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The European Experience**

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Institutions and Impersonal Exchange: The European Experience

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Abstract

This paper presents an institution - the Community Responsibility System (CRS) - which has been a missing link in our understanding of market development. The CRS fostered market expansion throughout pre-modern Europe by providing the contract enforcement required for impersonal exchange characterized by separation between the quid and the quo over time and space. It supported market expansion because it did not entail the high marginal cost of establishing new exchange relationships based on a reputation mechanism or the high fixed cost associated with establishing an effective centralized legal system. Merchant communes, motivated by concern over their collective reputations, utilized their local and partial intra-community legal institutions to discipline members who cheated in inter-community exchange and to create the organizational infrastructure required for anonymous merchants to credibly reveal their identities. The CRS endogenously declined as the trade it fostered undermined its self-enforceability. Depending on the prevailing political conditions, it was gradually replaced by a centralized legal system based on personal (rather than collective) legal responsibility and supported by the state. This institutional dynamic supports the view that long-distance trade impacts economic growth through its influence on intra-state institutional development.

(JEL Classification: N0, N2, C7.)

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Introduction:

A core question in economic history and development economics concerns the institutional evolution that led to market expansion in some economies but not in others. (E.g., North 1990; Greif 1997, 2000, 2004; Rodrik 2004; Shirley 2004.) A core question in international trade - trade across jurisdictional boundaries - concerns the institutional determinants of trade and foreign direct investment, the impact of domestic institutions on these flows, and, in turn, their impact on domestic institutions. (E.g., Greif 1992; Staiger 1995; Maggio 1999; Grossman and Helpman 2002, 2003.) Motivating both questions is the assertion that institutions determine the set of feasible exchange relationships and that without the ability to exchange, the potential for growth is rather limited.

The goal of this paper is to examine the nature and dynamics of institutions that supported impersonal exchange across jurisdictional boundaries in pre-modern Europe despite the absence of an effective, impartial legal system. It argues that during the commercial expansion that began in the eleventh century, a self-enforcing institution - the Community Responsibility System (CRS) - supported impersonal exchange characterized by a separation between the *quid* and the *quo* over time and space. The CRS enabled exchange that was impersonal; individuals who did not expect to gain from future exchange traded without knowing each other's past conduct or having the ability to transmit one's conduct to his future exchange partners.

Central to the CRS were the particularly European, 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 courts represented the interests of the community. This implied that collective responsibility - holding every member of a community jointly liable for default by any member in inter-community exchange - induced each community court to dispense impartial justice to non-members. Inter-community impersonal exchange was possible, not despite the partiality of the court, but because of it; the court cared about the community's collective reputation.

The CRS may well constitute the missing link in our understanding of the institutional

development that led to modern markets. Theoretically, the development of law-based institutions supporting impersonal exchange is puzzling. Arguably, reputation-based institutions that support personal exchange have a low fixed cost but a high marginal cost of exchanging with unfamiliar individuals. Law-based institutions enable impersonal exchange and have a high fixed setup cost but a low marginal cost for establishing new exchange relationships. An important step in the development of the modern market is supplementing reputation-based with law-based institutions. (E.g., North 1990; Li 1999; Dixit 2002, forthcoming.) Yet, if exchange was initially personal, why was a legal system established to support impersonal exchange despite the high fixed cost, and how was knowledge generated regarding the benefit of impersonal exchange?² In Europe, the CRS constituted an intermediary institution, that was neither purely law-based nor reputation-based. It enabled inter-community impersonal exchange despite the lack of impartial law based on the partial law and reputational considerations of communities.

Although the CRS was a self-enforcing institution, it nevertheless undermined itself in the long run. The processes that it fostered - trade expansion and growth in the size, number, and economic and social heterogeneity of merchants' communities - reduced its economic efficiency and intra-community political viability. By the late thirteenth century, the CRS was declining due to the impact of trade on the factors that rendered it an equilibrium outcome. The ability to effectively replace the CRS, however, depended on the political governance of these areas. When and where the appropriate conditions prevailed, its demise fostered the gradual development of institutions supporting impersonal exchange based on territorial law and individual legal responsibility that are currently the norm.

The institutional transition that the decline of the CRS entailed, highlights the importance of studying the causal relationships between international trade and the development of domestic institutions. Despite numerous studies on the impact of international trade on growth, very little conclusive causal evidence has emerged (Helpman, forthcoming). The history of the CRS supports the conjecture that institutional change is an important causal channel through which

²Additional factors can hinder a transition from reputation-based to law-based institutions even when the latter are more efficient; coordination failure (Kranton 1996); collective action problems (Li 1999, Dixit 2002); and the inability of the state to commit not to abuse property rights (Greif 1998, 2004).

trade influences growth.³ Indeed, it was the decline of the CRS and the subsequent institutional development that fostered the institutional distinction between trade within and outside a polity. Under the CRS, there was less, if any, distinction between the institution that governed impersonal exchange within and outside states. Indeed, ‘nation’ is the term frequently used during the pre-modern period to refer to the communes.

This paper is most directly related to the literature that analytically examines the institutions that supported pre-modern European market expansion. By focusing on impersonal exchange in the presence of partial law, this paper complements the study of institutions that supported personal exchange in the absence of the law (Greif 1989, 1993, 1994; Richardson 2002) and in the presence of impartial law (Gonzalez de Lara 2002). It also highlights an institutional overlap between the CRS and the Merchants Guild institution (Greif et. al. 1994), which secured the property rights of alien merchants from coercive power by the threat of embargo. Under the CRS, abuses such as robbery were prevented and compensation provided under the threat of holding a community’s merchants liable for the damage. Finally, this paper complements Milgrom et. al. (1990), which examined institutions that secured impersonal exchange characterized by separation in time (but not space) between the *quid* and the *quo*.

The paper begins the study of the institutional foundations of impersonal exchange in Europe in the late medieval period, because during this period long-distance trade expanded substantially. Furthermore, during this time merchants from different corners of Europe entered extensively into exchange characterized by a separation between the *quid* and the *quo*. E.g., credit, contracts for future delivery, negotiable securities, and maritime insurance. (E.g., Pirenne 1956; Lopez 1976.) The historical analysis presented here particularly draws on the rich historical sources available from Florence and England. Together with secondary sources, these are sufficient to establish the centrality of the CRS in Europe as a whole, although there is much room for additional historical and comparative research.

The paper proceeds as follows. Section I provides historical background. Section II presents a theory of the community responsibility system. Section III combines theoretical

³ I am indebted to Elhanan Helpman for pointing out the general importance of this issue. Acemolglu et. al. 2002 conjectured that pre-modern Atlantic trade fostered institutional development.

insights and predictions with historical evidence to substantiate that the CRS functioned in Europe. Section IV examines the decline of community responsibility and attempted transitions to alternative institutions.

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 from distance parts of Europe provided and received credit, bought and sold through contracts for future delivery, and insured the cargo they shipped overseas.⁴ While we cannot quantitatively measure the efficiency contribution of these exchange relations, they were arguably large. Credit, for example, relaxed the constraints on trade expansion in a monetary system based upon a limited supply of precious metal (e.g., Lopez 1976, 72).

Institutions that support impersonal exchange characterized by a separation between the *quid* and the *quo* over time and space have to mitigate the contractual problem intrinsic to impersonal exchange: one has to ex ante commit not to breach contractual obligations ex post despite the separation between the *quid* and the *quo*. A borrower, for example, can enrich himself after obtaining a loan by not repaying his debt. Expecting such behavior ex post, a lender would not lend ex ante unless there are institutions enabling the borrower to commit. For such commitment be undertaken in impersonal exchange, one has to be able to commit although it is not expected that the parties will trade in the future nor do they have information regarding each others' past conduct or the ability to report mis-conduct to future trading partners.

