Self-Enforcing, Public-Order Institutions for Contract Enforcement: Litigation, Regulation, and Limited Government in Venice, 1050–1350

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> The inability of societies to develop effective, low cost enforcement of contracts is the most important source of both historical stagnation and contemporary underdevelopment in the Third World
>
> North (1990, p. 54)

1 Introduction

Ever since the days of Adam Smith it has been recognized that an enhanced ability to exchange promotes economic growth. Some degree of market expansion and economic development can be and historically has been supported by private-order institutions based on reputation (e.g. Dixit 2004; Greif 2006). With a low fix cost but a high and rising marginal cost of expansion, private-order, reputation-based contract enforcement is, however, unviable at a large scale (Greif 1994; Li 2003; Dixit 2004, Chap. 3). Ultimately, impersonal exchange that would realize the gains from trade inherent in the modern market economy requires institutions that can enforce agreements based on the coercive power of the state (North 1990, p. 58; Dixit 2009, p. 13).

Such public-order, coercion-based institutions have been traditionally associated with the legal system. But, how can the state design a functional legal system and what exactly does it take it to effectively enforce impersonal exchange? Under what conditions, if any, does regulation improve enforcement efficiency by courts? Despite its enormous economies of scale, setting up a legal and regulatory system requires substantial fixed costs. Why would states incur into such costs if the volume of impersonal exchange prior to its establishment is necessarily low? We

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know that efficiency considerations alone would not lead to its emergence (Greif 1994, 2004; Kranton 1996). Furthermore, if creating effective, low cost public-order institutions requires developing the administrative capacity of the state to confiscate wealth and inflict others punishment, those who run the state will be able to use this capacity to arbitrarily seize property and overtax income. In the absence of countervailing forces, creating effective public-order institutions for contract enforcement would therefore reduce the security of property rights and potentially undermine the market. How can one get the state to behave like an impartial third party that uses coercion to protect rather than abuse contract and property rights?

The historical experience of Venice during the late medieval period (1050–1350) offers an outstanding opportunity to elucidate on these questions. It was precisely during this age when Europe experienced its longest period of market expansion and sustained growth, as well as a process of state formation. Venice, in particular, developed impersonal securities markets for overseas trade, expanded its commerce along the Mediterranean and beyond, became one of the richest cities of Europe for centuries, and developed many distinctive characteristics of today's western institutions, including an effective, low-cost legal and regulatory system for contract enforcement and a limited government that constrained the state from abusing its coercive power.

In examining the institutional foundations of markets and democratic political structures in Venice, this historical institutional analysis combines the two main approaches within the study of institutions (for a discussion, see Greif and Kingston 2011). From the *institutions-as-rules* approach (e.g. North 1990) it borrows the focus on legal and political institutions but it integrates the study of the rules of the game created by the state with an explanation of how these rules are enforced as part of an institutional equilibrium, thus using the conceptual and analytical framework advanced by the *institutions-as-equilibrium* approach (e.g. Greif 2006).

Like the Law and Finance literature this chapter claims that legal and administrative institutions are essential parts of a broad system of corporate finance but it finds that welfare-enhancing regulations might extend beyond those mandating disclosure and specifying liability standards for gatekeepers (Kraakman 1986; La Porta et al. 2006; Hart 2009), simplifying judicial proceedings (Djankov et al. 2003; Bianco et al. 2005) or providing an (efficient) alternative to judicial enforcement when courts are expensive, unpredictable and/or corrupt (for an overview, see Kessler and Shleifer 2010). It also explores the interactions between the Venetian legal and regulatory system for contract enforcement and the emergence of a limited government, a coercion-constraining institution that motivated judges and regulators to use their coercive power for protecting rather than abusing investor rights.

The chapter thus relates to the Political Economy literature studying how property right institutions protect individuals from theft or expropriation by the government or elites (e.g. North 1981, 1990; Weingast 1997; North and Weingast 1989; Olson 2000; Haber et al. 2003; Acemoglu and Robinson 2004; González de Lara et al. 2008; Jha 2008). Following Greif (2006, 2008), however, it emphasizes the need to examine property right institutions and contracting institutions as a system whose effectiveness relies on their complementarities.

