- oriented institutions support impersonal exchange based on a third-party impartial enforcer with coercive power, ex post verifiability of actions, and legal sanctions.²

The historical process of market development is thus seen as a process of institutional evolution that supplemented reputation mechanisms with impartial legal enforcement. Where reputation-based institutions enabled only personal exchange, impartial legal enforcement benefitted exchange that was impersonal in the sense that one's decision to exchange was not conditional on knowing a current partner's past actions, the expectations of future trading, or the ability to transmit information regarding past conduct to others. (E.g., Greif 1997; Li 1999; Dixit 2002, 2004, chapter 4.) Arguably, the transition to centralized legal enforcement in Europe was a response to population growth. (North and Thomas 1973.) Reputation-based exchange is characterized by a low fixed cost but a high marginal cost of exchanging with unfamiliar individuals. Legally-based exchange, however, is characterized by the high fixed cost required to set up an effective legal system but the low marginal cost of establishing new exchange relationships. Establishing an exchange based on the law amounts to providing a public good, implying that this will happen only if the society can overcome the associated collective action problem (Li 1999, Dixit 2002). Furthermore, establishing an effective legal system requires institutions that will enable a state to commit to not abusing property rights (Greif 1998).

But historically, if exchange began based on personal relationships within relatively small groups, the emergence of the impartial legal system that facilitates impersonal exchange in

² See surveys in Greif 1997, 2000. For inter-relationships between legal and reputation-based institutions see, for example, Greif 1994; Kranton 1996; Johnston et al. 2002.

contemporary developed economies requires an explanation. Why was a legal system supporting impersonal exchange established despite the high fixed cost if the volume of impersonal exchange was initially low? More broadly, what institutions, if any, facilitated impersonal exchange in the absence of impartial, third-party contract enforcement provided by the state and its legal system?

This paper addresses these questions by examining the nature and endogenous dynamics of institutions that supported impersonal exchange characterized by a separation in time and space between the *quid* and the *quo* in pre-modern Europe from the late medieval period. During the Late Medieval Commercial Revolution long-distance trade substantially expanded and merchants from different corners of Europe extensively entered into exchange characterized by a separation between the *quid* and the *quo* over time and space: credit, contracts for future delivery, negotiable securities, and maritime insurance are a few examples. (E.g., Pirenne 1956; Lopez 1976.)

The historical and theoretical analysis in this paper suggests the importance of institutions that support impersonal exchange that are neither based on one's expectation that misconduct will lead to a loss of his reputation nor on a third-party impartial enforcer in the form of a legal system. Rather, these institutions are based on social units that blur the boundaries between the way we model communities of economic agents and the state because they have coercive ability vis-via their members but their legal system is directly controlled by the economic agents and is partial in the sense that it directly reflects their economic objectives. This legal system neither serves the principle of justice nor is it motivated to do so by a third party, such as the state.

These institutions are based on involuntary collective liability of members of the social unit in their interactions with others making the concern with the loss of the social unit's reputation central to their operation. This leads to the endogenous provision of impartial justice meted out by the court partial of the social unit because the court is motivated to punish a member who cheated a non-member, fearing the loss of collective reputation. Hence, reputational considerations and coercive power jointly underpin the operation of the institution. This collective responsibility also enables economic agents to commit to honesty in impersonal exchange despite their finite life spans because the social unit became an infinitely lived player that internalized the cost of a member's cheating. The involuntary collective responsibility also alters the informational underpinning of exchange in the absence of impartial, third-party legal

enforcement. While bilateral or multilateral reputation mechanisms (e.g., Greif 1994) require knowledge of others' personal identities and past conduct, the institutions based on collective responsibility relies on knowledge of one's personal and social identities. Agents do not condition their choice of exchange partners on their past conduct.

In the particular context of pre-modern Europe, the social units underpinning the institution that enabled impersonal exchange were self-governed communities: the communes, which fall into the grey area between communities and states as we commonly conceptualize them. They were similar to communities in that they were characterized by intra-community personal familiarity, yet, like a state, they had a (geographically) local monopoly over the legal use of coercive power. Their legal systems, however, were partial and reflected the interests of their members rather than the principles of impartial justice or incentives provided by a third party. These communities provided the basis for the *Community Responsibility System* (CRS) that enabled large-scale impersonal exchange characterized by a separation between the *quid* and the *quo* over time and space throughout Europe from probably as early as the tenth century.

The organizational structure of the CRS was such that merchants could learn the communal and personal identities (labels) of their partners in an exchange, rather than their past conduct. Community courts held every member of another community jointly liable for default by a member of his community in inter-community exchange. The goods of every member of a cheater's community were impounded if that community refused compensation.³ This communal liability - which was neither contractual nor voluntary for an individual merchant - implied a concern with communal reputation. A community could avoid compensation for a default in inter-community exchange, but at the cost of losing the gains from any future trade. Hence, although a community's courts were partial and represented the interests of their finitely-lived members, they were motivated to utilize their local monopolies over coercive power to provide impartial justice, punish a community member who defaulted, and compensate for the damage. Communities were thus on-going, infinitely-lived organizations that internalized the cost of a default by each member on all members. Finally, anticipating compensation, merchants were

³ "Impound" (namely, to take legal or formal possession of goods to be held in custody of the law) and "confiscation" (namely, seizure under public authority) and distraint seem appropriate here.

motivated to learn the communal and personal identities of their partners to an exchange and could credibly commit to complain in case of default despite the cost involved.

During the thirteenth century, the CRS began to decline. Ironically, it was the same processes that it fostered - those through which trade expanded and merchants' communities grew in size, number, and economic and social heterogeneity - that reduced its economic efficiency and intra-community political viability. Yet, the ability of communities to replace the CRS with an alternative institution was dependent on their political environments. In some countries, such as England, the political system was conducive to a transition to legal contract enforcement based on individual legal responsibility. Even there, however, this transition was not a single event but a gradual process. In other countries, such as Germany and Italy, this was not the case in the centuries immediately following the thirteenth. The transition to the system that prevails today, in which individual liability is the rule and collective responsibility is consensual and contractual, took much more time and there is evidence of the CRS functioning as late as the seventeenth century.

This paper is most directly related to the growing literature examining the historical development of institutions that supported pre-modern European market expansion. The literature focuses on institutions that supported long-distance trade by facilitating agency relationships (Greif 1989, 1993, 1994), fostering capital mobilization (Gonzalez de Lara 2002), and securing property rights abroad (Greif, Milgrom, and Weingast 1994). Impersonal exchange characterized by separation in time between the *quid* and the *quo* is the focus of Milgrom, North and Weingast (1990).

But the analysis of the CRS advances, indicates and relates to the importance of co-examining issues central to various lines of research. It relates to the literature on collective reputation (e.g., Tirole 1996), voluntary collective responsibility, micro-lending (e.g., Ghatak and Guinnane 1999), sovereign debt (e.g., Bulow and Rogoff 1989), and the use of coercive power in enforcing contracts (Greif and Kandel 1995; Dixit Forthcoming). The CRS also touches on the role of organizations and brand names in resolving the unraveling problem in reputation-based institutions (e.g., Bull 1987; Kreps 1990; Tadelis 1999). These works consider how interactions among finitely-lived agents within an on-going organization can foster exchange among

themselves, or how the separation between one's identity and the economic entity mitigates the unraveling problem. The communal structure central to the CRS, however, was an on-going organization that fostered inter-organizational exchange in the absence of impartial justice, even though the economic agents were finitely-lived.

Similarly, previous works on reputation mechanisms concentrated on the importance of public information regarding past actions in fostering institutions based on multilateral reputation. If information regarding past actions is public, then a multilateral reputation mechanism that involves a credible threat to never trade again with a cheater can motivate honesty.⁴ (E.g., Greif 1989; Milgrom, North, and Weingast 1990; Kandori 1992.) The CRS highlights the importance of substituting public information regarding past actions with mechanisms that enable individuals to credibly communicate their social and personal **identities**. It thus made impersonal exchange possible despite the fact that merchants' past actions were not public information and personal identities could not have been communicated across communal boundaries.

The paper proceeds as follows. Section I discusses the issue of exchange characterized by separation between the *quid* and the *quo* during the late medieval period. Section II discusses the issue of impersonal exchange during the same period. Section III presents a theory of the community responsibility system. Section IV utilizes the insights of the theoretical analysis, as well as information from contracts, tribunal records, charters, and royal and community regulations, to evaluate the extent to which a community responsibility system indeed functioned in Europe during that time. Section V examines, theoretically and historically, the deficiencies of the community responsibility and the attempted transitions to an alternative system based on individual responsibility.

⁴ Kandori 1992 and Ellison 1994 demonstrated that in infinitely-repeated PD games, impersonal exchange can be possible based on contagious equilibria. Such equilibria, however, do not exist in games of exchange, which are inherently one-sided prisoners' dilemma games. See Greif 2000.

1. Exchange Characterized by Separation between the *Quid* and the *Quo* during the Commercial Revolution

The historical records indicate that 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 provided and received credit, bought and sold through contracts for future delivery, and insured the cargo they shipped overseas.⁵ While we cannot qualitatively measure the efficiency contribution of such exchange relations, they were arguably great. Lopez (1976), the eminent historian of the Commercial Revolution, viewed credit as a necessity for the occurrence of commercial expansion in a period with a monetary system based upon a limited supply of precious metal. The "take-off (of the Commercial Revolution) was fueled, not by a massive input of cash, but by a closer collaboration of people using (commercial) credit" (p. 72).