What were the institutions that enabled merchants from distant parts of Europe to credibly

⁴ General discussion: Lopez and Raymond 1955: 157-238; de Roover 1963: 42-118. Evidence on exchange among merchants from distinct parts of Europe: Reynolds 1929, 1930, 1931; Face 1958; Postan 1973; Moore 1985; Verlinden 1979. For historical examples see Obertus Scriba 1190, no. 138, 139, 669; Lanfranco Scriba 1952, vol. 1, no. 524: 234; Guglielmo Cassinese 1190-2, no. 250; *Calendar of the Patent Rolls*. 1266-1272: 20., vol. II: 1012-3.

commit to their contractual obligations in exchange characterized by separation over time and space between the *quid* and the *quo*? In particular, did late medieval Europe develop contract enforcement institutions that enabled impersonal exchange? Or was it confined to personal exchange in which repeated interactions or family relationships mitigated the commitment problem? Given the available historical evidence, we cannot address these question by tracing the exchange relationships of individual merchants over time. Hence, to examine whether impersonal exchange was possible in pre-modern Europe, one has to determine whether there was an institution functioning then that enabled it.

The absence of one institution is clear. In the early days of the period under consideration there was no state with a legal system capable of effectively supporting impersonal exchange between individuals from distant localities (even within the realm itself) . Local courts existed throughout Europe and they had a legal monopoly over the use of coercive power in rather limited territorial areas. 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.⁵

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 arguably were 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. An English charter concern the Imperial German city of Lübeck noted, for example, that the city is “governed” by its “burgesses and merchants” who are responsible for dispensing justice.⁶ But substantiating the assertion that such courts were partial and that 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 provided - on the equilibrium path - impartial justice exactly because they were partial.

Yet, many of the documents cited below explicitly reflect contemporary distrust of the

⁵ 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.*

⁶ *Calendar of the Patent Rolls Preserved in the Public Record Office*, 20: 1266-1272

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 they, in the absence of a countervailing force, would have dispensed equal justice to non-locals. Similarly, court's deliberations in Italy directly reflect that the profitability of local businesses, not impartial justice, motivated legal ruling in disputes with non-locals. (English 1988; Greif 2004a.) In Germany, non-local - merchants, peasants, and even lower ranked nobles - were considered foreigners, formally called 'guests' and were widely discriminated against in the court of law. (Volckart 2001.)

Precisely because there was no impartial legal system that was effective over a large geographical area, economic history asserts that prior to the rise of the state, personal exchange predominated and impersonal exchange was either absent or confined to spot exchange supported by local courts. (E.g., North 1990.) This conclusion, however, ignores that European medieval trade was conducted in the particular social and institutional context of the self-governed communities: the 'communes.' During the late medieval period, most of the towns west of the Baltic Sea in the north and the Adriatic Sea in the south acquired this status. Although there were marked regional differences among communes (and the term is used here to refer to self-governed communities in general) they had much in common. Like a state, these communes had local enforcement institutions. Like a community, their members were personally familiar with each other, while the objective function of their enforcement institutions was arguably to advance the interest of their members rather than serve impartial justice.⁷ Gaining affiliation with a commune was usually a lengthy and costly process – in the extreme case of Venice, one had to pay taxes for twenty-five years to acquire citizenship. More generally, immigration was costly and risky.

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 theoretically considers whether communities were a necessary component of

⁷ While the communal structure underpinned the CRS, organizations representing the communes, such as guilds were those actually involved in inter-communal commercial disputes.

institutions enabling impersonal exchange given the late medieval institution environment. It first uses a simple economic model devoid of communities to present why impersonal exchange could not have been an equilibrium outcome. It then extends the model to include communities and show that in this case, inter-community impersonal exchange can be an equilibrium outcome.

Consider a repeated, random matching game between N_L lenders and N_B borrowers who are engaged (WLOG) in credit transactions. This 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. A borrower who did not travel and a lender who did not lend receive payoffs of zero. A borrower who receives a loan can decide whether to repay it or not. Repaying yields the net interest of $i > 0$ to the lender and the gain of goods valued $g > 0$ to the borrower. If the borrower did not repay, the lender loses his capital, getting payoffs of $-1 \leq 0$ but the borrower gets $G > g$, where $G - 1 \leq i + g$. The above implies that lending is efficient and profitable to both parties, but only if the borrower pays his debt. The borrower is better off, however, not paying than by repaying. The time discount factor is δ .

The necessary and sufficient conditions for exchange based on a reputation mechanism in such a model are well known (e.g. Fudenberg and Tirole. 1993). To avoid the unraveling problem, the game must be infinitely repeated or there must be a sufficiently low per-period probability the borrower will leave the game (that is, die). Suppose that this condition is satisfied and because the focus here is on impersonal exchange, assume that bilateral reputation mechanism (in which a merchant who was cheated cease trading with the cheater) can not support trade. (That is, $\delta \geq \frac{(G - g)N_L}{g + (G - g)N_L}$.) This focus is justified given the large number traders during the late medieval period. Multilateral punishment (in which all merchants cease trading with a cheater) can nevertheless support lending in that case. If past actions are public information, and the players are sufficiently patient relative to the gain from cheating ($\delta \geq \frac{G - g}{G}$), the following strategies constitute a SGPE with lending on the equilibrium path: a borrower initiates an exchange but repays if and only if he has never defaulted before to anyone; a lender lends only to a borrower who has never cheated before. In this case, a multilateral reputation mechanism

supports impersonal exchange. Because it is optimal for a borrower to ex post pay fearing losing gains from future exchange, a lender can trust him ex ante. Critical to this analysis, is the implicit assumption that the identity of each of the borrowers is known to all the lenders, so that one can identify a borrower who cheated in the past.

The above discussion highlights the necessary and sufficient conditions for lending on the equilibrium path in an exchange which is impersonal in the limited sense that there are no expectations for future trading between two particular traders. 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.⁸

Because these conditions did not hold in the late medieval period, an institution based on multilateral reputation mechanism could not have supported impersonal exchange. 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 and it is reasonable to assume that being cheated can be verified by another merchant if the one who was cheated provides him with the appropriate evidence. But why would a lender be motivated to take the costly actions required to convince each and every other lender that he had been cheated? In the late medieval period these costs had to have been very high given the communication and transportation technology, the large number of merchants, and the large geographical area in which they operated. A lender still would not be motivated to reveal past cheating because he would not recover the cost of doing so. Indeed, these costs were prohibitively high. How could a late medieval trader have been technologically able to distribute this information, given that the

⁸ Contagious equilibria can support one-time exchange in infinitely-repeated prisoners' dilemma games with private information. (Kandori 1992; Ellison 1994). Such equilibria do not exist in games capturing exchange characterized by separation between the *quid* and the *quo* that is the focus here. (Greif 2000.)

evidence could not be xeroxed, faxed, or shown on TV?

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 did not exist. Indeed, most commoners did not have a last name during this period and surnames were descriptive (e.g., reflecting one's physical features or place of birth). The problem was not only that of transmitting the identity of a cheater to others but also being able to establish one's true identity when entering an exchange. In the absence of supporting institutions one had to rely on a statement from his exchange partner regarding who he is. But how could one commit to reveal his true identity if doing so would make it possible to punish him later on?

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 implied by the merchants' finite life spans; the technological and strategic problems of generating and circulating information about past actions; and the problem associated with one's inability to independently verify and communicate the identity of another person. Furthermore, can these problems be mitigated despite the partiality of the intra-community enforcement institutions?

To address these questions, extend the above basic model to capture merchants' finite life spans and communities.⁹ 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 is replaced. There are two communities:¹⁰ 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. As each self-governed community had their own courts, let LC (lenders court) denote the lenders' enforcement institution and BC

⁹ Fearon and Laitin 1996 explored how communities can be motivated to discipline their members to achieve interethnic political cooperation.

¹⁰ As discussed below, having more communities does not fundamentally change the strategic interactions among two communities. The CRS provides a community disincentive to act in conflict among two alien merchants. Having more communities increases the outside options of communities thereby causing conditions 1 or 2 not to hold. See section 4.

(borrowers court) the borrowers' enforcement institution.

Because 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.¹¹ 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.¹²

The time line of actions is presented below but before going into detail, it is appropriate to highlight the important ones. The BC can establish an organization in 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 territory and distribute these funds or those provided by the BC within the lenders' community.¹³ Individual borrower's past actions are private information but the courts can ex post verify, following a complaint, whether a lender was cheated by a particular borrower. (Historically, the court examined the contract the lender had).