By examining the Venetian institutional system, this paper sheds light on various well-known but poorly explained historical phenomena, such as the exclusion of foreigners from Venetian trade, the tightness of Venetian citizenship regulations, its fluctuating commercial policy with sporadic restrictions on imports, the role of trading licenses in disciplining merchants, the transition from the sea loan to the commenda, and the co-emergence of well-functioning markets and polities. It also shed light on the process of market and state formation in the Third World, where both basic market supporting institutions and stable democracies need to be created.

To conduct this work, I draw on the almost 1,000 notary acts preserved in the State Archive of Venice and transcribed in full by Raimondo Morozzo della Rocca and Antonio Lombardo, henceforth MRL, for the period 1021–1261.9. To better interpret this fragmentary and notary-biased evidence, I compare it with secondary studies based on Genoese notary records of the twelfth century. These historical records enable me to, first, build up a context-specific game in which the state emerges as an institutional equilibrium and, second, evaluate various theoretical predictions generated by the game under the assumption that the state governed financial relations. Empirical confirmation of these predictions lends support to the hypothesis that the state functioned as an impartial third-party that used coercion to enforce contracts.

2 Impersonal Exchange

The spectacular economic growth of Venice during the late medieval period (1050–1350) was based on the expansion of its trade along the Mediterranean and beyond (De Roover 1965; Lane 1973; Lopez 1976; Cipolla 1993). This trade required large amounts of capital and involved high risks. A commercial round-trip voyage from Venice to Constantinople, the Crusader States or Alexandria took 6–9 months and overlapping sailing seasons precluded financing it with retained earnings from a previous voyage (Lane 1973, pp. 69–70, 120). Fitting costs were further increased due to the need of carrying a large armed crew, sailing in convoy with naval protection, and securing merchants' property rights abroad (Lane 1973, pp. 23–49, 68–85, 124–131). These protective measures notwithstanding, the *risk of the sea and people*, as the Venetians referred to the possibility of loss through shipwreck, piracy or confiscation of merchandise by foreign rulers, remained high (Lane 1973, pp. 77; De Roover 1965, pp. 44–46). The commercial risk was also high: profits varied widely depending on the tariffs and bribes paid in customs, the transportation and storage fees, the rates of conversions applied to various weights, measures and currencies, fluctuations in prices, the conditions of the goods upon arrival, and so forth (Lane 1967, pp. 95–111; Greif 1989, pp. 860–861). Trade in ordinary goods within Europe or the East did not set such high capital requirements as trade in luxuries between Europe and the East but was less profitable and still involved high risks (Lopez 1976, p. 95).

Crucial to this trade expansion was an impersonal financial market through which the Venetians invested their savings and shared the risks inherent into sea ventures

through bond-like sea loans and equity-like commenda contracts (Luzzatto 1952, pp. 59–80, 89–115; Lane 1966, pp. 56–57). The sea loan was a fixed payment loan with the particular feature that the investor assumed the risk of loss at sea or at the hands of hostile people and was therefore allowed a higher rate of return. Unlike in other localities where the commenda was considered a partnership, the Venetian commenda or *collegantia* was a credit instrument whereby an investor assumed liability for any loss in proportion to his capital investment and shared the commercial profits and risks with the merchant (Besta and Predelli 1901, St. Enr. Dand., 30–33, St. Ran. Dand., 16, St. Tiep., 1229, 16; Cessi 1938, St. Nov., III, 1–3).