The historical records also reflect the identity of the individuals who entered into exchange characterized by a separation between the *quid* and the *quo* over time and space during the Commercial Revolution. Exchanges were often conducted among people who lived near each other. (E.g, Herman Van der Vee 1977: 300). But exchange characterized by a separation between the *quid* and the *quo* was often established among merchants who did not live near each other. For example, around the middle of the century traders from Asti regularly sold northern textiles imported from the Champagne Fairs on credit to Genoese traders (Reynolds 1929, 1930, 1931; Face 1958). Credit arrangements among individuals from other localities are frequently mentioned in Genoa's historical records. In 1190, for example, two Genoese traders, Bonifacius della Volta and Nicola Mallonus, bought goods from a Piacenzan merchant for 120 lira with one year to pay. On the 28th of March, 1210, Rubeus de Campo of Genoa paid a debt of one hundred marks sterling in London on behalf of Vivianus Jordanus from Lucca.⁶ Credit transactions among individuals from distant localities were not confined to Italy. They were common in England during the twelfth and thirteenth centuries among English merchants from different cities and among English merchants and French, Flemish, and German traders.⁷

⁵ For a description of these developments, see, for example, Lopez and Raymond 1955: 157-238; de Roover 1963: 42-118; and Postan 1973.

⁶ Obertus Scriba 1190, No. 669 and see also Nos. 138, 139. Lanfranco Scriba 1952, vol. 1, No. 524: 234.

⁷ E.g., *Calendar of the Patent Rolls Preserved in the Public Record Office*. 1266-1272: 20. *English Historical Documents*, vol. II: 1012-3. Postan 1973.

Similarly, contracts for future delivery among individuals from distant localities were common in Italy, England and France. For example, in 1191 a Genoese merchant named Ugo Mallonus bought from a Pavian and a Roman five bales of fustian of Pavia at forty pieces per bale, including thirteen vermilion, six green, the rest brown, and contracted to buy three more bales at mid-Lent and another two at Easter. At the Fairs of Champagne, where much of the trade between northern and southern Europe was conducted during the twelfth and the thirteenth centuries, merchants from different localities frequently entered into contracts for future delivery.⁸

Contract enforceability is necessary for any exchange but enforcement is particularly important in exchange characterized by separation between the *quid* and the *quo*. In the absence of appropriate institutions, a borrower, for example, can enrich himself after obtaining a loan by not repaying his debt. Expecting such behavior *ex post*, a lender would not lend *ex ante*. Similarly, a merchant who is paid to deliver goods in the future will find it optimal to retain possession of these goods, implying that the buyer would not be willing to pay *ex ante*. Hence, exchange characterized by separation over time and space between the *quid* and the *quo* requires contract enforcement institutions that enable the transacting parties to *ex ante* commit to carry out their contractual obligations *ex post*.

What were the institutions that enabled such exchange during the Commercial Revolution? How could a twelfth-century borrower from Lucca, for example, commit himself *ex ante* to repay *ex post* a debt to a lender from London? Did late medieval Europe develop contract enforcement institutions that enabled impersonal exchange? Or was exchange confined to personal exchange in which repeated interactions or family relationships mitigated the commitment problem? Given the available historical evidence, we cannot address this question by tracing the exchange relationships of individual merchants over time. Hence, to examine the extent to which impersonal exchange was possible in pre-modern Europe, one has to determine whether an institution that enabled it functioned then.

The absence of one institution is rather clear. In the early days of the period under consideration there was no state with a legal system capable of effectively supporting impersonal exchange among individuals from distant localities. Local courts existed throughout Europe and they could supervise and enforce contracts executed in the areas under their authority. They had the ability to provide contract enforcement for exchange among individuals present in the (limited) territorial area over which they had

⁸ Ugo: Guglielmo Cassinese 1190-2, no. 250. With respect to England and France, see Moore 1985; Verlinden 1979.

legal jurisdiction. This was the case even within a relatively well-organized political unit (such as England); there was no legal system that could provide the required enforcement.⁹

But the law was absent in yet another sense. By and large, local courts were not unbiased agents of a central legal authority or impartial dispensers of justice. Rather, more often than not, they were arguably the embodiment of local interests and were prejudiced in their judgments against foreigners. Indeed, local courts in the countryside as well as in cities, were controlled by the local landed or urban elite. But substantiating the assertion that such courts were partial and their judgements reflected the interests of this elite group is subtle. It is particularly problematic to provide evidence regarding partiality with respect to alien merchants because, as discussed below, under the CRS these courts would provide - on the equilibrium path - impartial justice exactly because they were partial.

Yet, many of the documents cited below explicitly reflect contemporary distrust of the impartiality of courts. Furthermore, in England we find that local courts provided partial justice to local peasants (e.g., Hanawalt 1974), making it more reasonable that these courts, in the absence of a countervailing force, would have dispensed equal justice to non-locals. Court liberations in Italy also reflect partiality. Consider, Siena which was the financial capital of Europe by the early fourteenth century. Its largest banks were unlimited liability partnerships that held deposits for people throughout Europe. By the early fourteenth century, however, Siena's main banks - such as the Bonsignori and the Tolimeii - went bankrupt. The bankers applied to the city and asked to retroactively change their statutes to those of limited liability. The argument was that this would enable retention of wealth in the city. The legal authorities refused the request but they did so not because they were obliged to serve justice. Rather, they argued that it would hurt the reputation of Siena's banks. Profitability, not impartial justice, motivated the legal ruling. (English 1988.)

It is exactly because there was no impartial legal system that was effective over a large geographical area that the conventional wisdom among economic historians is that prior to the rise of the state, impersonal exchange was either absent or at most confined to spot exchange supported by local courts. In the absence of effective impartial justice, only personal exchange based on personal familiarity and interactions was possible. (E.g., North 1990.)

This conclusion, however, ignores the particularities of the historical context in which European medieval trade was conducted: the particular social and institutional context of communities. These were

⁹ Plucknett 1949: 142; Ashburner 1909; Postan 1973; and the information contained in *Select Cases Concerning the Law Merchant, A.D. 1239-1633. 2: Central Courts.*

self-governed communities - or communes - in the medieval sense of the word, and most of the towns west of the Baltic Sea in the north and the Adriatic Sea in the south acquired this status during the late medieval period. (Henceforth, I will use LMP instead of the Late Medieval Period.) There were very marked regional differences between different types of communes. Those in Italy acquired such a degree of independence that they became city-states. Those in other parts of Europe did not gain such extensive independence but nevertheless had much control over their internal affairs. In either case, similar to a state, these communes had enforcement institutions. Like a community, however, their members were personally familiar with each other, while the objective function of their enforcement institutions was aimed toward the interest of their members rather than serving impartial justice.¹⁰ Finally, gaining affiliation with a commune or severing it was usually a lengthy and costly process. In the extreme case of Venice, one had to pay tax for twenty-five years to acquire citizenship. More generally, immigration was costly and risky during this period.

Is it theoretically possible that these communities provided the foundation for an institution that supported inter-community impersonal exchange characterized by distance between the *quid* and the *quo*? And if so, did this institution prevail in late medieval Europe?

2. The Community Responsibility System: Theory

This section considers whether theoretically communities could have been a part of an institution enabling impersonal exchange. It first uses a simple economic model devoid of communities to present the conditions under which exchange that is impersonal - in the sense of not being based on bilateral, repeated interactions - can be an equilibrium outcome. It then argues that the conditions required for such an equilibrium did not prevail in the late medieval period. It concludes by expanding the model to include communities, and showing that in this case, inter-community impersonal exchange can be an equilibrium outcome. For ease of exposition, many technical details are suppressed.

Consider a repeated, random matching game between N_L lenders and N_B borrowers who are engaged (WLOG) in credit transactions. Such exchange, as is generally the case, is best modeled as a one-sided prisoners' dilemma game (Greif 2000). Each borrower can decide whether to initiate exchange with a lender (travel to trade) or not. Every borrower who initiates an exchange is matched with a lender ($N_L \geq N_B$). A lender who was matched with a borrower can decide whether to lend (a finite amount) or not. The

¹⁰ See below regarding the roles of other bodies, such as guilds, having the same function as the commune in the CRS. For the ease of presentation, I concentrate here on communes.

payoffs for a borrower who did not travel and a lender who did not lend are zero. A borrower who receives a loan can decide whether to repay it or not. Repaying yields the payoffs of $i > 0$ to the lender and $g > 0$ to the borrower. Not repaying, however, yields the payoffs of $-l \leq 0$ to the lender and $G > g$ to the borrower, where $G - l \leq i + g$. The above implies that lending is efficient and profitable to both parties, conditional on the borrower paying his debt, but the borrower is better off by not paying than repaying. The time discount factor is δ .

The necessary conditions for exchange based on a reputation mechanism in such a model are well known. To avoid the unraveling problem, it must be that the game is infinitely repeated or that a per-period probability that a player will leave the game (that is, die) is sufficiently low. If this condition is satisfied, then personal exchange based on a bilateral reputation mechanism can be an equilibrium outcome. Specifically, if the probability of future matching between a particular lender and borrower and the borrower's time discount factor are sufficiently high, there is a sub-game perfect equilibrium (SGPE) with lending on the equilibrium path. Specifically, if $\delta \geq \frac{(G - g)N_L}{g + (G - g)N_L}$ then the following strategy is an equilibrium with lending on the equilibrium path. A lender's strategy is to never lend to a borrower who had cheated him in the past, and a borrower's strategy is to initiate an exchange but to repay a lender iff he had never cheated this lender in the past. This exchange, however, is personal while the issue here is the ability to conduct impersonal exchange. Furthermore, the condition is less likely to hold as the number of lenders increases. Indeed, historically the number of medieval traders was very large, implying that the cost that one could have imposed on another by refusing to trade with him in the future was arguably minor.¹¹ Accordingly, assume that the above condition does not hold.