Complaining costs a lender ($c > 0$) and verifying a complaint is costly for the courts. The cost of verification for LC is C_L and it is C_B for BC. Note that this is an ex post verification that a

¹¹ 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.

¹² 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. Bribes arguably made arbitration of disputes problematic.

¹³ "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) seem appropriate here. "Distrain" and 'witheram' is often used in medieval documents.

lender had been cheated by a particular borrower and, as noted above, such a verification in the model without communities is insufficient for an equilibrium with lending. Similarly, (unlike Milgrom, et. al. 1990 who studied impersonal exchange) no assumption is made here that either a lender or a court can ex ante (before lending) verify that a borrower never cheated before. Assume for the moment that a court's actions are publicly observable. This assumption is historically justified as courts' actions were made publically observable: in Florence decisions regarding inter-communal disputes were made available by being written in a publically displayed book for this purpose (Vecchio and Casanova, 1894: 137-9, 265). Analytically this assumption is justified because in equilibrium, lenders and borrowers would have an incentive to learn about the courts' actions.

By impounding the goods of one borrower, the LC gains possession of value $g > 0$. Impounding implies that the goods lost value due to the inability to sell them on time, because of water damage, etc., so denote by $d > 0$ this damage and assume that $g - d > 0$ to insure 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 $c > 0$. The LC can impound only the goods of borrowers present in its territory, so denote by $I_b(t)$ the subset of the borrowers in the LC territory in period 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 to which I will return below.

The following time line presents the players' actions and their sequences.

<<Enter Figure 1 here>>

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**.¹⁴ Consider the following strategies:

¹⁴ Because we assume, so far, that all complaints are perfectly verifiable. The probability of disagreement between LC and BC is zero.

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 and no lender ever complain if the LC failed to compensate a lender who furnished a valid complain and the BC compensated.

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 compensation of x from BC, which is equal to the total cost of default to the lender ($i + l$), complaining, and verifying to the lenders ($c + CL$) so $x = i + l + c + CL$. If BC ever compensates without a valid complaint, the LC requests compensation every period. 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 $f = x + CB$ on the defaulter and pays x to LC.¹⁵ If LC furnished a complaint that BC finds invalid, it does not furnish compensation.

Under what conditions is the above strategy an SGPE? Intuitively, (and ignoring for the moment the cost of establishing an identity verifying organization) four conditions are necessary and sufficient for a strategy to be an SGPE with lending on the equilibrium path. The penalty on a borrower should be sufficiently high to deter cheating and cover the courts' expenses; a lender should be sufficiently rewarded for (only) a valid complaint so information about cheating is solicited; the BC should be better off compensating when the complaint is valid rather letting the cheater keep the spoils and forgoing future gains from borrowing; the LC should be better off if lending is continued rather than confiscating all goods and forgoing future lending. For simplicity, the following discussion only briefly elaborates on exactly how these conditions are or can be

¹⁵ Budget constraints are ignored here. Bankruptcy under the CRS introduces a difficult state-verification problem and it was recognized during this period. Communities has to pay.

satisfied under the strategy presented above.

The first condition - the unprofitability of cheating and covering the courts' expenses - is satisfied given that under the above strategy a cheater is paying the fine of $f = i + l + c + CL + CB$. Hence, a borrower has no single profitable deviation of either not borrowing, cheating, or trading in state of conflict. Given the strategies of the lenders and the courts, it is a borrower's best response to travel, return, and repay if and only if the state is one of cooperation. In particular, in cooperation state, traveling and borrowing yields $g > 0$ to a borrower who repaid, while cheating implies a net penalty of $-c - CL - CB < 0$. Borrowing in a conflict state yields no gain (or negative cost if we were to introduce travel costs). The second condition for profitable complaining is satisfied given that furnishing a valid complaint entails getting $g > c$. A lender cannot gain from either not lending in a cooperation state nor lending in a conflict state or providing an invalid complaint (because doing so entails the loss of $c > 0$).

The third condition, that a BC's best response is to verify any complaint, impose the above fine, and compensate the LC, is satisfied if (1) holds:

$$(1) \quad gN_B \sum_{t=0}^{T-1} (T-t) \delta^{t+1} + I_B(t)(g-d) \geq x + C_B$$

If this is the case, 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 .¹⁶ Hence, the BC cannot gain by reneging on compensation. Similarly, the BC cannot gain from paying without either verifying or finding a valid complaint because, LC's would then always demand compensation. The fourth condition, that the LC is motivated to return the impounded goods, to pay the lender who was cheated, and not to impound without a valid complaint, is satisfied if (2) holds:

$$(2) \quad iN_B \sum_{t=0}^{T-1} (T-t) \delta^{t+1} \geq (g-d)N_B.$$

¹⁶ If we were to allow coordinated cheating by all the borrowers, the condition would have been:

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

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 forgoing future trade. LC's best response is to verify a complaint and demand compensation. It can neither gain from not demanding compensation, or from forwarding an invalid complaint.

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 both 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 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 serves the younger cohorts best. It is thus optimal for a borrower to repay. Anticipating that this will be the case, lenders can find it optimal to lend.

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 will 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 is less than $d(i - l)$.

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 late medieval period, 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

Direct and indirect historical evidence supports the claim that the CRS prevailed throughout Europe. Direct evidence consists of explicit references in the historical records of various aspects of the CRS; indirect evidence is the confirmation of various predictions generated under the assumption that it prevailed. The discussion particularly draws on evidence from England and Florence. The next section examines the decline of the CRS, providing further evidence to, and insights regarding the operation of the system.¹⁷ The CRS was also used to protect property rights of a community's merchants abroad from abuse (e.g., robberies and tolls). The following evidence is only regarding commercial matters.

The strategy of holding every member of community liable for each member's default in inter-community exchange 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,

¹⁷ Data limitations preclude quantitatively testing the assertion that the CRS promoted inter-communal impersonal exchange. The historical evidence presented below, provides indirect support to this assertion and, more generally, lends support to the appropriateness of the above model and hence the relationships between exchange and the CRS it predicts. In governing criminal matters, the CRS had here a function similar to that of embargos explored in Greif et. al. 1994.

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 charter is representative. Out of the circa 500 chartered English towns of the thirteenth century, charters for 247 towns survived. Even this restricted set, however, reveals the large extent of the CRS. By 1256, cities with sixty-five percent of the known urban population had clauses in their charters allowing for and regulating 'distrain' (that is, impounding). The earliest charters are from the early twelfth century. The centrality of the CRS in supporting English trade among members of various towns is reflected in the observation that forty two percent (59/139) of the surviving domestic economic correspondence of the Mayor of London (1324 - 1333) explicitly mentions the CRS. The Mayor asks or being asked to act under the threat that otherwise all members of the related community will be held liable. Twenty four percent of these letters relate to commercial transactions (while the rest relate to either stolen goods or disputes over the legality of tolls).¹⁹

Charters regulating the relationships between members of English communities and those of its main international trading partners - Flanders, Germany, and Italy - also reflect the strategy of holding a person's community members liable for his defaults in inter-community exchange. The centrality of the CRS to English trade overseas is well reflected in the observation that thirty percent (15/50) of the international correspondence of the Mayor of London (1324 - 1333) dealt with commercial transactions that were regulated under the CRS. The CRS governed exchange between English merchants and those from Poland, Germany, Flanders, France, and Italy. In

¹⁸ *English Historical Documents*, vol. II: 1012-3, and see discussion by Stubbs 1913. English legal documents indicate that one's merchant guild - which in many cases was also the governing body of the borough - was his relevant community (Maitland 1889: 134). Yet, the charter suggests that a community de facto was the smallest unit - borough, village or county - that could be pressed to penalize a culprit.