The operation of impersonal markets among Venetian city dwellers is well reflected in the 435 sea loans and commenda contracts published by MRL for the period 1021–1261. Even though these contracts constitute a tiny sample, they show very flexible financial relations that transcended the boundaries of the family, business groups, social class, and other personal relations. First, although family ties were important, particularly during the eleventh century when 37.50% of the observed contracts involved kin, only 7.23 and 9.20% of the contracts established during the twelfth and thirteenth centuries were among family members.[1] A possible concern with this data is that financial relations among trustworthy relatives may have not required the services of a notary and Venetian brothers legally constituted a fraternal partnership (*fraterna*) without the need of formal contracts. Yet, notaries proved useful to trustworthy relatives for establishing legal title of their credits in potential disputes with third parties over the estate of a deceased merchant and the *fraterna* was of little importance until the mid thirteenth century (González de Lara 2008, pp. 258–259). We thus observe notarial acts showing a loan by a widow to her granddaughter 'for the needs of her home,' an investment by a widowed nun in her son's voyage, and commenda contracts between brothers (MRL 1940, # 146, 356, 785).

Second, although the available data do not indicate an investor's occupation (except in the case of priest and nuns, notaries and various high office holders) it provides various proxies for establishing whether he was a merchant himself. An investor is considered as belonging to a merchants' community or group if he is known to have functioned as a merchant, raising trading capital from other investors; resided overseas while functioning as investor; supplied funds to a merchant abroad; or received payment from a one-way-trip voyage at a different location from where he had supplied the funds. On the basis of this classification, we can conclude that both merchant and non-merchant capital was mobilized into trade at all times. Yet, the trend was towards a separation between investment and management. Whereas 82.22% of the investors known for the period 1021–1178 belonged to a merchants' community operating mainly within the East, only 41.42% and 11.11% of the investors known for the periods 1179–1219 and 1220–1261 were merchants themselves. Since the late twelfth century Venetian trade was increasingly opened to a

[1]Two individuals are considered to belong to the same family if they had the same surname or the contract mentions that they were relatives.

wide range of investors who remained in the city and had no control at all over the ventures they financed (Luzzatto 1952, pp. 70–72).

Third, unlike in other localities Venetian trade was never characterized by a *class* of rich investors and a separate *class* of poor merchants who rarely, if ever, functioned as investors (Luzzatto 1962, pp. 59–80, 89–116; Greif 1994, p. 928). Most investors were nobles and about half of them belonged to the ruling aristocracy, but over a third of the investors in our sample were non-nobles. Similarly, some merchants were relatively poor individuals, like Dobramiro Stagnario, a manumitted slave, and Romano Mairano, whose wife received a humble dowry (Luzzatto 1952, pp. 98–99, 108–116; Lane 1973, p. 52; Robbert 1999, p. 34) but most ventures were managed by noble merchants. Furthermore, financial relations seem not to have been driven by traders' social class: 25.98% of the contracts were entered between noble investors and non-noble merchants, but 37% were among nobles, 20% among non-nobles and 13.33% between non-noble investors and noble merchants; the remaining 3.69% were between Venetians and non-Venetians.

A merchant typically raised capital from various investors of different ranks and sometimes invested in other merchant's ventures for the sake of diversification. To undertake a trading voyage from Venice to its colonies in 1234 Rodolfo Suligo received funds ranging from 25 to 152 Venetian pounds from at least 15 noble and non-noble investors (MRL 1940, # 675–690, 804). In total he raised 1071Venetian pounds and 5 pence, about 200 times the annual rent of a profitable shop in the market place of the Rialto in the year 1238 (MRL 1940, # 710; Robbert 1999, p. 37). During his trading carrier Romano Mairano – who appears 49 times as a merchant and three times as an investor during the period 1150–1199 – raised capital from 43 individuals belonging to 35 families, both noble and non-noble (Luzzatto 1952, pp. 108–116; González de Lara 2008, p. 159). Domenico Gradenigo entered into 28 commenda contracts during the period 1205–1226 with various members of his aristocratic, rich family and with 14 other investors, of whom only two financed him repeatedly (González de Lara 2008, pp. 159–160).