There can nevertheless be an SGPE with lending on the equilibrium path. Specifically, if past actions are public information, and the players are sufficiently patient relative to the gain from not paying ($\delta \geq \frac{G - g}{G}$), the following strategies constitute such an SGPE: a borrower initiates an exchange but repays if and only if he has never defaulted before; a lender lends only to a borrower who has never cheated before. In this case, a multilateral reputation mechanism supports impersonal exchange. It is ex ante known that a borrower will pay because otherwise he would lose future gains from exchange with all the lenders. Implicit in the above statement is an important and strong assumption. It is assumed that the

¹¹ In the twelfth century, there were several thousand Genoese long-distance traders (Krueger 1957, 1962). Thousands of individuals crowded every major fair in England (Moore, 1985). It has been conjectured that the merchant class in western Europe numbered in the hundreds of thousands by 1200 (Berman, 1983).

identity of each of the borrowers is known to all the lender. One can identify a borrower who cheated in the past.

Exchange which is impersonal in the above sense can then be an equilibrium outcome if the economic agents are infinitely-lived or the per-period probability that a borrower will leave the game is sufficiently low; information regarding past actions is public information; identities are known; and borrowers are sufficiently patient. These conditions are necessary and sufficient for an institution based on a multilateral reputation mechanism can support impersonal exchange in the above model.

Such an institution based on a multilateral reputation mechanism, however, could not have supported exchange during the late medieval period. If there is one thing we know for sure about late medieval traders it is that their life spans were finite. There was uncertainty about when exactly one would perish but life expectancy was relatively short and advanced age is difficult to conceal. As noted by Hart (2001), it is inappropriate to model economic agents as infinitely lived. Even ignoring this problem, the above institution does not endogenously enable and motivate lenders to distribute and acquire information. Cheating is directly observed by the individuals involved in the exchange. So why would a lender be motivated to take the costly actions required to inform all other lenders that he had been cheated? In the late medieval period these costs had to have been very high given the large number of merchants and the large geographical area in which they operated. Indeed, how would a late medieval trader, even if he wanted to inform others that cheating had occurred, have been technologically able to distribute this information?

Finally, given the large number of medieval traders, how could one communicate the identity of someone who had cheated him? The photograph, driver licence, I.D., and passport were not invented yet. Indeed, most commoners did not even have a last name during this period. Hence, the problem was not only that of transmitting the identity of a cheater to others but also learning about it to begin with. In the absence of supporting institutions one would have to rely on a statement from his exchange partner regarding his identity. But how could one commit to reveal his true identity if doing so would make it possible to punish him *ex post*?

Can an institution built around intra-community personal familiarity and contract enforcement institutions enable inter-community, impersonal exchange by simultaneously mitigating all the above problems? Specifically, the end-game problem of merchants' finite life spans; the technological and strategic problems associated with the generation and circulation of information about past actions; and the problem associated with one's inability to independently verify the identity of another person and

communicate it. Furthermore, can these problems be mitigated despite the fact that intra-community enforcement institutions during the LMP were partial?

To address these questions, extend the above basic model in the following way. Each player lives for T periods: $T-1$ periods of trading and one period of “retirement.” Each period the old cohort of borrowers and lenders dies and are replaced. There are two communities:¹² all borrowers are members of community B, and all lenders are members of community L. A community has several features. 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. Let LC denote the lenders’ enforcement institution and BC the borrowers’ enforcement institution.

As the self-governed community in the LMP had their own courts, and these courts represented the interests of the community’s members, assume that a community court’s payoff is the sum of the payoffs of the community’s living members.¹³ Two assumptions are implicit in the above specification. The first is that each community member’s payoff has an equal weight in the court’s objective function. This clearly did not hold in all times and places and is used here as a benchmark case. The second implicit assumption is that courts don’t care about the welfare of future members or respect the “honor” of the commune. Relaxing this assumption would only strengthen the results presented below.¹⁴

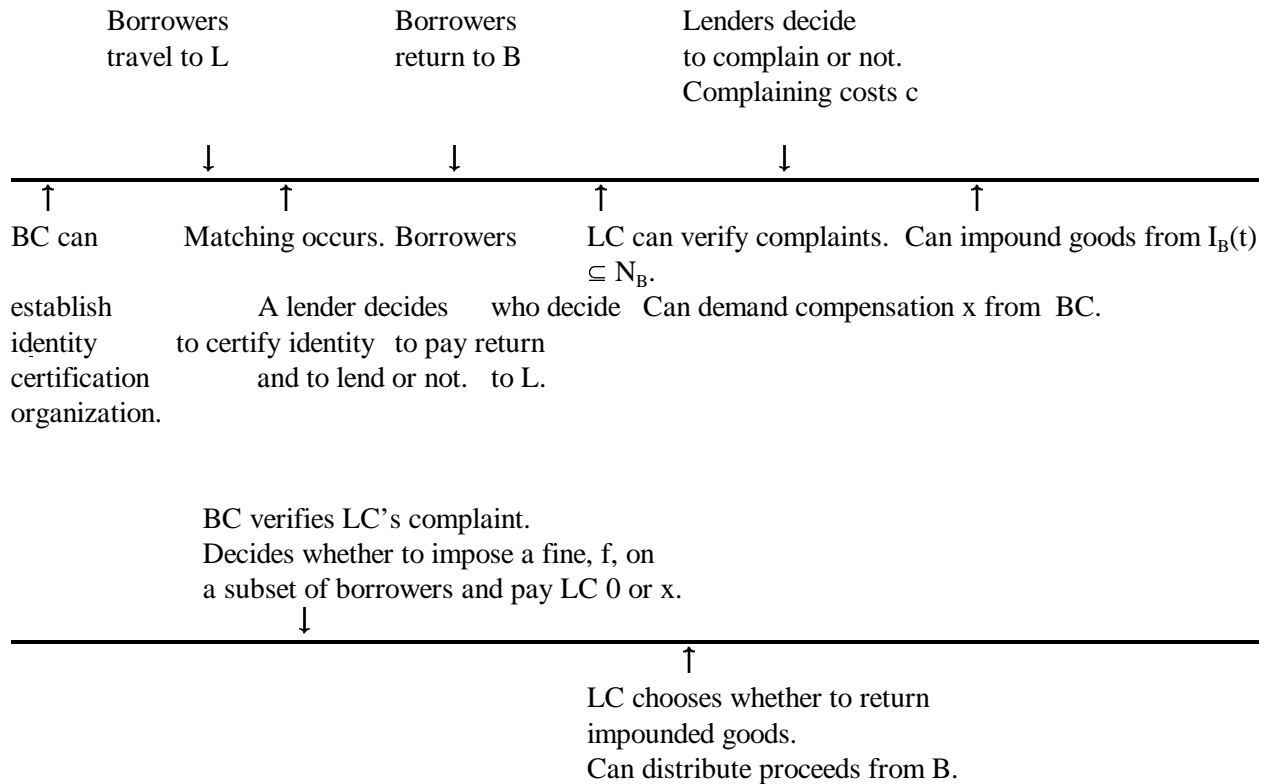
The details of the action sets are presented below but before going into detail, it is appropriate to highlight the important ones. The BC can establish an organization at the lenders’ community territory certifying the communal and personal identity of a borrower. It can also penalize any borrower in its territory and transfer the funds to the LC. The LC can impound the goods of borrowers present in its

¹² The analysis is robust to multiple borrowers’ communities but is sensitive to assuming multiple lenders’ communities. See below.

¹³ That is, members of cohorts 0 to T ; the court’s value function at the end of a period is the same as in the beginning of the next period.

¹⁴ I assume away the possibility of bribes because decisions over disputes in inter-community exchange were made by a community’s representatives and involved many decision-makers. In Florence, for example, prior to 1250, initiating actions over disputes in inter-community 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. Yet, for these consuls to initiate actions in inter-community disputes the actions had to be approved by two additional bodies, the Consuls of the Popolo and the Consuls of the Commune. Santini 1886, 168-72.

territory and distribute these funds or those provided by the BC within the lenders' community. Individual borrower's past actions are private information but they can be ex-post verified at cost by the courts following a costly complaint about cheating by a lender. Note that making a parallel assumption of verification in the game without communities would not change the equilibrium set. A lender still would not be motivated to reveal past cheating to a new lender to induce verification because the cheated lender would not recover the cost of complaining. The cost of verification for LC is C_L and it is C_B for BC. Assume for the moment that a court's actions are publicly observable. In the equilibrium examined below, lenders and borrowers would have an incentive to learn about the courts' actions. It is easiest to present the players' actions and their sequences using the following time line.



The value of the goods the LC impounds is g per borrower. A borrower whose goods were impounded bears the damage of $d > 0$ whether the goods are released or not and assume that $g - d > 0$ so that impounding is profitable. The fine that the BC can impose on a borrower is $f \geq 0$ and the cost for a lender to complain is $c > 0$. $I_B(t)$ is the set of borrowers whose goods the LC impounds. This set can be empty and has to be smaller than the number of borrowers in the lenders' territory at time t . For simplicity,

the game omits two important features of the situation: the first is the cost to a lender of verifying the communal and personal identity of a particular borrower. This assumption does not qualitatively change the analysis. The second feature is the presence of many communities. I will return to this issue below.

Is there an SGPE with lending on the equilibrium path? The following definitions will be helpful in exploring this issue. The game is in **Cooperation State** if (1) there has been no impounding without default, (2) BC has never refused to pay compensation after default, and (3) LC has never refused to return impounded goods after receiving compensation from BC. If either of these conditions fails, then the game is in **Conflict State**.¹⁵ Consider the following strategies: A borrower travels if and only if the two communities are in cooperation state. He borrows if he is given a loan, and returns to pay his debt. If he defaults, he pays compensation whenever it is demanded by BC. If he ever travels to L during conflict and obtains a loan, he defaults. A lender lends if he is matched with a borrower during cooperation after verifying his identity, and does not lend during conflict. He complains if and only if he is cheated.