¹⁹ Five hundreds towns: Beresford and Finberg 1973. Charters: see Ballard and Tait 1913, 1923. Population: Bairoch et. al. 1988. I considered only cities with a population of at least 5000 people by 1300. A learning process is suggested by the observation that charters of thirty five cities explicitly borrowed from the charter of Lincoln. London: Calendar of Plea and Memoranda Rolls Preserved among the Archives of the Corporation of the City of London at the Guild Hall (vol. 1)

particular, the CRS governed the relationships between England and three main cities of Flanders - Ypres, Ghent, and Bruges - that were the largest commercial European cities outside Italy.²⁰

Thirteenth century treaties among Flanders, German towns and the Hanseatic League reflect that the strategy of holding one's community members liable for his defaults in inter-community exchange also prevailed among them. All the main cities of Flanders - Ypres, Bruges, and Ghent - and the Count of Flanders were part of various treaties. (Verlinden 1979: 135; Dollinger 1970: 187-8.) Alongside Flanders, Italy was the most commercialized European area at the time. Florentine historical records provide ample evidence of agreements and treaties regulating the CRS, reflecting that it had been the default during the twelfth and thirteenth centuries. More than 75% (33/44) of the commercial treaties that have been preserved from the early 12th century (when the records begin) to 1300 mention the strategies associated with the CRS and regulate its operation. Apart from Florence, at least twenty-three other Italian towns were involved in the treaties. In these treaties and other sources one finds reference to all the large Italian cities (Genoa, Venice, Milan, Pisa, Rome) as well as many smaller ones (e.g, Siena, Padua, Cremona, Lucca, St. Miniato, Montepulcino, Montalcino, Prato, Arezzo, and Massa Trebaria).²¹ Various treaties regulate the relationships with groups of cities as well, leading Arias (1901) to conclude that most of the cities of Tuscany, Lombardy, Romagna, and Marca Trivigiana were involved.

Evidence also reflects the part of the CRS strategy that 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 response to accusations of cheating a member of another community, the Commune of Firenze was to press on the culprit to pay the damages (Santini 1886: 166.) The property of one who refused to pay could have been sold and him banished from the commune. (Vecchio and Casanova 1894: 248-9.) The charters of the

²⁰ Charters: Lübeck: *Calendar of the Patent Rolls Preserved in the Public Record Office*, 20: 1266-1272. Ypres: *Calendar of the Patent Rolls Preserved in the Public Records Office*, 460: 1232-1339. Italy: Vecchio and Casanova 1894 (court cases). London: *Calendar of Plea and Memoranda Rolls Preserved among the Archives of the Corporation of the City of London at the Guild Hall* (vol. 1).

²¹ Treaties: Arias 1901. Vecchio and Casanova 1894.

English towns of Great Yarmouth (1272), Pontefract (1194), and Leeds (1208) explicitly specify that if the default by one community member implies that other's goods were impounded, he has to compensate them for the damage under the threat that his property will be confiscated and he expelled from the community of the town. (Ballard and Tait 1913, 1923.) Various English boroughs had the policy that once a foreign creditor established that a member of the borough failed to repay a debt, he would be paid out of the borough's funds and the borough would seek double indemnity from the debtor (Plucknett 1949: 137).

Direct evidence from charters, treaties, and regulations reveals that the CRS was the law of the land. But was it also the practice of the land? The historical evidence indicates that it was widely utilized. To present evidence supporting the claim that the CRS was a relevant contract-enforcement institution, it is useful to first extend the above model to explicitly capture an important aspect of past and present exchange that the above model does not capture. Specifically, that commercial disputes can arise and courts have only a limited ability to verify past actions.

To capture the possibility of commercial disputes and that different courts can reach different conclusions based on the same evidence, assume that lender-borrower relations are characterized by imperfect monitoring. That is, the lender receives a signal 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.²² 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 signals are not perfectly correlated. Courts can sincerely disagree about whether cheating took place.²³

²² 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.

²³ Technically the main assumptions are: Let $\alpha_{B(t)}$ denote a 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 a borrower's action in period t . Each of them could be R or D. Conditional on a borrower's action, $\theta_L(t)$, $\theta_{LC}(t)$, and $\theta_{BC}(t)$ are iid across time and across transactions. θ_L is only observed by L. θ_{LC} and θ_{BC} are publicly observed. I assumed here $N_L = N_B$

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. 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 property 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 are the means of generating these costs.

Hence, if the CRS prevailed, we should find court cases reflecting the above strategy of holding community members liable, confiscating their property, and in case of disagreement whether a default had occurred, the cessation of trade for a finite period of time. Such evidence is indeed amply contained in court cases and other evidence from England, Italy, and elsewhere.²⁵ In Florence alone, between the years 1280 and 1298 (for which we have particularly good data), we know of thirty six cases of either dispute, confiscation, or finite-period trade cessation involving as many as twenty-five different cities. (Santini 1886.) In addition, there are later court cases involving Spain (Aragon) and England (Vecchio and Casanova 1894) Another indication that disputes were common is that students in universities such as Bologna and Florence

= 2N.

²⁴ These results are generic in imperfect-monitoring models (Green and Porter 1984; Abreu, Pearce, and Stacchetti 1990).

²⁵ England: Moore 1985; Plucknett 1949. Italy: Santini 1886; Vecchio and Casanova 1894; Catoni, 1976. Regarding Flanders, see Pro SC 2/178/93: 14 May 1270 published in *Select Cases Concerning the Law Merchant: A.D. 1270-1638*, 1: Local Courts: 9-10.

approached the authorities requesting immunity from confiscation as early as 1155 and 1171 respectively. (Munz 1969: 77; Santini 1886: 20-4.)

To illustrate such cases, consider the request (1238) by Beatrice who asked the Florentine court for a retaliation against the Commune of Pisa for a sum she claimed was owned to her by the heirs of Ubaldo Viscount. Her request was granted after the commune of Pisa denied payment. Such a denial, according to the 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.) As this case illustrate, impounding was done following a deliberate legal procedure. (E.g., Italy: Vecchio and Casanova 1894; Arias 1901. England: Maitland and Bateson 1901: 14-5.)

Retaliation was a calculated response aimed at fostering exchange, rather than an act of revenge. This is suggested by attempts to confine them only to inter-community commercial matters.²⁶ 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.²⁷ The assertion that the CRS enabled inter-community impersonal exchange gains support from noting that, in commercial matter, it applied only when theory implies that it is effective. It is effective on in transactions in which one can prove default by another which is easier in contracts in which one assumed a specific obligation (e.g., repaying a debt) but is difficult in transactions in which one has a large latitude in choosing actions (e.g., agency relationships). I found no evidence that the CRS governed such transactions.

²⁶ A Florentine statute (1325), explicitly enumerated the cases in which it was appropriate to grant retaliation: when 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.

²⁷ Arias 1901: 177-88; Santini 1886: 165; Vecchio and Casanova 1894: 216-223, 237-242.

The above assertion further gains support from examining the organizational details of pre-modern 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 safeguarded their property rights within the fair, they relinquished legal rights over these merchants once they were there. Law was personal rather than territorial. One was subject to the laws of his community rather than the legal authorities of the locality where the fair was held.

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 was proof that a member of that community assumed an obligation in inter-community exchange.²⁸

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. Personal law was compatible with the CRS. Conversely, the fairs' authorities must have had the ability to identify members of a particular community and its representatives in order

²⁸ We have only one piece of evidence regarding the content of these scribes's cartularies. Verlinden 1979. The fifteen contracts, written by an Italian scribe (1296) mention individuals from twelve communities indicating the relevance of this information.

to approach them when necessary. Indeed, the Florentine Statutes very often made provision explicitly warning the merchants not to act in the fairs in way that would invoke a dispute and a reprisal. (Vecchio and Casanova 1894: 248-9.) Regulations (1260) empowered the Fairs' wardens to 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 in the century, the King of France transferred legal authority in the Fairs to their royal bailiffs. 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. Furthermore, 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 system, 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.³⁰ More generally, however, authorities at fairs were arguably motivated to follow the LC strategy - holding a community liable for the contractual obligations of each of its members - because running a successful fair was a profitable business. 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. The threat of excluding a particular

²⁹ Special lodging facility for alien merchants from the same commune is a salient feature of pre-modern trade. One can still see the location of the Hanseatic Steelyard and Lombard Street in London. Interesting this has not been the case in Bruges where merchants rented houses. Indeed, the local renter was liable for his tenant's contractual obligations. De Roover 1948. Surnames: Emery 1952; Lopez 1954.