Diversification was pervasive. For example, Giovanni Serzi contracted with a different merchant in each of the eight sea loan contracts that have survived. In 1169 he funded four merchants who were sailing on three different ships from Armiro (Peloponnesus) to Constantinople and in 1170 he financed another four merchants under similar conditions (MRL, # 214–217, 219–223). Lazzaro Mercadante, another prosperous merchant, is known to have supplied capital through eight commenda contracts to seven different merchants during the period 1242–1258 and held as many as 25 credits of commenda when he died in 1281 (MRL, # 746, 759,764, 771, 793, 839–840, 843; Luzzatto 1952, pp. 61–65). At the time of his death in 1268 the doge Raniero Zeno had about half of his fortune diversified in 132 commenda contracts (Luzzatto 1952, 81–87).

The broad participation of the citizenry, the flexibility within which merchants raised capital from many investors, and the large extent to which prosperous investors diversified their trade portfolios thus facilitated the mobilization of capital into risky trade investments that was crucial to the city's commercial success. According to Lane (1966, p. 62), there was an "ever-expanding volume of funds

seeking investment" in Venice. Yet, foreigners were excluded from the Venetian financial market. As we have seen, over 96% of the contracts were between Venetian citizens, who for the most part resided in the city of Venice itself, as opposed to any other settlement within the Venetian lagoons or abroad. Although this data might be biased, as foreigners were less likely to use Venetian notaries than citizens, a comparison with other equally biased data suggests that the Venetians indeed contracted mainly with each other. Genoese cartularies, for example, show many relations between citizens and noncitizens (Greif 1994, pp. 930–935).

3 The Fundamental Problem of Exchange

The operation of an impersonal financial market in Venice was key for growth but required the development of institutions that mitigated what Greif (2000) has labeled the fundamental problem of exchange. For individuals to enter into mutually beneficial exchange they need to be able to commit to fulfill their contractual obligations. Prospective creditors and shareholders would not invest unless assured that they would indeed receive a sufficiently high return on their risky investments. A Venetian merchant, however, could expropriate from investors in various ways. First, once overseas he could flee with all the capital entrusted to him. Second, even if he returned to Venice, he could render a false account and divert part of the profit. Finally, he could take excessive risks and/or shirk during the operation of the voyage. In the absence of effective institutions for contract enforcement, investors, anticipating expropriation, would not have entered into mutually beneficial debt-like sea loans and equity-like commenda contracts. Yet, we observe a diversified financial market, large in scale and scope among Venetian citizens. How could investors trust merchants? What were the institutional foundations of this market?

As discussed in González de Lara (2008), quite complex exchange can be realized by creating private-order institutions for contract enforcement. Loyalty among family members and other social control systems probably fostered market expansion, but financial relations in Venice were not confined to the family, a merchants' community or a particular social class. A reputation mechanism can mitigate the fundamental problem of exchange by ensuring that a merchant's future gains (or, more precisely, his discounted lifetime expected utility) from keeping his honest association with an investor or group of investors is larger than the gains he can obtain by cheating. A private-order institution based on bilateral reputation could have thus supported long-term relations of a sufficiently high per-period value between a merchant and a particular investor. Yet, investments by non-nobles who sporadically supplied small sums and the large extent to which investors diversified in Venice suggest that a merchant could commit to fulfill his contractual obligations even when his bilateral relations were expected to last only for a short period of time and be of little value. Furthermore, competition among Venetian investors to place funds rendered each investor's threat of terminating his bilateral association with a merchant who cheated him void. The operation of a private-order

institution based on multilateral reputation among the Venetians as a group is consistent with the observed scope and flexibility of the Venetian financial market. Yet, the relevance of such informal means for contract enforcement is challenged by the Venetians' documented reliance on notaries, courts, and legal codes and the absence of any evidence regarding private communication networks and collective punishment.

Ultimately, viable impersonal exchange of the sort observed in Venice requires institutions that can enforce agreements by the threat of coercion. According to some scholars, the legal system supported the emergence of a market economy in Europe during this period of time (De Roover 1965; Lopez 1976). Yet, asymmetric information and the geographical boundaries of the courts' jurisdictional power limited the ability of such public-order, coercion-based institutions to enforce financial contracts for overseas trade (Cipolla 1993, p. 164; North 1990, p. 57).