BC establishes an identity certifying organization. LC never demands compensation when there is no complaint. LC verifies every complaint only in cooperation state, and if the complaint is valid, it impounds the goods of borrowers present in its territory and demands from BC compensation equal to the total cost of default, complaining, and verifying to the lenders ($x = i + l + c + C_L$). If BC provides compensation, LC compensates the lender who was cheated, and returns the impounded goods. If BC does not provide compensation, LC continues to impound goods from members of B who are in L territory. LC impounds the goods of all borrowers in its territory if it ever impounded goods without complaint. BC verifies any complaint and if the complaint is found valid, BC imposes a fine of $f = x + C_B$ on the defaulter and pays x to LC.¹⁶ If LC furnished a complaint that BC finds invalid, it does not furnish compensation.

Under what conditions is the above strategy an SGPE and how exactly does it mitigate the various problems that hinder impersonal exchange in the absence of a community? Given the strategies of the lenders, the LC, and the BC, it is a borrower's best response to travel, return, and repay if and only if the state is cooperation. In a state of cooperation, taking the others' strategies as given, travelling and

¹⁵ Because we assume, so far, that all complaints are perfectly verifiable. The probability of disagreement between LC and BC is zero.

¹⁶ For simplicity, it is assumed that borrowers can pay f . In reality, when this was not the case, members of his community paid. Arguably, it was difficult for an LC to verify if indeed a borrower was really bankrupt or not.

borrowing yields to a borrower who repaid $g > 0$ while cheating implies that he will have to pay the net penalty of $-c - C_L - C_B < 0$. Given the strategies of the borrowers, the LC, and the BC, it is a lender's best response to lend if and only if the state is cooperation (and like borrowers, lenders have an incentive to learn what the state is). Because a lender has to bear the cost of an invalid complaint (c) but is rewarded for presenting a valid one ($x > c$), a lender's best response is to complain only if cheated.

If BC's pays without verifying, LC's best response is always to demand compensation. BC's best response is to verify any complaint, impose the above fine, and compensate the LC if condition 1 holds: $gN_B \sum_{t=0}^{T-1} (T-t)\delta^{t+1} + I_B(t)(g-d) \geq x + C_B$. This condition is that the value of future lending and that of the impounded goods to the living members of the borrowers' community are more than x , the amount demanded by the LC, and verification cost, C_B .¹⁷ LC's best response is to verify a complaint and demand compensation. It is also motivated to return the impounded goods and not to impound without a valid complaint if condition 2 holds: $iN_B \sum_{t=0}^{T-1} (T-t)\delta^{t+1} \geq (g-d)N_B$. That is, the value of future trade to the living members of the lenders' community is higher than what they can gain from impounding all the goods and foregoing future trade. The linchpin in making this strategy an equilibrium is the incentive provided to the borrowers' community. The BC's best response is to verify a complaint, impose a fine on a cheater, and compensate. Finally, if these conditions hold, the BC will find it optimal to establish an organization to certify identity if these costs are less than the net present value of the borrowers' gain on the equilibrium path.

Theoretically then, a CRS - an institution encompassing the above organizations - communities, community courts, and a certification organization - and the belief that the above strategies will be followed - can support impersonal exchange. At its core is making the threat of punishing a borrower who defaulted credible. If a borrower's cheats in his $(T-1)^{st}$ period, the lenders' credible threat not to lend again implies that the borrowers' community is worse off. Because the lender knows the communal and personal identity of the cheater, and expects to be compensated if he complains, he will do so. The BC finds it optimal to punish a cheater because it is optimal for the younger cohorts. A borrower thus finds it optimal to repay

¹⁷ Fearon and Laitin 1996 explored how communities can be motivated to discipline their members to achieve interethnic political cooperation. If we were to allow coordinated cheating by all the borrowers, the condition would have been:

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

his debt. Anticipating that this will be the case, lenders can find it optimal to lend. Communal (local) enforcement overrides the fear of losing future gain from exchange in inducing honesty.

The CRS thus enables exchange that is impersonal - up to one's communal identity - by mitigating all the problems that hinder impersonal exchange in the absence of communities. It mitigates the end game problem because the community, although it aggregates only the payoffs of its living members, becomes de facto a substitute for a single infinite-horizon player. The reputation of the community is placed as a bond for the behavior of each of its members. Public information is endogenously generated because a lender who was cheated is motivated to complain. At the same time, the strategies of the players imply that a lender does not benefit from furnishing false claims, and courts are motivated to examine the validity of claims. This model does not account for why, on the equilibrium path, lenders and borrowers would be motivated to verify whether the state is one of cooperation or conflict. After all, conflict would not occur in this model. When it is expanded, as is done below to include imperfect monitoring, conflicts of a finite length occur on the equilibrium path and borrowers (lenders) are motivated to learn about the state as long as the cost of doing so are less than $d(i - 1)$.

The CRS changes the information required for impersonal exchange. No lender needs to know the past actions of a borrower. Nor does each lender need to know the personal identity - to be able to recognize - every borrower. To sustain exchange, one only needs to know the communal affiliation and personal identity of his current match. This can be done by approaching the certifying organization of the lenders' court. Finally, non-contractual, joint communal liability and communal reputation get around the problem of local partial justice. Partial courts are endogenously motivated to provide impartial justice.

Although theoretically the CRS could have fostered inter-community impersonal exchange during the LMP, this does not imply that it functioned during that time. The historical evidence, however, indicates that the CRS prevailed throughout Europe then.

3. The Community Responsibility System: A History

Historical evidence supports the claim that the CRS prevailed during the LMP throughout Europe. In substantiating the importance of the CRS, the discussion first provides anecdotal evidence for the operation of the CRS drawing, in particular, on the history of England and Florence. It then turns to more systematic evidence regarding the scope and the origin of the system.

The strategy associated with the CRS calls for holding a person's community members liable for his default in inter-community exchange. This strategy is apparent even in documents related to inter-

community exchange within the same political unit. In a charter given to London sometime between 1130 and 1133, the King, Henry I, announced that "all debtors to the citizens of London discharge these debts, or prove in London that they do not owe them; and if they refuse either to pay or to come and make such proof, then the citizens to whom the debts are due may take pledges within the city either from the borough or from the village or from the county in which the debtor lives."¹⁸

This document also reflects that in England at least, a community *de facto* was the smallest municipal or administrative unit - borough, village or county - that could be pressed to penalize a culprit. English legal documents indicate that at times one's merchant guild - which in many cases was also the governing body of the borough - was his relevant community. "Every member of the guild ... guaranteed the debts contracted by every member in the way of his trade - is subsidiary liable for those debts. You are a member of the commonality of X: - it is a course of action for me against you that A, who is your 'peer and parcener,' your 'fellow commoner,' (or) 'at scot and lot' with you, has contracted a trading debt with me and has not paid it" (Maitland 1889: 134).

The same strategy governed the relationships between members of English communities and those of other political units. Consider, for example, a statement made by King Henry III in 1266. The King granted "to his burgesses and merchants of Lubeck, that during the king's life, they or their goods within the king's power shall not be arrested for any debt whereof they are not sureties or principal debtors; unless the debtors are of their commune and power and have failed to pay in whole or part and the said burgesses of Lubeck, by whom the said town is governed fail in justice to the men of the king's land and power, and this can reasonably be proved."¹⁹ This charter also reflects that the "burgesses of Lubeck" governed the town. The same strategy prevailed in the relationships among other regions of Europe as is reflected, for example, in a 1252 statute issued by Margaret, the Countess of Flanders. Foreign merchants were held liable for debts assumed by their peers. Although only a principal debtor or his guarantor could be imprisoned for debt, the goods of other members of the defaulter's community could be impounded. (Verlinden 1979:135.)

The above evidence reflects the strategy of holding a member of one's community responsible for his contractual obligations in inter-community exchange. Other evidence reflects the part of the CRS's strategy which calls for holding one liable for the cost that his default in inter-community exchange imposed on his community. The "*discorso intorno al governo di Firenze dal 1280 al 1292*" states that in

¹⁸ *English Historical Documents*, vol. II: 1012-3, and see discussion by Stubbs 1913.

¹⁹ *Calendar of the Patent Rolls Preserved in the Public Record Office*, 20: 1266-1272.

response to accusations of cheating a member of another community, the Commune of Firenze was to press on the culprit to pay the damages himself (Santini 1886: 166). Similarly, some English boroughs went so far as to have a policy whereby once a foreign creditor could establish that a member of the borough had failed to repay his debt, the authorities would pay him out of the borough's funds and later they would seek double indemnity from the debtor (Plucknett 1949: 137).

Were rules such as those mentioned above effective in influencing behavior or were they only statements about how things are supposed to be? The historical evidence is rich in indicating that the CRS indeed influenced behavior. To present events and processes - rather than words - supporting this claim it is useful to first extend the above model to explicitly recognize that commercial disputes can arise and courts have only a limited ability to verify past actions.

Disagreement in inter-community exchange over whether one fulfilled his contractual obligation is reflected, for example, in the Genoese cartulary of Giovanni Scriba. An entry registered on July 22, 1164 (Vol. II, no. 1245), indicates that shortly before 1164 a Genoese trader, Amicus Zostro, received a loan from Xecha Bohadie, a Muslim trader from Tripoli. While Amicus had evidently already arranged to pay Xecha's brother or son in Sicily, Xecha claimed that no such payment had been made. In July, 1164, following Xecha's assertion that payment had not been made, Amicus sent an agent named Baldezonus from Genoa to Tripoli carrying six cantras of copper. Baldezonus was instructed to sell the copper and pay Xecha if the latter would swear in the presence of reliable witnesses that he would hold neither Amicus nor any other Genoese merchant for ransom.