³⁰ For an example involving an Englishman and merchants from Brussels in the Fair of S. Botolph in England, see, *Selected Cases Concerning the Law Merchant*, vol, II, no. 7: 11-12.

individual from the fair was arguably rather ineffective because it could not deter cheating in old age or cheating and then trading through agents or family members.³¹

More importantly, the CRS may have been part of the reason that fairs were so prominent during this period. Under it, trade centers without an affiliated trading community have an advantage over those that have a community. In the latter case, the incentives to provide inter-community enforcement are weakened since the community's own merchants may have to bear the cost of retaliation in case of inter-court disputes. If a merchant from community A sued a member of community B in the court of community C, the resulting dispute would hurt the merchants from community C visiting community B. Hence, community C can lose from adjudicating such disputes. Under the CRS, this is not the care regarding trade centers without an affiliated community of long-distance traders. They have a comparative advantage in providing contract enforcement in impersonal exchange relative to trade centers that have such a community.

The evidence are consistent with this theoretical reasoning, trade centers with a community of long-distance traders did not adjudicated disputes among alien traders. Trade centers without such a community did. Under the English towns' charters each was allowed to impound goods only in cases involving their own local citizens. Court cases from English fairs, however, reflect impounding from members of various communities. (E.g., Moore 1985.) This state of affairs is not unique to England, suggesting that it does not reflect Royal discretion. In Florence, only Florentine citizens had the right to request impounding the goods of alien merchants in a Florentine court. (Vecchio and Casanova 1894: 14-5.) More generally, understanding the importance of the CRS in fostering trade during the late medieval period therefore reveals the rationale behind a puzzling observation. By and large, the main medieval fairs did not have an affiliated community of long-distance traders. The merchants of the large fairs, such as the Champagne fairs or the English Fair of St. Ives, were local traders who did not travel to other trade centers.

Similarly, if the CRS governed inter-community exchange, we would expect

³¹ Milgrom et. al. (1990) analysis of the fairs ignored such considerations.

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 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 and Germany reflects a transition away from impounding. The Florentine evidence reflects that during the twelfth century treaties contained the threat of impounding goods. By the early thirteenth century, members of one community were allowed to leave the other community during a grace period between the time the right for confiscation was granted and its execution. By the early fourteenth century, this had become the default. A Florentine statute required the a grace period of one month between declaring and acting upon any impounding of goods under the CRS. (Santini 1886: 68-72, 165.) In 1231, a German law similarly reflect a broad transition away from confiscation as it made grace period mandatory throughout the Empire. (Planitz 1919: 177.)

That the CRS was regulated by an Imperial law in Germany suggests that it was the rule rather than the exception in that region of Europe but we also know that the CRS prevailed in France.³² By the thirteenth century, therefore, CRS prevailed in the most heavily populated and commercial European areas, that is, Italy and Flanders, in the best organized country, England, and in the largest political units, France and Germany. Although Italian documents from the tenth century already reflect its operation, the origin of the CRS is, nevertheless, unknown as it has neither a clear Roman law nor customary Germanic law

³² Germany: Wach 1868; Planitz 1919; Volckart 2001. France: Patourel 1937 and Giry. *Manuel de Diplomatie*, 1925. Paris Vecchio and Casanova. 1894: 128; and the above discussion of the fairs.

antecedents (Wach 1868).³³ Legal origin can not account for the CRS.

The origin of the CRS may well reflect the political, economic, and social particularities of late medieval Europe. For reasons such as the Peace of God movement organized by the Church and the decline in external raids, violence had subsided in Europe; it was less of a threat to those seeking to gain from long-distance trade. Politically, the administrative and military weakness of the large European political units implied that they were in no position to provide the required institutions. At the same time, the ideology and policy of the church (such as prohibiting kin marriage even among distant relatives) fostered, European individualism (which may have well already prevailed). (Goody 1983; Morris 1972.) This undermined the possibility that the absence of a state would lead to a kin-based organization of society. These conditions, and the legal tradition of man-made law, fostered the emergence of self-governed communities and the various institutions centered around them. (As in Greif 1994; Greif et. al. 1994.)

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 served a useful purpose. By the late thirteenth century, however, the CRS was already declining for reasons examined below.

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

The CRS enhanced efficiency by supporting inter-community, impersonal exchange. Yet, thirteenth century historical records from Italy, England, Germany, and France reflect attempts to abolish the system.³⁴ What led to the decline of the CRS? Addressing this question requires

³³ This lack of legal origin may have been the reason that the legality of collective responsibility had been deliberated in countless pre-modern European legal treatises. (Vecchio and Casanova 1894: XXI.) Among the earliest ones is that of the Monk Bartolommeo from S. Concordio (d. 1347) and among the latest ones is that of Giovanni De Brelgel (1707-1778).

³⁴ Changes and refinements in the CRS are reflected in historical documents before the thirteenth century. These provide important evidence regarding the system. But the thirteenth century seems

examining the costs and limitations of the CRS and its inter-relations with economic, social, and political processes. This discussion sheds further light on how the CRS worked in the first place and provides evidence of its operation. Ironically, it reveals that the same processes that the CRS fostered - growth in inter-community interaction and community size, number, and intra-community heterogeneity - diminished the system's effectiveness, increased its economic costs, and undermined its intra-community political viability.³⁵ The ability of various regions in Europe to advance an efficiency-enhancing institutional alternative, however, depended on their political situations. But even where, as in England, the appropriate conditions prevailed, a transition to a centralized, law-based system with individual responsibility and territorial law was a lengthy process.

Theoretically, the processes that the CRS fostered reduce the range of situations in which it enables commitment and increases the frequency and cost of inter-community conflicts.³⁶ Greater numbers of traders, communities, locations of trade and frequent inter-community interactions reduce the cost of falsifying one's community affiliation and increase the cost of verifying it. An increase in trade makes it more likely that disputes will transpire, leading to trade cessation. Furthermore, more trade increases the costs of traders' strategic responses to expected disputes: because courts can impound goods only from traders present in their jurisdictions, merchants will respond to expected disputes by not traveling to trade.

By the second half of the thirteenth century, the ease of falsification and the difficulty of verification seem to have hindered the operation of the CRS in England. Moore (1985) has examined all the evidence available from the important English fair of St. Ives. She concluded that during the thirteenth century the CRS "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

nevertheless to have been a turning point. For the first time there was a wholesale abolishment of the system on the one hand, and the provision of a relatively effective alternative - at least within some territorially large political units - on the other.

³⁵ This growth is very well documented. E.g., Bairoch et al. 1988; Beresford and Finberg 1973.

³⁶ This discussion is intuitively based on the above model. Extending it to explicitly incorporate these considerations is possible but for simplicity sake is not undertaken here.

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 the growth of English towns reduced falsification costs. The legal authority of these towns did not extend to the adjacent countryside. People living near towns were apparently able to present themselves as being members of the town while dealing with non-members, become involved in cheating, and escape the town's jurisdiction. During the thirteenth century, "there seems to have been much trafficking between foreign merchants and natives whose mercantile status was doubtful, and whose assets and persons were by no means entirely within the territorial jurisdiction of a local court" (pp. 137-8).

One example of the ability to falsify communal identity and its strategic use is reflected in a case brought before the court of the St. Ives Fair (1275).³⁷ Merchants from the community of Leicester were summoned to the court and were held liable for the debt of Thomas Coventry of Leicester. They argued, however, that "the said Thomas Coventry was never peer or parcener of theirs ... or a member of the commonality of Leicester." Shortly after, however, Thomas of Coventry appeared at the fair, admitted being from Leicester, and sued the original plaintiffs, arguing that their false accusation caused him "no small damage." The original plaintiffs could not defend themselves but claimed not to be under the jurisdiction of the court since they were from London (which, as discussed below, had gained, an exemption from the CRS by that time).