During the late-medieval period there was not a centralized legal system that was effective over a large geographical area, less over the whole Mediterranean (Greif 2004, p. 118). A Venetian court could and did force merchants within the (limited) territorial area over which it had legal jurisdiction to comply with their verifiable contractual obligations (González de Lara 2008, pp. 269–270). Yet, it could not exercise coercion over a merchant who fled. If a merchant embezzled an investor's capital and took refugee in another jurisdiction, a Venetian court could not force him to repay. Tracking down a merchant was prohibitively costly and even if he was located, inter-community litigation was not an option against a state in that Venice could not retaliate, for example, by interrupting trade (Greif 2004). Obviously, when considering the option to flee, a fraudulent merchant would choose a safe haven where Venice could not exert that pressure. The notorious case of Benetto Soranzo illustrates the failure of the Venetian legal system to gain extradition of *fugitives* as late as the fifteenth century. In 1455 Beneto fled Venice with all the surviving assets from his failed bank and took refugee in the lands of the duke of Modena. The Venetian authorities attempted in vain to persuade the duke to deny him asylum and when he finally intervened, Benetto merely moved to lands under the jurisdiction of the duke of Mantua (Mueller 1997, pp. 200–211).

Leaving collateral in Venice could have mitigated the problem of outright embezzlement but most merchants left few goods behind. As we have seen, many Venetian merchants were relatively poor individuals and those who were rich typically held most of their wealth in movable goods, which they could take with them, and had real estate holdings outside Venice and its domains (Pozza 1995). For example, at the time of his death in 1281 Lazzaro Mercadante had almost all his wealth invested in trade and owned some plots of cultivated land near Padua; in Venice he simply kept three houses of little value (Luzzatto 1952, pp. 61–65).

Relying on guarantors or kin to pay in place of insolvent merchants could also have mitigated the embezzlement problem. Yet, Venetian overseas trading contracts did not request naming guarantors, nor was the family held liable for a merchant's illegal actions. According to Venetian law, only sons under parental authority were liable for their father's debts (Besta and Predelli 1901, St. Enr. Dand., 68, St. Ran. Dand., 11–12; Cessi 1938, St. Nov. I.40). This is in sharp contrast with other

legislations that were also devised at the time. Genoese courts, for example, held all members of a merchant's family legally responsible for the merchant's verifiable transgressions, such as outright embezzlement of an investor's capital (Greif 1994, pp. 937–938).

A second problem with the legal system is that to enforce complex contracts, like the sea loan and even more the commenda, a court requires verifiable information. But, neither investors nor judges could provide it, among other things, because they remained in Venice and, so, could not directly monitor merchants abroad. In the absence of an institution generating and transmitting verifiable information, a merchant would have misreported a loss at sea or by the action of men in the expectation of being released from repayment, diverted part of a commenda's profits once they materialized, assumed high risks from which he was protected through limited liability and shirked.

By admitting the testimony of witnesses as evidence in judicial proceedings and conditioning repayment exceptions on the verification of losses from shipwreck, piracy or confiscation of merchandise abroad (Besta and Predelli 1901, St. Enr. Dand., 32; St. Tiep., 1229, 16; Cessi 1938, St. Nov., III.2), the legal system facilitated the enforcement of sea loans and, to some extent, commenda contracts. The court's reliance on witnesses to verify such losses is well reflected in the available data. In 1219, for example, the captain of and various merchants traveling on the ship *Lo Carello* testified that it had wrecked close to Negroponte and that the merchant Domenico Gradenigo had lost merchandise worth 110 hyperpers (MRL 1940, # 582).

Uncovering an accounting fraud, though, was far more challenging. It required verification of the tariffs and bribes a particular merchant had paid to pass customs, the transportation and storage fees he had arranged for, the rates of conversion he got applied among a plethora of weights, measures and currencies, the price at which he had bought and then sold his wares, whether these had been damaged on the voyage or pilfered by the crew, and so forth. Without verifiable information on such costs, prices and events, a Venetian court could have not supported the development of equity markets.