To capture the possibility of commercial disputes and that different courts (and even judges and juries in the same trial) can reach different conclusions based on the same evidence, we need to extend the above basic model. Assume that lender-borrower relations are characterized by imperfect monitoring – the lender receives a signal which is a random variable that depends on the action taken by the borrower. Particularly, even if cheating has not occurred, the lender's signal may indicate that he was cheated.²⁰ Further assume that each court also has an independent imperfect monitoring ability – if a lender complains each court receives a signal indicating whether cheating has occurred. Each court's signal is public and the

²⁰ The historical records suggest that disputes were more likely to occur when one of the contracting parties passed away, 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 one of the parties themselves.

signals are not perfectly correlated.²¹ In other words, courts can sincerely disagree about whether cheating took place.²²

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 regarding past conduct will occur and will be followed by conflicts of finite durations.²³ During conflict, impounding will occur and lending will cease. This retaliation, however, will be finite in length and once over, lending will resume. The intuition beyond these results is well known.²⁴ Although on the equilibrium path no cheating occurs (in the sense that a borrower chooses not to pay), finite periods of conflict are required to provide the communities and the contracting individuals with the appropriate incentives. If the BC's strategy calls for compensating the lender, although it concludes that cheating did not occur, the LC's best response is to claim that a dispute occurred even if it did not. Similarly, if the LC's strategy calls for not confiscating when it maintains that cheating occurred, the BC'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 and forgone gains from exchange is the means of generating these costs.²⁵

²¹ It is assumed, for simplicity, that if there is no dispute, the courts have perfect monitoring ability.

²² Technically: Let $\alpha_{B(t)}$ denote borrower's action in period t with $\alpha_{B(t)} \in \{R, D\}$. Let $\alpha_j(t) \in \{RC, NRC\}$ denote agent j 's action in period t where $j \in \{L, LC, BC\}$, and RC and NRC denote requesting and not requesting compensation, respectively. Let $\theta_L(t)$, $\theta_{LC}(t)$, $\theta_{BC}(t)$ denote three random variables each representing a signal about borrower's action in period t . Each of them could be R or D. Assume that $N_L = N_B = 2N$. Conditional on a borrower's action, $\theta_L(t)$, $\theta_{LC}(t)$, and $\theta_{BC}(t)$ are iid across time and across transactions. θ_L is only observed by L. θ_{LC} and θ_{BC} are publicly observed. Any lender can complain but the probability that courts' will disagree whether a dispute had occurred or not is less in that case.

²³ This conclusion qualitatively holds even if one complains of cheating although a dispute did not occur, and the courts have imperfect monitoring ability in the sense that in positive probability each court will reach a distinct conclusion following the complaint.

²⁴ ??

²⁵ Using arbitration is problematic. If it is cheap, it will not provide the appropriate incentives. E.g., the LC will submit claims regarding disputes even if it knew they were groundless. To restore incentives, the price of arbitration has to be set high, making it less appealing. The only case known to me is between Volterra and San Gimignano in 1234. The arbitration by the Council of Florence, however, failed. Santini 1886: 168. Note, however, that this arbitration was ex post and hence does not fit the theoretical reasoning for its failure.

Hence, if the CRS prevailed, history should reflect court cases reflecting the above strategy of holding community members liable, confiscations, and that trade would cease for a finite period of time following a dispute. Such evidence are indeed ample. In 1238, Beatrice, wife of Marcovaldo of Florence, requested a retaliation against the properties of the people and the Commune of Pisa, for a sum of 2,000 and interest of 750 dinar piccoli of Genoa, to be paid by the heirs of Ubaldo Viscount and Torritano, the son of the late Lamberto, and by two Pisans who had posted a guarantee for them. The retaliation was granted by the podestà after the Commune of Pisa, which had been asked for restitution (according to the Statute), denied cooperation.

Such a denial, according to the above model, would occur when the two courts differed in their assessment of the situation. Various commercial treaties reflect that contemporaries indeed considered retaliation to be unavoidable in cases of disagreements among courts. A treaty between Pisa and Florence signed in 1214, specifies that retaliations would follow if the judges were unable to settle the dispute. (Santini 1886: 165-8.) That such conflicts were a common occurrence is suggested by the records of the visit of the Emperor of the Holy Roman Empire, Frederick Barbarossa, in Bologna in 1155. The students of city's famous law school complained to him that the city of Bologna was holding them liable for debts incurred by members of their original communities. (Munz 1969: 77.²⁶)

Disputes were not unique to Italy. In 1270 "Gottschalk of Almain, burgher of Lynn, complains [in the court of the St. Ives Fair in England] of the communities of Ghent, Ppoeringen, Douai, Ypres, and Lisle as subjects of the Countess of Flanders, for that whereas the said Gottschalk caused fourteen sacks of wool worth seven score marks to be brought from the realm of England to Flanders to trade with it there and hosted this wool at the house of a certain Henry Thuroid on Sunday." The wool, however, was detained in Flanders and the loss amounted to about 200 marks. Yet, the Countess of Flanders refused to provide justice. Accordingly, Gottschalk requested that the court impound the goods of members of the above communities present at the fair. His request was granted.²⁷

²⁶ The operation of the CRS critically depended on the ability to ex post verify past actions. Verification is relatively easy in transactions such as credit and contracts for future delivery, but is more difficult in transactions such as agency relationships, in which one has a large latitude in choosing actions. Indeed, I found no evidence that the CRS governed such transactions.

²⁷ 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.

Retaliations were a calculated response aimed at fostering exchange, rather than acts of revenge. This is suggested by attempts to confine them only to inter-community commercial matters. A 1325 statute from Florence, for example, explicitly enumerated the cases in which it was appropriate to grant retaliation. It could be granted in cases where there were losses in currency or goods, damage to property, tax extortion, or personal detention. No retaliation was allowed in cases involving personal bodily offenses. (Santini 1886.) Further evidence that retaliations were a means to ensure proper incentives rather than compensation per-se is suggested by the observation that they lasted for a finite number of periods, and communities terminated a retaliation period by announcing a "suspension" without making it conditional on full compensation. Retaliations arguably lasted long enough to make misrepresenting information sufficiently costly.²⁸

The assertion that the CRS enabled inter-community impersonal exchange gains further support from examining the organizational details of late medieval trade. Consider, for example, the puzzling features of the Champagne Fairs, arguably the most important inter-regional trading fair in Europe during the twelfth and thirteenth centuries. (Verlinden 1979.) The fairs were not organized as a meeting place among individual merchants from different localities. On the contrary. They were organized as a meeting place for traders from different communities, who often had their own places of residence, storage, permanent representatives, and scribes. In the second half of the thirteenth century, for example, at least fifteen different Italian communities were represented at the Fairs: Alba, Asti, Bologna, Como, Florence, Genoa, Lucca, Milan, Orvieto, Parma, Pistoia, Piacenza, Rome, Siena, Venice. Each of them seems to have had its own scribes and a consul, who had legal authority over members who were present at the Fairs. Although the authorities of the Fairs contracted with various surrounding rulers to secure the right of passage for merchants on their way to the fair and safeguard their property rights within the fair, these authorities relinquished some legal rights over these merchants once they were there.

The rationale behind these arrangements is transparent once one recognizes that they were part of the organizational features of the CRS. The common place of residence, scribes, and consuls enabled one to establish the communal and personal identity of a merchant whom he did not know personally. Living in the quarters of a particular community constitute a way to demonstrate ones' communal identity. A contract written by the scribe of a particular community constituted a proof that a particular member of that specific community assumed a particular obligation in inter-community exchange. Surviving records

²⁸ For a discussion of suspension, see Arias 1901: 177-88. See also Santini 1886: 165.

of these documents, written by an Italian scribe in 1296, contains fifteen contracts. Yet, they mention individuals from the communities of Piacenza, Genoa, Milan, Asit, Como, Savona, Florence, Montpllier, Narbonne, Avignon, Carpentras, and St. Flour.

Similarly, if a community is held liable for the actions of its members, it has to have the representation required to verify who its members are, and the ability to discipline them when necessary. Conversely, the fairs' authorities must have had the ability to identify members of a particular community and its representatives in order to approach them when necessary. Indeed, in 1260 the wardens of the Champagne could pronounce a sentence of exclusion from the fairs following a default, and this exclusion was extended to the compatriots of the defaulters if the judicial authorities of their own towns or principalities did not compel them to fulfill their obligations. Later the King of France had attempted to transfer all legal authority in the Fairs to their authorities. In 1326, however, he concluded that this had led to a decline in trade and hence, restored the CRS. (Thomas 1977.)

In smaller fairs and within cities, less extensive arrangements provided the means to identify one's communal and personal identity. Merchants of the same community traveled together, lodged together (often in their own special residences), and witnessed each other's contracts. Members of distinct communities, even within the same political entity, were noticeably separate from each other in such mundane ways as how they spoke, dressed, and cooked. In Italy, the medieval communal structure survived the longest and indeed, local dialects lasted until the twentieth century. Indeed, contracts and court cases reflect the large extent to which medieval merchants knew the communal affiliations of each other.²⁹

In regions with a relatively strong central political authority, a fair's authorities were motivated to follow the procedures of the CRS so that they would not be sued by the central authorities if they broke the rules. This is well reflected in a thirteenth-century court case from the Fair of S. Botulph in England. A certain James complained that several merchants from Brussels had cheated him. After verifying his complaint, the fair bailiff impounded wool belonging to the merchants from Brussels who were present at the fair, but for some reason released them later on. James responded by entering a plea against the bailiff before the "lord king" of England. In the plea he complained that the "bailiff of the fair aforesaid, had wrongfully delivered sacks of the wool aforesaid to the aforesaid merchants (of Brussels) to the grave

²⁹ For a general discussion of surnames during this period, see Emery 1952 and Lopez 1954. Further evidence will be added.???

damage and manifest loss of James himself, inasmuch as the same commune has not yet satisfied him in respect to the debt aforesaid." (Selected Cases Concerning the Law Merchant, vol, II, no. 7: 11-12.)