A decrease in falsification costs and an increase in verification costs theoretically imply that the CRS can support exchange in fewer situations. That this had been increasingly the case is suggested by evidence from the English Close Rolls. Throughout the period under consideration, English merchants could have chosen to register debts in these chancery rolls, thereby placing their transactions under the jurisdiction of the Common Law. 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 could avoid the cost. Between 1257 and 1271, however, the

³⁷ 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.

number of registered debts increased by a factor of forty-three.³⁸

Similarly, Italian evidence suggests that increasing inter-community social mobility was also undermining the effectiveness of the CRS, which critically depends on a community's ability to punish its members. Yet, Florentine treaties from the late thirteenth century suggest that in Italy this ability had been eroding and defaulters were fleeing their communities. The response had been to move away from personal law and toward a territorial law, which is currently the norm. Between 1254 and 1298 Florence entered into at least twelve treaties with other Italian cities in which each commune yielded to the other the right to detain any of its merchant who was fleeing his community to avoid paying penalty under the CRS. (Arias 1901.)

Unfortunately, we don't have the data required to evaluate whether the number of disputes increased along with the volume of trade or whether the cost of expected disputes was increasing. The number of disputes circa the end of the thirteen century, however, was high. We know that between 1302 to 1314 Florence had granted at least thirty six concessions (that is, rights to impound), granted at least thirteen suspensions (that is, enact moratorium on impounding), and was subject to at least six retaliation (that is, cases in which the other community responded to impounding in kind). No less than thirty other communities or other polities were involved. (Barbadoro 1921.) While these numbers are high, we have no comparable earlier data. The trend from 1302 to 1314 was that of increasing number of cases.

Increasing costs of commercial disputes is suggested, however, by institutional changes aimed at containing them. As already noted, however, by the second half of the thirteenth century, it was established that between concession (authorizing confiscation) and the confiscation itself, there would be a grace period during which merchants could trade and then leave the city. In 1251, Genoa agreed to warn Florentine merchants at least two months prior to impounding goods. (Arias 1901: 52.) Similarly, in Italy, there was a general transition to replace impounding with imposing a toll so that trade could continue during disputes and uncertainty would be

³⁸Based 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.

reduced.³⁹

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

If correct, this assertion has three implications: first, larger - and hence arguably more heterogeneous - communities are likely to attempt to abolish the CRS;⁴⁰ second, rich, well-established merchants are likely to attempt to abolish the CRS in governing exchange; third, these merchants will attempt to preserve the CRS in governing the security of property rights of alien merchants. Arguably, in a larger and more heterogeneous community, the community's non-mercantile population will favor abolishing the CRS as they bear the costs of conflict (due to the absence of alien merchants) but do not directly gain from the CRS. Similarly, wealthy merchants gain less from the CRS because they have the connections, reputations, and wealth to conduct personal trade but they bear more of its cost because they have more wealth abroad. And it is because they have wealth abroad that they would prefer that the CRS will continue to be used in cases of abuse of property rights through robberies, taxation, tolls, etc.

The historical evidence is consistent with these predictions. The Italian cities grew larger earlier than the English towns. London, the largest English city, with 25,000 inhabitants circa 1300 was about one-fourth the size of the large Italian cities and of similar size to many others. Indeed, the treaties of Florence reflect an attempt in Italy to abolish the CRS from as early as 1203 although, for reasons discussed below, these treaties failed to achieve their goals as later treaties and court cases indicate. (Arias 1901.) During this time, however, English charters

³⁹ 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. For the generality of this procedure, see Vecchio and Casanova 1894.

⁴⁰ Although arguably as cities grow larger (beyond a particular size) the net economic benefit of the CRS may be negative due to the high frequency of disputes.

routinely authorized English towns to employ the CRS. The largest city, London, however, was an exception. It gained an exemption from the CRS in 1133 when King Henry I declared that "no other shall be justice over the men of London" (but authorized Londoners to impound others' goods). It seems that the Flemish towns, also larger than English towns, gained an exemption from the CRS in England. Specifically, sometime between 1225 and 1232, the king assured the merchants of Ypres that none of them "will be detained in England... nor will they be partitions for another's debts."⁴¹

The English sources also suggest that wealthy merchants sought exemption from the CRS. Moore's (1985: 119) examined cases brought before the court of the St. Ives Fair in England under the CRS. In the second half of the thirteenth century there "was an increasing number of individuals ... able to respond to ... suits by producing royal licenses of immunity from prosecution for any debts except those for which they were principal debtors or pledges."⁴²

Italian historical records reflect a reduction in the intra-community political viability of the CRS. Distinct incentives among various segments of 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 a dispute in which they were probably not directly involved. (Arias 1901: 165.) Similar distinct incentives are reflected in a Florentine regulation (1415) that forbade retaliation against foreign rector, officials, or traders selling edibles. (Santini 1886: 168-72.)

More direct evidence of the decline in intra-community political viability is provided by the political economy of the CRS in Florence. The *mercatores* of Florence were the city's affluent merchants whose business during the thirteenth century was conducted throughout 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

⁴¹ London: *English Historical Documents*, vol. II, no. 270: 1012-3. Ypres: *Calendar of the Patent Rolls Preserved in the Public Records Office*, 460: 1232-1339.

⁴² This evidence is also consistent with an attempt to free-ride on the CRS. For such exemptions in France, see Thomas 1977.

political control over the city in the second half of the thirteenth century, they entered into a sequence of treaties aimed at moving Florence away from the CRS. In 1279, for example, the cities of Florence, Venice and Genoa, as well as most of the cities of Tuscany, Lombardy, Romagna, and Marca Trivigiana, agreed "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." (Arias 1901: 170-6; 400-1.)

While almost certainly 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, as mentioned above, the attempt to abolish the CRS in Italy in the early thirteenth century failed. By mid-century, new treaties were signed regulating the operation of the CRS and attempting to improve its function by instituting various changes. As noted above, the first was moving toward territorial law, that is, allowing communes to detain fleeing merchants who were not citizens of other communes (thereby extending the parameter set in which the CRS is an equilibrium); second, instituting a grace period during which merchants could leave a city after a concession had been granted allowing impounding and imposing a reprisal through a toll instead of impounding (thereby reducing the costs implied by expected reprisals); and third, hiring external jurists or auditors to review inter-community disputes (thereby attempting to increase the partiality of courts; Vecchio and Casanova 1894).

By the late thirteenth century, when arguably the economic efficiency and political viability of the CRS had failed even further, treaties to abolish it in Italy were signed once again. Consistent with the theoretical prediction, retaliations continued in centuries to come within Italy but mainly in cases involving abuse of property rights, particularly robbery, rather than commercial disputes. (E.g., Vecchio and Casanova 1894; Barbadoro 1921.) As the Italian communes were shifting from republics to oligarchies, their institutions were altered to served different interests. A CRS securing property rights abroad was valuable for the wealthy merchants but a CRS enabling less fortunate merchants to enter into impersonal exchange was not.

In the absence of a low-cost institution to govern impersonal exchange, the Italian communes may have had to forgo the benefit of impersonal exchange. Indeed, it seems that in the late thirteenth century an alternative private-order institution to foster credibility in exchange had been established. Specifically, during the thirteenth century the Italians established large-scale family firms with branches in many trade centers throughout Europe. Having collateral abroad enabled these firms to better commit to their contractual obligations. The extended reach of personal exchange reduced the cost of the smaller extent of impersonal exchange.

In Germany, the disintegration of the Empire during this period implied that no central ruler was available to provide a third party able to devise an impartial legal system either. As late as the fifteenth century, collective responsibility was still widely practiced despite attempts dating back to the thirteenth century to abolish it (Plantiz, 1919: 176 ff.). The lack of local monopoly over coercive power enabled the simultaneous operation of a “feud system,” which operated at least until the sixteenth century. Under it, a merchant would hire a feudal lord with a mercenary army to force a community to compensate him for a default. Frankfurt-on-the-Main, which held a significant yearly international fair, was involved in at least 229 feuds between 1380 and 1433. The important city of Nuremberg was involved, between 1404 and 1438, in no less than 200 feuds. (Volckart 2001.) It was a costly system in terms of ex ante incentives and ex post cost of dispute.⁴³

In England, however, the state enabled the communities to abolish and then replace the CRS. When the CRS was declining toward the end of the thirteenth century, the political situation was favorable for providing an alternative contract-enforcement institution. The increasing political power of the towns and cities provided them with a voice in policy determination as reflected in the transfer (1295-7) of the right to approve taxes from the Great Council (which represented the nobles) to a parliament with representatives from the commercial sector (towns and cities). There were mechanisms in place to coordinate the institutional

⁴³ France during this period was not in a political situation conducive to providing impartial justice. It was the period of the Hundred Year’s War (1337-1453) and the previous wars with England and Flanders. Revenues were probably a top priority for the Crown as is suggested by the above discussion of law provision in the Champaign Fairs. Notaries emerged in France as important credit intermediaries from the seventeenth to the nineteenth centuries. Hoffman, et. al. 2000.

transition, to mitigate the collective action problem, and to enable the Crown to commit not to abuse rights through the legal system. (Greif 2004.)