Asymmetric information regarding a merchant's choice of action and diligence while on voyage also impaired a court's effectiveness. To punish cheaters, the court needed to know when and to what extent a contract had been violated, for example, by unduly changing route to politically unsafe but highly profitable ports, storing merchandise in a precarious but cheap warehouse, betting on exchange rates, selling on credit with lax terms but superior prices, or simply shirking.

If kinship, private reputation, and the legal system did not provide the foundations of Venice's financial market, how could investors trust merchants not to expropriate all or part of their capital? What institutional arrangements reduced the measurement and agency costs of using bond-like sea loans and equity-like commenda contracts? Theoretical considerations and historical evidence suggest that the observed trust and implied information reflect the operation of a public-order yet reputation-based institution.

4 A Public-Order, Reputation-Based Institution for Contract Enforcement

In late-medieval Venice a public-order, reputation-based institution for contract enforcement prevailed. It was public-order in the sense that the state created the rents required to motivate a merchant to keep his affiliation with Venice, generated the information needed to detect a contractual breach, and punished a merchant if he cheated. It was reputation-based in the sense that the merchant was motivated to submit to the Venetian authorities and comply with his contractual obligations not only due to the threat of legal sanctions but also of losing his reputation with the state and thus access to Venice's lucrative trade. The Venetian institutional system thus combined coercion and reputation, but relied on public contract enforcement: threats backed by the coercive power of the state of legal sanctions and of exclusion from state-generated rents supported the Venetian financial market for overseas trade.

4.1 Providing Incentives to Keep One's Affiliation with Venice: Economic Rents and Barriers to Entry

The Venetian state took the military and diplomatic initiatives required to gain exclusive trading privileges, organized protective convoys, and restricted foreign entry. These regulations generated economic rents to which only Venetian citizens had access and so motivated merchants to return to Venice, where the legal system could force solvent borrowers to repay if they failed to do so spontaneously.

As González de Lara (2008) covers this issue in detail, a few considerations will suffice here. First, by obtaining exceptional trade privileges in *Romania*, the territory that belonged or once belonged to the Byzantine Empire, the Crusader States and Alexandria, Venice increased the expected profitability of its merchants beyond what they could have gained as residents of other cities. Furthermore, Venice's lordship over the Northern Adriatic ensured that all wares brought there were exchanged in the *Rialto,* the city's wholesale market, where Venetians would be the middlemen and have a chance to make a profit. Second, Venice outfitted a fleet to secure the seas for its merchants and rented them space on the state-owned galleys escorted by it, thereby providing them with protection at less cost than was available to their competitors. Last but not least, Venice's political stability assured its merchants that they and their offspring would continue enjoying rents from trade, while civil strife and foreign rule in rival cities hampered the long-term sustainability of their particular commerce.

To preserve per-citizen rents, Venice denied foreigners access to its lucrative trade and applied tight citizenship rules. Specifically, the state passed laws and regulations prohibiting foreigners from shipping merchandise from Venice and trading in its colonies (Lane 1973, pp. 7, 61). It also developed the administrative

structures required to enforce these prohibitions. For example, during the thirteenth century merchants planning to join a trading convoy from Venice to its colonies were required to register in advance and to obtain a license (Lane 1973, p. 49). More generally, the Consuls of the Merchants in Venice and colonial governors abroad had the specific duty of ensuring that foreigners did not participate in business reserved for Venetian citizens (Sacerdoti 1899, pp. 17, 44). The state also constrained citizenship and so access to trade by requiring immigrants to pay taxes in Venice for a long period of time, 10 years during the twelfth and thirteenth centuries and up to 25 years during the fourteenth century. At various points during the fourteenth century when an overabundance of Eastern wares in Venice was eroding profits, the state also established import quotas, thereby coordinating monopolistic practices that restored high prices (González de Lara 2008, pp. 266–267; Mueller 1997, pp. 151, 265, 503; 616). These regulations are striking, since they were not generally applied. For example, Genoa welcomed foreigners to its colonies, granted citizenship after 1 year of residence in the city, without taxation, and never restricted imports (Lopez 1982, pp. 33, 348).