More generally, however, fairs' authorities were probably motivated to follow the LC strategy - holding a community liable to the contractual obligations of each of its members - because running a successful fair was a profitable business.³⁰ Providing inter-community impersonal contract enforcement increased the fair's attractiveness to merchants but the ability to do so critically depended on the CRS. Without it, fair authorities were unable to extend their reach beyond their limited geographical areas and the threat of excluding a particular individual from the fair was arguably rather ineffective. Individuals could not have been deterred from cheating in their old age or defaulting on their contracts; they could continue trading through agents or family members.

Indeed, the CRS may have been part of the reason that fairs were so prominent during this period. Under the CRS, trade centers without an affiliated trading community had an advantage over those that did have a community. In the latter case, the incentives to provide inter-community enforcement were diluted since the community's own merchants might have had to bear the cost of retaliation in case of inter-court disputes. These concerns are explicit in Florentine legal documents. Only Florentine citizens could have demanded impounding the goods of alien merchants in a Florentine court. (Vecchio 1975: 14-5.)

Fairs which did not have an affiliated merchant community are therefore in a better position to promote inter-community, impersonal exchange based on the CRS. Indeed, an interesting feature of late medieval trade is that its main centers did not have an affiliated community. Their own merchants only traded locally and did not travel to other trade centers. Furthermore, Florentine legal documents reflect recognition of this problem.

More generally, if the CRS governed inter-community exchange, we would expect organizational details and rules to change to facilitate it in a manner consistent with the functioning of this institution. We would expect, in particular, that it would respond to opportunities to avoid the wastefulness associated with impounding goods. The role of impounding is reflected, in the perfect monitoring case, in the necessary condition $g \sum_{t=0}^{T-1} (N_B - t) \delta^{t+1} + I_B(t) (g - d) \geq C_B + x$: for the BC to be motivated to compensate, the net present value of future trade and the impounded goods should be higher than the cost of verifying and compensating. Theoretically, then, as long as trade is of limited scope, impounding goods may be

³⁰ For many examples of using the CRS in the courts of English fairs, see Moore 1985.

necessary, but as trade expands - as the borrowers community increases in size - this is no longer the case. The net present value of future trade is sufficient to provide the appropriate incentives.

Consistent with this theoretical prediction, thirteenth-century evidence from Italy, England, and Germany reflects increasing limitations on impounding. While the above evidence regarding the CRS in Italy during the twelfth century contains the threat of impounding goods, by the thirteenth century this was no longer the case. A treaty signed between Pisa and Florence in 1214, for example, contains the provision that if one community refused to compensate the other, members of the latter would be allowed forty days to leave town. More than a century later, in 1325 this has become the default in Florence. A Florentine statute requires the city's administrator to wait one month between declaring and acting upon any impounding of goods under the CRS. (Santini 1886: 165, 68-72.) In England, as reflected in the above charter given to Lubeck, confiscation was allowed only if the BC failed to provide justice. While the above evidence cannot be generalized, a 1231 German law reflects a broad transition away from confiscation as it made such a clause mandatory throughout the Empire. (Planitz 1919: 177.)

That the CRS has been regulated by an Imperial law in Germany suggests that it was the rule rather than the exception in that region of Europe. The fact that we have hundreds if not thousands of pieces of evidence, such as those presented above regarding the CRS from all over Europe, also suggests that this was the case. Indeed, examining all the surviving city charters from England indicates that by 1256, cities with sixty-five percent of the known urban population used the CRS.³¹ (Consistent with the above analysis, none of the surviving charters of the smaller Irish cities reflects the operation of the CRS.) In Italy, all the major commercial cities - Venice, Genoa, Florence, Milan, and Pisa - had the CRS as well as numerous smaller ones. (E.g., Arias 1901; Vecchio 1975.) The country of Flanders, the most economically prosperous area of Northern Europe, had the CRS according to the above evidence. The CRS also prevailed in France.³² By the fifteenth century the CRS also governed relationships among European and Muslim traders. An Arabic writer noted, "the consuls are the chiefs of the Franks and are hostages for

³¹ The populations of cities is taken from Bairoch et. al. 1988. I considered only cities with population of at least 5000 people by 1300. A city was considered to have a CRS if its charter permitted it. For the charters, see Ballard and Tait 1913, 1923. See Moore 1985 Plucknett 1949 for ample evidence that the CRS functioned in England.

³² France: Patourel 1937 and Giry. *Manuel de Diplomatie*, 1925. Paris.

each community. If anything happens in any community dishonoring to Islam, the consul is answerable.³³ (Lewis 1988: 76.)

The origin of the CRS is not known. Italian documents from the tenth and eleventh centuries already reflect its operation although it has neither a clear Roman law nor customary Germanic law antecedents. (Wach 1868.) Evidence from the thirteenth century, mentioned above, indicates that it was already common north of the Alps. By the thirteenth century, the CRS prevailed in the most populated and commercial European areas, that is, Italy and Flanders, in the largest political unit, France, and in the best organized country, England. The prevalence of historical documents reflecting aspects of the CRS have been noticed by an earlier generation of scholars. (E.g., Santini 1886; Arias 1901; Maitland and Bateson 1901; Patourel 1937; Moore 1985). By and large, however, these scholars viewed it as an archaic and barbaric system - a relic of the past that hindered, rather than advanced, trade. The analysis, presented here, however, suggests that it has served a useful purpose. By the late thirteenth century, however, the CRS was already declining for reasons examined below.

3. Institutional Decline and Transition: From the CRS to Individual Legal Responsibility

The CRS enhanced efficiency by supporting inter-community, impersonal exchange. Ironically, however, the same processes that the CRS fostered - growth in the size, number, and heterogeneity of merchants' communities - diminished the system's effectiveness, increased its economic costs, and undermined its intra-community political viability. Indeed, its decline during the late thirteenth century cannot be attributed to the usual suspects of institutional change during the LMP: technological change (e.g., North and Thomas 1973), or the rise of the territorial state (e.g., Benson 1990). There is no evidence for such technological change and the CRS declined also in areas such as Italy and Germany, where no central, territorial monarchy established itself in the late thirteenth century.

Theoretically, the growth of cities and the extensive inter-community interactions that the CRS reduced the cost of falsifying one's community affiliation and increased the cost of verifying it. Inter-community conflicts were therefore more likely to occur. The growth in size and number of communities during the LMP was impressive. For example, between 1200 and 1300 the population of Genoa increased from about 30,000 to 100,000, while that of Venice increased from about 70,000 to about 110,000. In

³³ In interpreting this statement, recall that in the Islamic world crime and sin are synonyms, implying that even cheating in a business matter is dishonoring to Islam.

England there were a little more than 200 boroughs at the turn of the thirteenth century, but there were about 500 at its end. (Bairoch et al. 1988 and Beresford and Finberg 1973.)

By the second half of the thirteenth century, the ease of falsification and the difficulty of verification seem to have hindered the operation of the CRS in England. As Moore (1985) has noted, "this procedure (of the CRS) apparently 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). Similarly, Plucknett (1949) noted that "... 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).

The ability to falsify communal identities and its strategic use is reflected in a case brought before the court of the St. Ives Fair "on Wednesday next after the feast of St. John before the Latin Gate in the eight year of Abbot William," which happened to be 1275.³⁴ On that day William and Amice of Fleetbridge brought a complaint against Thomas Coventry of Leicester. But since he was not present at the fair, several of Thomas' other "peers and parceners," namely other merchant members of the community of Leicester, were summoned to the court. William and Amice claimed that Thomas owed Amice money for a sack of wool he bought three years ago from her (late) father, who lived in Leicester, and for which Thomas had promised to pay in the following year but had not. To prove their case, William and Amice produced a tally from the court of Leicester.³⁵

Leicester's merchants, who were present at the court and held responsible for the debt, denied, however, "any breach of the peace of the lord Abbot and the bailiffs or the fair and the damage of the said William and Amice" and were "ready to verify in such manner as the court shall award that the said Thomas Coventry was never peer or parcener of theirs or at scot and lot with them or a member of the commonality of Leicester." The court refused to accept their claim and judged in favor of William and Amice. Yet, shortly after these proceedings, Thomas of Coventry appeared at the fair and did not deny being from the commonality of Leicester. He did claim, however, that William and Amice had brought a

³⁴ The case: 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,

³⁵ On the tally and its use, see *Select Pleas in Manorial and Other Seigniorial Courts, Reigns of Henry III and Edward I*, p. 133.

false accusation against him, causing him "no small damage," most likely by the response of the merchants of Leicester whose goods were impounded by the fair court. William and Amice could not defend themselves but claimed not to be under the jurisdiction of the court since they were from London.³⁶

Indeed, declining confidence in the CRS in England is reflected in the Close Rolls. Throughout the period under consideration, merchants could have chosen to register debts in these chancery rolls, thereby placing their transactions under the jurisdiction of the Common Law. This implies that property and goods could have been placed as bonds for repaying debts. (Moore 1985, n.105.) Registration, however, was costly, and prior to 1271 few debts, if any, were enrolled each year. As long as the CRS functioned well, traders relied on it and did not register their debts. Between 1257 and 1271, however, the number of registered debts increased by a factor of forty-three.³⁷

Theoretically, the growth in the number of traders increased the total economic costs of the CRS because more traders increased the probability of conflict in each period. Furthermore, the increase in the probability of conflict increased the cost of strategic uncertainty. Courts, after all, can impound goods only from traders present in their jurisdiction. Whenever conflict loomed on the horizon, each merchant was motivated to make sure that he was not present - in the wrong place at the wrong time.

Florence's historical records reflect the impact of this uncertainty. Once a conflict was expected, merchants of the communities involved refrained from trading in each others' cities, while merchants who lived permanently in the other community left their residences with their merchandise. (Arias 1901: 156-8.) Agreements aimed at reducing the cost this uncertainty reflect recognition of this problem. Italian communities agreed to restrict the penalty that could be imposed on a particular individual or to allocate the costs more evenly. In 1251, Genoa contracted with Florence to warn its merchants at least two months prior to impounding goods so that Florentine merchants could leave Genoa in an orderly manner. (Arias 1901: 52.) In other cases, attempts were made to use taxes on members of a community to allocate the

³⁶ See below regarding London's exception from the CRS.