The Statute of Westminster I (1275) officially abolished the CRS in England with respect to debt. Subsequent Statutes first recognized that this led to a decline in commerce because "merchants who in the past have lent their substance to various people are impoverished because there was no speedy law provided by which they could readily recover their debts on the day fixed for payment." Second, these statutes gradually established an alternative contract-enforcement institution. It was based on territorial law, individual responsibility, central administration of justice, and the placing of collateral.⁴⁴

This alternative system was not effectively implemented or put into use overnight. Indeed, some Royal charters granted after 1275 still allowed the town to impound goods based on collective responsibility. (The charters of Rhuddlan (1284) and Blakewell (1286); Ballard and Tait, 1923.) Similarly, the CRS still de-facto governed the relationships between English merchants and foreigners. England and Florence were engaged in a long reprisal that lasted until 1460. (Vecchio and Casanova 1894: 262.) But as time passed the alternative, individual responsibility system seems to have become effective.

That the CRS was still practiced after it was officially abolished is well reflected in the fourteenth century correspondence of the Mayor of London. Fifty nine percent of the Mayor's domestic and international economic correspondence from 1324-1333 still reflects the operation of the CRS (104/176). Twenty eight percent of these cases were concerning contract enforcement and the rest, regarding stolen goods and disputed tolls. A comparable set of letters is also available for the years 1360 -1370. Thirty five percent of the Mayor's domestic and international economic correspondence reflect the operation of the CRS (55/159). Fifty percent of the cases are regarding contract enforcement. Interestingly, while in the early period the number of

⁴⁴ Statute of Westminster I: *English Historical Documents* Vol. III: 404. Decline in trade: The Statute of Acton Burnell (1283), *English Historical Documents*, vol. III (54): 420-2. Contract-enforcement institution: The Statute of Acton Burnell; the Statute of Westminster II (1285), *English Historical Documents*, vol. III (57): 428-57 (and see in particular c. 18); the Statute of Merchants (1285), *English Historical Documents*, vol. III (58): 457-60. See discussion in Plucknett 1949: 138-50; Moore 1985: 120. The English Crown may have been imitating the French system. See discussion in Patourel 1937: 97, who also refers to the work of Girard. *Manuel de Diplomatie*, 1925. Paris, pp. 649-52, 835-54.

domestic and international cases was almost the same, there were forty five percent more international cases in the later data set. The institutional distinctions between national and international trade seem to have been increasing.⁴⁵

The effectiveness of the system appears to have been improved sequentially and gradually as the participants learned about its deficiencies and invented new ways to mitigate and improve it. Administrative procedures and cross-checks were used to lessen the problems of corruption and bribery. It wasn't until 1352 that common creditors were ranked with the crown's creditors insofar as imprisonment of the defaulted debtors were concerned, and outlawry extended to cover debt and actions of account. Yet, even as late as 1543, the authorities could not break into the locked house of a debtor who defaulted on his debt, and it was only during this time that the concept of bankruptcy was introduced.⁴⁶ A contract enforcement institution based on individual responsibility, similar to the contract enforcement institution based on collective responsibility which it replaced, developed slowly.

This institutional transition was not an automatic response to the cost effectiveness of a centralized legal system in a large population. (North and Thomas, 1973.⁴⁷) The CRS changed because its operation and other developments implied that it was no longer self-enforcing: it was no longer an equilibrium outcome. Once a transition was underway, the availability of mechanisms for coordination, overcoming collective action problems, establishing an effective judiciary, or enabling rulers to credibly commit to property rights security influenced the trajectory of institutional change.

⁴⁵ 1324-1333: *Calendar of Plea and Memoranda Rolls Preserved among the Archives of the Corporation of the City of London at the Guild Hall*, vol. 1. 1360-1370: *Calendar of Letters from the Mayor and Corporation of the City of London*.

⁴⁶ Administration: The Statute of Merchants (1285), *English Historical Documents*, vol. III (58): 457-60. Credit: Plucknett 1949: 324-26, 343. Houses and bankruptcy: Jones 1979. (Bankruptcy under the CRS would have imperiled the operation of the system by introducing a difficult state-verification problem.

⁴⁷ It is has been argued that rulers established a centralized legal system to enrich themselves (e.g., Benson 1989). It may have been the case in France but the institutional transition also occurred in Italy in the absence of a ruler and I found no evidence that the English Crown gained materially from it.

Concluding Remarks

Although impersonal exchanges characterized by a separation between the *quid* and the *quo* over time and space are the hallmark of the modern market economy, we know little about the institutional development that enabled them. This paper has argued that neither a law-based institution provided by an impartial third party nor one based on the interacting parties concerns with maintaining their reputation supported such exchange during the period of great European commercial expansion that began in the tenth century. This exchange was supported by an institution central to which were self-governed communities, intra-community (partial) courts, and collective reputation.

The organization of trade in the context of these communes provided the basis for a self-enforcing institution - the Community Responsibility System (CRS) - that enabled inter-community, impersonal exchange characterized by a separation between the *quid* and the *quo* over time and space. The CRS combined aspects of law-based and reputation-based institutions, highlighting the importance of enforcement institutions combining coercive power and reputation (Greif and Kandel 1995; Dixit, forthcoming).⁴⁸

Two components of the CRS were central to the ability to endogenously solicit the information and provide the incentives that enabled merchants to credibly commit. First, the communities provided an organizational structure that assisted merchants in credibly revealing their communal and personal identities. Communities, in turn, were motivated to provide this costly organizational structure because, in the context of the CRS, it enabled their members to benefit from trade. A second central component of the CRS was that communal courts represented the interests of the community and hence concerned about the community's collective reputations.

Communities were thus on-going, infinitely-lived organizations that internalized the cost of a default by each of its of finitely-lived members on other members, and whose future trade

⁴⁸ So far, in studying the institutional foundations of exchange, economists have particularly concentrated on those based on an impartial third-party enforcer in the form of the law, or those based on an individual's concern with his economic reputation. See surveys in Greif 1997, 2000; McMillan and Woodruff 2000. For inter-relationships between legal and reputation-based institutions see, for example, Greif 1994; Kranton 1996; Johnston et al. 2002.

served as a bond for contractual performance. Communal liability - which was neither contractual nor voluntary for an individual merchant - supported inter-community impersonal exchange. Exchange did not require that the interacting merchants have knowledge about past conduct, share expectations regarding trading in the future, or have the ability to transmit information regarding a merchant's conduct to future trading partners.

The CRS highlights some neglected aspects of the micro-foundations of contract-enforcement institutions. It reveals the importance of identities and verifies cheating ex-post rather than honesty ex ante. Models of multilateral reputation assume that identities are common knowledge. One of the CRS's central components, however, was the mechanism enabling one to reveal his identity. Arguably, an important part of a society's contract-enforcement institutions are the ways one can credibly commit to transmit information regarding someone's identity. Similarly, works on multilateral reputation mechanisms highlight that ex-ante information regarding past conduct enables conditioning exchange on it and thereby supporting honesty in a wide range of situations. (E.g., Greif 1989; Milgrom et. al. 1990; Kandori 1992.) Underpinning the CRS, however, was the ex-post ability to substantiate that one had been cheated by a particular person rather than verifying that this particular person never cheated before.