Identifying these barriers to entry as essential elements of the Venetian institutional system for contract enforcement thus helps explain Venice's legislation. Governed by a public-order, reputation-based institution, the Venetians needed both to reserve the rents of their privileged trade for themselves and to keep these rents high by restricting access to citizenship and limiting the supply of imported wares in Venice when sale prices were low. The alternative view common in the political economy literature (e.g. Acemoglu and Robinson 2008) that elite merchants captured regulation is inconsistent with the distinctiveness, timing, and nature of the Venetian regulatory process. Had this been the case, the more powerful Genoese elite would have introduced similar barriers to entry and the Venetians would have implemented import quotas at all times and attempted to eliminate competition from less wealthy and politically influential citizens. The Venetian experience thus challenges the conventional wisdom that entry regulations are an unmitigated bad. Without restrictions on entry, Venetian rents from trade would have dissipated but without these rents, a merchant would have embezzled an investor's capital outright and fled to avoid legal sanctions.

4.2 *Mitigating Asymmetric Information Problems: Formal Monitoring and Public Gatekeepers*

The Venetian state also regulated the operation of trading ventures in a manner that reduced merchants' opportunities and incentives to breach their contracts and enhanced investors' ability to verify a breach. Specifically, by 1220s colonial governors, convoy admirals, ship scribes, tax collectors and many other public gate-keepers monitored merchants at all times, thereby preventing misconduct and generating the verifiable information required to adjudicate commercial disputes.

Venice obtained the right to hold permanent magistrates with administrative and judicial functions in Constantinople in 1186 and took possession of a chain of colonies with full extraterritorial rights in the former Byzantine Empire after the Fourth Crusade: a *podestà* was installed in Constantinople in 1205, a *castellano* in Coron and Modon in 1208, a *bailo* in Negroponte in 1216, and a duke in Crete in 1219. In the Crusaders States Venice had obtained large compounds with full extraterritoriality in the early twelfth century, but the Venetian population remained predominantly self-governing until about 1192, when a *bailo* was first sent to Acre. In 1208 Venice also gained consular representation in Alexandria. These colonial governors oversaw custom duties, administered warehouses and lodging facilities, enforced the use of Venetian measures, weights and coins, kept public records of the prices the Venetians paid for cotton and pepper while Venice maintained monopsonies in Acre or Alexandria, implemented all the regulations and trading controls established in Venice, and adjudicated commercial disputes abroad (Luzzatto 1952, pp. 62–60; Prawer 1973; Lane 1973, pp. 17–19, 49–51, 59–62; 99–100; Lopez 1982, p. 374; Ferluga 1992; Jacoby 1994; Ravegnani 1995).

By 1180s the state also organized trading convoys from Venice to its colonies. Unlike those previously planned by private individuals, these convoys were protected by state-owned galleys and "treated as community enterprises subject to governmental approval" (Lane 1973, p. 49). All the vessels and merchants planning to join a particular convoy were increasingly required to register in advance and to obtain a license. The first trading contract mentioning such a license dates from 1200; after 1220s the requirement prevailed and since 1266 it was compulsory by law. Licensed convoys were operated under admirals appointed and paid by the state and according to naval and commercial plans formulated by its governing Councils. All decisions regarding a convoy's sailing times, route, ports of call, and freight rates were thus delegated to the government in Venice or to the admiral in charge of the whole convoy overseas (Sacerdoti 1899, pp. 43–44; Lane 1973, pp. 68–70, 129–131, 145–146).