³⁷Based 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. It should be noted, however, there is only one entry for 1257; four for 1269; and forty-three for 1271. See Plucknett 1949: 137 regarding the cost of using the common law.

costs of retaliation.³⁸ Yet, most likely, the uncertainty implied by the CRS could not be completely avoided and as the size of communities grew, the costs of retaliations and uncertainty increased as well.

The CRS also undermined its own economic efficiency by intensifying the adverse selection and moral hazard problems associated with commercial ventures financed by credit. As is well known, under credit financing, the lender assumes all downside risks while the borrower retains all the gains above a certain amount. Hence, credit financing encourages borrowing for high-risk ventures. Appropriate incentives to lenders to evaluate *ex ante* the creditworthiness of the borrowers mitigates this problem, but the CRS undermined such incentives. Even when, as assumed in the above model, matching is random and one does not know his business partners' past actions, a lender can still evaluate the creditworthiness of a borrower based on other signals. In the historical episode under consideration, these signals included the borrower's age, type of clothing, number of servants, the quality and nature of the goods he carried, etc.

The CRS, however, reduced the incentive to invest in conducting such an evaluation relative to a case of individuals' legal responsibility. After all, unlike individual legal responsibility, under the CRS the future trade of all members of one's community is the de facto collateral for the loan. Clearly, the incentive to check creditworthiness is not completely eliminated because of the cost associated with recovering a loss but it is less than it would have been if only borrowers had been held responsible for their debts. Hence, the CRS arguably fostered the entry of more merchants with a higher probability of being unable to repay their loans as the size of communities increased.

Awareness that the CRS intensified the problems associated with credit financing is well reflected in a document from February 8, 1281. On that day, several cities in Tuscany agreed not to retaliate against each other. In announcing this agreement to their merchants, the authorities stated that the local merchants should start paying more attention to the personal creditworthiness of merchants from the other towns with whom they would be dealing. This extra precaution was required, it was argued, because from now on "*a chui dato, a colui rechesto*" (that is, "to whom it is given, from him it will be asked") and if he is not able to pay, impounding goods from his community members will not be permitted. (Arias 1901: 166-7.)

Recognition of the above problems and their relationship to the CRS is indirectly reflected in the seemingly puzzling changes in laws and rules that took place during the thirteenth century. In Italy, England, and Germany the authorities increased the cost of default to the lender by demanding that prior to

³⁸ For example, on 22 February, 1296, Florentine merchants petitioned their city to agree that Bologna would impose a toll (*pedaggio*) on Florentine goods entering Bologna in order to settle a retaliation. Arias 1901:165.

requesting justice from his community's legal authorities, a lender had to travel to the borrower's community and make his case there. Only if justice was not provided could he apply to his community court to request retaliation.

In Germany, this change is reflected in the above mentioned Imperial Decree from 1231. In England, it is reflected in various charters. The City of Cambridge, for example, received a charter and the right to establish a merchant guild as early as the middle of the twelfth century, but only later charters reflect rules increasing the cost of default to lenders. A 1256 charter by King Henry III states that the "beloved burgesses of Cambridge" will "have this franchise, namely that they themselves or their goods, wheresoever found in our dominion, shall not be arrested for any debt of which they shall not be the sureties of principal debtors, unless perchance the debtors shall be of their commonality and power and shall have to make satisfaction for their debts in whole or in part and the said burgesses shall have made default in justice to the creditors of the same debts and this can be reasonable proven." (Maitland and Bateson 1901: 14-5.)

In Italy, apart from a similar shift in the lender's obligation, there is one during this time toward territorial law. Alien merchants who were previously under the jurisdiction of their communities while abroad were increasingly placed under the authority of the community in which they were present. Consider the following treaty signed on April 7, 1279, among Florence, Genoa, and most of the other towns of Tuscany, Lombardia, Romana, and March Trevigiana. It established that merchants fleeing with money belonging to other people could be imprisoned in the territories of the towns who signed the treaty and that they would be kept there until brought to justice. (Arias 1901: 100.)

Such changes are puzzling. Why punish a lender who was not paid? Why was there a transition to territorial law? These changes, however, are consistent with the argument that the CRS was contributing to its own demise by fostering the adverse selection and moral hazard problems. Increasing the cost to a lender counters the increasingly negative impact of the CRS on the adverse selection and moral hazard problems. It provides lenders with more incentives to evaluate borrowers' creditworthiness. The shift toward territorial law seems to reflect an attempt to mitigate the adverse selection and moral hazard problems by increasing the cost of default to borrowers while the inter-community interactions that the CRS fostered made immigration easier.

The ability to mitigate the problem of runaway defaulters, however, was limited, probably because of the courts' limited ability to check the identity of non-residents (as discussed in section 2). Even in the well-organized kingdom of England, the authorities were known to have been usually unable to locate an

individual who escaped from his place of residence.³⁹ In England, as a matter of fact, one did not even have to escape in order to avoid paying a debt. During this period English law precluded selling one's house or real estate to repay a loan, or even punishing a borrower who defaulted with imprisonment. (Jones 1979.)

Just because the CRS was probably becoming less efficient and more economically costly over time, would not necessarily have led to its decline. What seems to have induced attempts to abolish the system was the reduction in its intra-community political viability. The intra-community social and economic heterogeneity that the CRS contributed to, implied that within a community the costs and benefits of the CRS were not distributed evenly. Those who gained relatively little, therefore, were thus motivated to abolish it.

If correct, this assertion has two implications: first, larger - and hence arguably more heterogeneous - communities are likely to attempt to abolish the CRS; second, rich, well-established merchants will wish to abolish the CRS. After all, wealthy merchants gain less from the CRS because they have the connections, reputation, and wealth to conduct personal trade, and they bear more of its cost because they have more wealth abroad. Similarly, a community's non-mercantile component is likely to want to abolish the CRS. Although they bear some cost during a conflict due to the absence of alien merchants, they do not directly gain from the CRS.

Indeed, the historical records reflect a decline in the CRS which is consistent with the above predictions. In England and Italy alike, wealthy traders and large communities sought exemptions from the CRS or wanted to abolish it altogether. Moore (1985: 119) examined cases brought before the court of the St. Ives Fair in England and noticed that in the second half of the thirteenth century there "was an increasing number of individuals ... able to respond to ... suits (related to the CRS) by producing royal licenses of immunity from prosecution for any debts except those for which they were principal debtors or pledges."

In England, large communities approached the king seeking exemptions from the CRS. With about 25,000 residents, twelfth-century London was the largest city in England and a large city by western European standards of that time. In 1133, Henry I declared that the citizens of London "shall appoint as sheriff from themselves whomever they may choose, and shall appoint from among themselves justice whomsoever they choose" and "no other shall be justice over the men of London." Indeed, as mentioned

³⁹ Plucknett 1949: 142. As late as the seventeenth and eighteenth centuries, "a felon could consider himself distinctly unlucky if he was captured by the authorities." Bellamy 1973: 201.

above, William and Amice claimed that they could not be judged at the St. Ives court. Yet, as cited above, Londoners had the right to apply the principle of community responsibility to residents of other cities.⁴⁰

Later, the king provided other large communities with various exemptions from the CRS. In Flanders, Ypres was the largest city and about twice the size of London. Indeed, sometime between 1225 and 1232, King Henry III assured the merchants of Ypres that none of them "will be detained in England... nor will they be partitions for another's debts." Only the debtor, or those who made a pledge for him, would be liable for the debt. Yet, the King seemed to have been aware of the need to induce the community of Ypres to ensure any merchant that he would receive justice if a complaint was brought against him. It was agreed that "if any aforesaid burger or merchant of Ypres were to offend the King or other men or merchants from England, or if a dispute were to arise between another man of his and a man from England, it will stand by law in the courts of the king by the king, or by his judges, or by his bailiffs in that place where the offense was committed for the purpose of amending the mistake and making proper payments."⁴¹

Italian historical records also reflect a reduction in the intra-community political viability of the CRS. Distinct incentives among various segments regarding the CRS are reflected in an appeal made on 22 February, 1296, by some Florentine merchants to the authorities of their city about a conflict with Bologna. These were merchants whose livelihoods 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 the conflict in which they were probably not directly involved. It seems that the rest of Florence did not care about settling the matter. (Arias 1901: 165.) Similar distinct incentives are reflected in Florence's fifteenth-century regulations. In 1415 it was forbidden to retaliate against foreign rector, officials, or against traders coming to Florence to sell edibles. (Santini 1886: 168-72.)

Indeed, attempts to abolish the CRS in Florence reflect the interests of particular segments in the city. The *mercatores* of Florence were the city's affluent merchants whose business during the thirteenth century was carried out over most of Europe, as far north as Sweden. 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 the city, they entered into a sequence of treaties aimed at moving Florence away from the CRS. (Arias 1901: 170-6.)

⁴⁰ *English Historical Documents*, vol. II, no. 270: 1012-3.

⁴¹ *Calendar of the Patent Rolls Preserved in the Public Records Office*, 460: 1232-1339.

On April 9, 1279, the cities of Florence, Venice, Genoa, as well as most of the cities of Tuscany, Lombardy, Romagna, and Marca Trivigiana, agreed "that from this day forth nobody of the said city-states is able to be or should be, on behalf of another, detained or taken captive or disturbed, in person or goods, but it should be demanded of him alone to whom it should be given, or of him who by justice should be held." To enable impersonal inter-community exchange, however, it was also agreed that each town would imprison any merchant in its territory who was fleeing with other people's money and that his creditors would receive justice.⁴² That most of Italy's large city-states also sought an end to the CRS in the second half of the thirteenth century suggests that by then, the most important Italian communities wanted to abolish it.

costs, and undermined its political viability.