The analysis of the CRS also relates to the role of organizations and brand names in resolving the unraveling problem (e.g, Bull 1987; Cremer 1986; Kreps 1990; Tadelis 1999, 2002). These works consider how an on-going organization can foster reputation-based cooperation among its finitely-lived agents, or how the separation between personal and economic identities mitigates the unraveling problem. The communal structure of the CRS, however, made it an on-going organization in which intra-organizational reliance on legal sanctions enabled reputation to sustain exchange among each of its members and non-members.

More generally, the CRS was not based on one's expectations that misconduct will lead to the loss of reputation, but on collective responsibility, whose underlying economics have only recently gained attention.⁴⁹ In contemporary economies, collective responsibility plays a role in micro-lending in developing countries (e.g., Besley and Coate 1995; Bouman 1995), and in

⁴⁹ For theoretical analyses see, e.g., Varian 1990; Tirole 1996; Ghatak and Guinnane 1999; Ball 2001.

business associations with joint and unlimited liability (e.g., Bernstein 1992). The CRS and the nineteenth-century German Cooperatives (Guinnane 1997) illustrate the importance of collective responsibility in past economies. Indeed, the CRS reveals that collective responsibility was central to the functioning of past European economies and calls attention to the possibly important, yet neglected, role in the modern market economies of collective responsibility. For example, the CRS suggests the possibility that even contemporary firms should be viewed as units of collective responsibility. Collective responsibility, however, is no longer practiced, however, contemporary international trade. Only the assets of the individuals (or corporations, including the state) that defaulted can be captured. We don't have an analysis, however, of the determinants, extent, and implications of the impartiality of national courts of law in international disputes.

The centrality of collective responsibility, which was neither contractual nor voluntary for each merchant, in pre-modern Europe underscores a point made by Levinson (2003). The contemporary tendency to consider only individual legal responsibility (or contractual joint liability) as morally and legally acceptable, means imposing the result of a long process of European institutional evolution where similar succession did not transpire. Indeed, the CRS reveals how important the social and political context is in determining the set of feasible, efficiency-enhancing institutions. Institutional policy has to take into account that while institutions supporting impersonal exchange have always to mitigate the same contractual problem, the institution most appropriate for doing the job are not and will depend on the context.

The CRS demonstrates once again the causal relationship between institutions and international trade. It was a multi-tiered, inter-jurisdictional ('international') institution that provided the appropriate incentives to both individuals and domestic legal jurisdictions. It highlights the commonality between institutions supporting exchange in international trade and those mitigating a sovereign's debt problem. (E.g., Bulow and Rogoff 1989; Wright 2002). Exchange relies on institutions that induce those with domestic legal authority to enforce or follow international contractual obligations. Furthermore, the endogenous decline of the CRS reveals the importance of studying the reverse causality from international trade to the development of domestic institutions. The history of the CRS supports the conjecture that institutional change is an important causal channel between trade and growth.

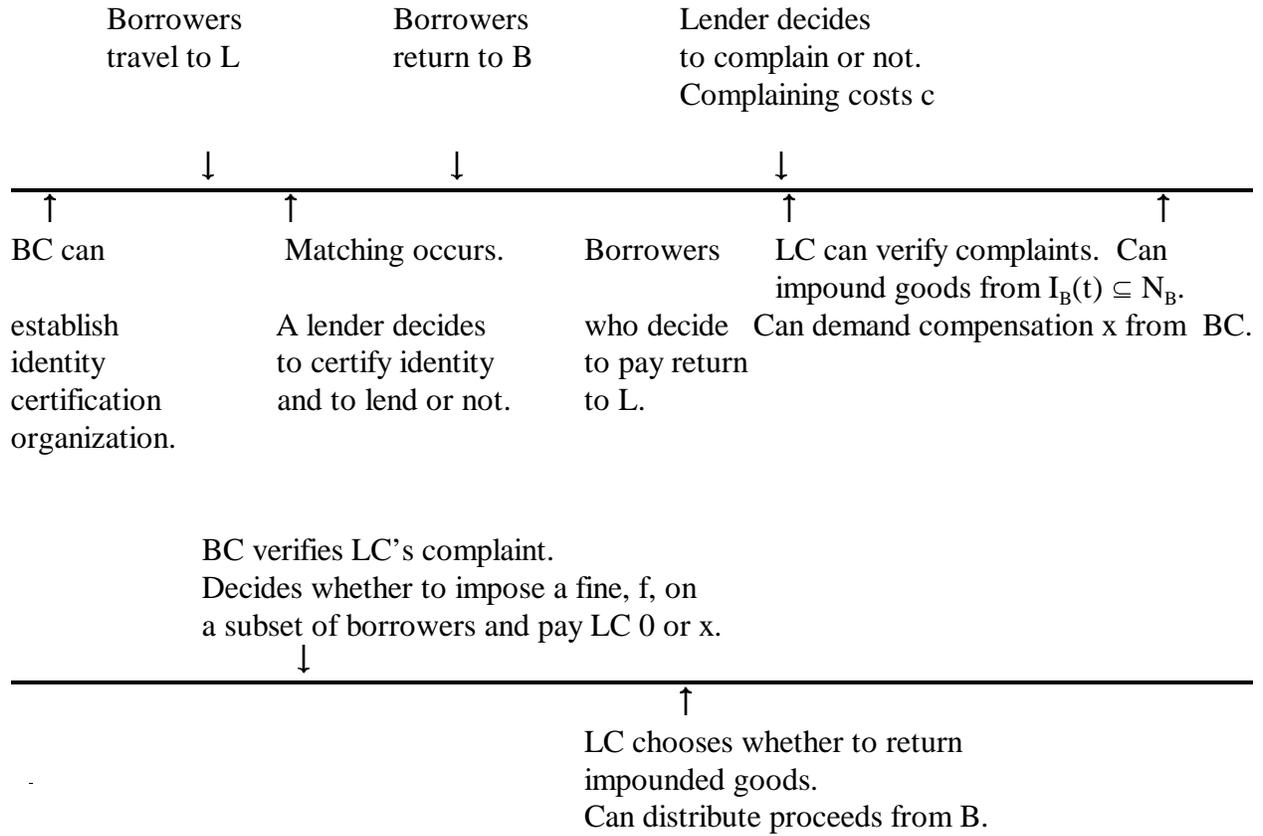
Although the CRS was a self-enforcing institution in the sense that all relevant incentives - to individual traders and their communities - were provided endogenously, in the long run, the CRS undermined itself. It contributed to the growth of long-distance trade and the size, number, and heterogeneity 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, and made some members of the community worse off under the system than they otherwise would have been. By the late thirteenth century, wealthy members of communities sought exemptions from the CRS and the communities themselves were laboring to abolish it. Where possible, the state stepped in to provide an alternative. The European economic institutions moved closer, albeit slowly, to the system that prevails today, in which individual liability is the rule, impersonal exchange is supported by the legal system, and collective responsibility is consensual and contractual. The asymmetry in the ability to provide alternative institutions within and outside polities, however, created the institutional distinction between national and international trade.

The ability of communities to replace the CRS with an alternative institution depended 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. In other countries, such as Germany and Italy, this was not the case in the centuries immediately following the thirteenth. History calls into question the conventional wisdom that the rise of the European state was a pre-condition for the rise of markets. The CRS suggests the importance of the inverse line of causation; the institutional demand created by the market influenced the development of state-governed, law-based institutions. When and where the state could respond to this challenge while being constrained from abusing rights, markets subsequently prospered. The decline in the European economy from the fourteenth century may well have been, at least partially, due to the need to replace the institutional foundations of the late medieval period.

Although institutions that support impersonal exchange characterized by a separation between the *quid* and the *quo* over time and space are the hallmark of the modern market economy, we know little regarding the institutional development that enabled them. This

knowledge could shed light on the nature and evolution of modern institutions and facilitate understanding the institutional transitions that developing economies still face. Comparative and historical analysis of the nature and dynamics of contract enforcement institutions that supported impersonal exchange in various economies is likely to greatly enhance our understanding of the historical process of economic development and contemporary impediments to the expansion of markets.

Figure 1: Time/action line.



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