While, most likely, similar factors contributed to the decline of the CRS in various parts of Europe, the ability to devise an alternative system depended on the larger political context. In Italy, there was no third party - such as a king - that could have devised an impartial legal system. Indeed, although inter-community treaties to abolish the CRS in Italy were signed during the late thirteenth century, retaliations continued in future centuries. In Germany, the disintegration of the Empire during this period implied that no central ruler was available either. Germany seems to have resorted to a "feud system" in which a merchant would have to hire a feudal lord and use a mercenary army in order to force a community to compensate him for a default. (Volckart 2001.)

This was not the case in England, where the state enabled the communities to abolish the CRS. In 1275, King Edward I issued the Statute of Westminster I that forbade applying community responsibility to debts, and established the following ruling with respect to any "stranger who is of this kingdom (namely, an Englishman from one locality present in another)." Such an individual should not "be distraint in a city, borough, vill, fair or market for what he is neither debtor nor pledge for, and he who does this is to be severely punished and the distress is to be released without delay by the bailiffs of the place or by the other, the king's bailiffs if need be."⁴³ The Statute of Westminster I did not establish any alternative institution for contract enforcement and the results – in terms of an inability to contract – were apparently severe.⁴⁴ A

⁴² The Latin version of this treaty is contained in Arias 1901: 400-404.

⁴³ *English Historical Documents* Vol. III: 404.

⁴⁴ Although the merchants could have used, as mentioned above, the costly and time consuming common law court.

later statute in 1283 declared that "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, and for that reason many merchants are put off from coming to this land with their merchandise to the detriment of merchants and of the whole kingdom."⁴⁵ Edward seems to have abolished the system, recognizing its cost, only to later realize its benefits.

The alternative contract enforcement institution established by Edward I may have been influenced by a similar institution that had been enacted in France.⁴⁶ This conjecture gains some support from the observation that in England it was first established in the Channel Islands, between England and France, in 1279, and only later, in 1283, in the rest of England. The Statute of Acton Burnell of 1283 established this alternative contract enforcement institution by enabling, though not requiring, a creditor and debtor to appear before the Mayor of either London, York, or Bristol, acknowledge the debt, and have it registered in a roll. The creditor would then be given the debtor's bond sealed by a special royal seal kept by these mayors for this purpose. In case of default the creditor did not need to bring an action of debt, but could resort to immediate confiscation and selling of the chattels and divisible property that were placed as bonds. Recovering the loan through a forced selling of the bond, if necessary, was the responsibility of the mayor or sheriff in whose jurisdiction the bond was to be found. If the proceedings from the bond were not sufficient to cover the debt, the debtor would be imprisoned.⁴⁷

Despite its intent, the Statute of Acton Burnell failed to provide an appropriate contract enforcement mechanism, and two years later, in 1285, the Statute of Merchants had altered some of its provisions because "merchants complained to the king that sheriffs misinterpreted his statute and sometimes by malice and by misinterpretation delayed the execution of the statute to the great detriment of the merchants."⁴⁸ The provisions of this statute indicate the difficulties in providing the appropriate incentives to those who were supposed to administer the legal procedures established by the Statute of Acton Burnell. Among the provisions were the following: Instead of one administrator, two were required

⁴⁵ *English Historical Documents*, vol. III: 420

⁴⁶ See discussion in Patourel 1937: 97, who also refers to the work of Giry. *Manuel de Diplomatie*, 1925. Paris, pp. 649-52, 835-54, discusses this institution in France.

⁴⁷ The Statute is published in *English Historical Documents*, vol. III, no. 54: 420-2. For a discussion of this Statute and other relevant developments, see Plucknett 1949: 138-50; Moore 1985: 120.

⁴⁸ This statute appears in *English Historical Documents*, vol. III, no. 58: 457-60.

to produce a roll specifying a debt, one nominated by the king and the other by the local authorities. Two rolls specifying the bond had to be made, and after being sealed by the seal of the debtor, each would be held by another administrator. Forced sales were abolished and the debtor was imprisoned until the matter was settled but he was given three months to enter any contract necessary to raise the money required for paying his debt. If he failed to do that, the Statute of Merchants and the Statute of Westminster II established that his chattels and his land could be handed over to the creditor in compensation. The land, however, could not be alienated, but the proceedings from it could be used to pay the debt.⁴⁹ Finally, the ability to register and seal contracts subject to this procedure would be made available to merchants in towns other than London, York, and Bristol, and at every fair.

The procedures established in England between 1283 and 1285 provided the basis for a contract enforcement mechanism that enabled impersonal exchange based on a central legal system and individual responsibility. The system did not mature overnight, and several improvements were made over the years to enhance its functioning. For example, in 1352, the common creditors were ranked with the crown's creditors insofar as imprisonment of the defaulted debtors were concerned, and outlawry was extended to debt and actions of account.⁵⁰ Yet, even as late as 1543, the authorities could not break into the locked house of a debtor who defaulted on his debt. (Jones 1979: 13-6.) A contract enforcement institution based on individual responsibility, similar to the contract enforcement institution based on collective responsibility which it replaced, developed slowly.

Changes and refinements in the CRS are reflected in historical documents long before the thirteenth century. After all, documents reflecting such changes constitute important evidence for the system and its effectiveness. The interests of individual merchants to become exempt from the system was not new in that century either. But the thirteenth century is nevertheless a turning point in the historical process through which contract enforcement institutions governed impersonal change. It is the first time that there was a wholesale abolishment of the system on the one hand, and the provision of relatively effective alternative - at least within some territorially large political units - on the other.

⁴⁹ For the Statute of Westminster II of 1285, see *English Historical Documents*, vol. III, no. 57: 428-57 (and see in particular c. 18).

⁵⁰ Plucknett 1949: 324-26, 343. Nor did the system enhance the ability to recover debt when the debtor was an alien and landless in England. See discussion in Moore 1985: 121.

4. Conclusions

Was inter-community, impersonal exchange possible during the late medieval commercial revolution? The Community Responsibility System enabled exchange that was impersonal up to one's community affiliation. It enabled exchange that was impersonal in the sense that the decision whether or not to transact among individuals who did not expect to transact again was independent of knowledge of one's past actions or the ability to transmit one's identity to future exchange partners. The CRS enabled impersonal exchange despite the absence of centralized legal contract enforcement provided by a state, the finite life times of humans, the difficulties in communicating one's identity, or verifying past actions.

The CRS was a self-enforcing institution in the sense that all relevant incentives - to individual traders and their communities - were provided endogenously. Initially, it was also a self-reinforcing institution, in that it led to processes that increased the range of parameters within which it was self-enforcing. While the CRS was based on the existing, community-based social structure, it reinforced this structure by motivating the community members to clearly define their communal membership, to establish the organizations required to indicate who their members were to the rest of the society, and to strengthen their intra-community enforcement institutions. Similarly, the CRS was reinforced by the introduction of other supporting organizations, structures, rules, and regulations.

But in the long run, the CRS was a self-undermining institution.⁵¹ Its own implications bred processes leading to its destruction. The CRS contributed to the growth of long-distance trade and the size, number, and heterogeneity of communities, and these changes undermined its self-enforceability. They reduced the system's effectiveness, economic efficiency, and its intra-community political support. Such processes made it easier, for example, to falsify one's community affiliation, hindered verification of this affiliation, reduced the cost of inter-community mobility, increased the severity of the adverse selection and moral hazard problems, and made some members of the community worse off under the system than they otherwise would have been. By the late thirteenth century, certain members of communities sought exemptions from the CRS and communities themselves were laboring to abolish it. Where possible, the state stepped in to provide an alternative. The European economic institutions moved closer to their current situation in which individual legal responsibility is the norm.

⁵¹ See Greif (forthcoming) on the relationships between self-enforcing, self-reinforcing, and self-undermining institutions.

This study of the nature and dynamics of impersonal contract enforcement institutions in pre-modern Europe reveals the importance of understanding the inter-relations between social, economic, and political factors in determining the set of feasible and actual economic institutions. A market economy may be organized along lines distinct from the ones currently prevailing. The process of developing a market economy is one in which economic institutions, social structures, and legal institutions co-evolve to produce even such and fundamental ingredients of market economy as how one can credibly communicate his identity to others. It was not a coincidence that surnames became more common in Europe during the LMP. It may not be a coincidence that such transition is observed in parts of the Muslim world (e.g., the Ottoman Empire) only in the modern period.

In recent years there has been growing awareness of the importance of collective responsibility in contemporary economies.⁵² Collective responsibility plays a role in micro-lending in developing countries and in inducing sovereigns to pay their international debts. (E.g., Besley and Coate 1995; Bouman 1995). Collective reputation is important in business associations where partners can assume joint and unlimited liability (e.g., Bernstein 1992). Arguably, the modern firm is, like the CRS, also a mechanism that fosters impersonal exchange. A firm's reputation and its intra-firm ability to discipline workers, facilitates exchange between these workers and outside consumers.⁵³

The scope of these analyses reflect their embeddedness in modern societies. They do not have to consider such issues as the certification of identity and endogenously inducing impartial justice and they take it for granted that collective responsibility is voluntary and contractual. Yet, the analysis of the CRS suggests the importance of considering the historical process through which such issues became irrelevant in some economies and not in others. More generally, if the ability to enter into impersonal exchange is a key to the division of labor and the rise of market economies, comparative studies of the evolution of contract enforcement institutions facilitating impersonal exchange in various economies is likely to greatly enhance our understanding of the historical process of economic development in various societies.

⁵² For a theoretical analysis see e.g., Varian 1990; Tirole 1996; Kranton 1996; Ball 2001.

⁵³ The literature of sovereign debt considers endogenous impartial justice but in the context of personal exchange by the ruler. E.g., Bulow and Kenneth 1989.

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