In addition, the Maritime Statutes of 1229 specified a ship's carrying capacity, arms and crew, the allocation of space for freight, equipment and officials, and the methods for loading and unloading cargoes. They also required that the crew swore under oath that they would not pilfer any shipment and that the ship owners choose among themselves a shipmaster to go with the ship. The shipmaster was held liable for any merchandise registered with the ship scribe, excluding losses at sea, from fire, or from the actions of hostile people. The scribe also had the duty to register the number, weight, and owner of any merchandise loaded and unloaded, record the contracts of all merchants on the voyage, and report any observed fraud. He was a semi-public official who was to be appointed by the shipmaster but with the consent of the Consuls of the Merchant, the top magistracy regarding trade oversight (Predelli and Sacerdoti 1902; Lane 1966).

On their arrival to Venice, ships were inspected by custom officials to make sure they had paid the appropriate dues. By 1180 naval patrols coerced traffic in the northern Adriatic and during the thirteenth century there were thirteen control points around the lagoon. At each, half dozen men with two or three vessels inspected all

passers to make sure that their cargoes were covered by permits to go where they were headed and required proof that they had been cleared in Venice (Lane 1973, 17–18, 49–51, and 59–62). In about 1200 Venice minted the silver *grosso*, which soon became an accepted medium of exchange and unit of account for overseas trade (Stahl 2000, pp. 204–213). Furthermore, by 1225 all commodity sales in the Rialto needed to be registered with the S*ensali dellla Messetteria*, a group of officials responsible for the collection of taxes and the provision of compulsory brokerage services (Rösch 1995, p. 453).

Consistent with the conjecture that Venetian regulations actually enhanced an investor's ability to verify a merchant's accounts while reducing the severity of moral hazard, we observe a progressive transition from debt-like sea loans to equity-like commenda contracts (for a full discussion of contractual design in Venice, see González de Lara 2009, 2011 and the references therein). As shown in Fig. 1, the sea loan prevailed until about 1180, when the state did not yet monitor trade. In the absence of (verifiable) information regarding a venture's true outcome, market participants were constrained to rely on debt-like sea loans, despite the implied inefficient risk allocation and perverse incentives on merchants to assume excessive risk from which they were protected through limited liability. As colonial governors, convoy admirals, ship scribes, custom officials and public brokers engaged on formal monitoring, bond-like sea loans progressively gave way to equity-like commenda contracts. By 1220s, when Venetian officials effectively monitored trade, generating the information required to detect a contractual breach and limiting a merchant's opportunities and incentives to breach his contractual obligations, the commenda prevailed. Since the Venetian regulations also rendered

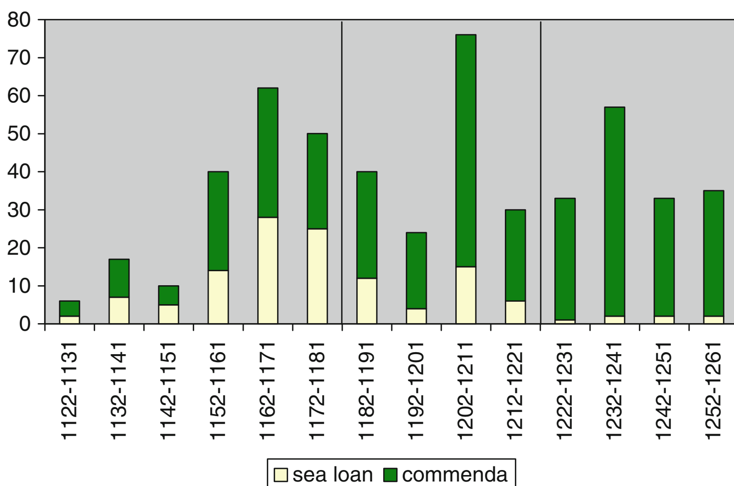

Fig. 1 Documented sea loans and commenda contracts and their distribution over time
Source: The author, based on Morozzo della Rocca and Lombardo (1940, 1953). There is also evidence on one sea loan and eleven commenda contracts for the period 1021–1120. In addition, there are 38 contracts that cannot be classified with certainty and hence do not appear in the figure

a venture's outcome less sensitive to a merchant's effort, the low-powered commenda did not impair trade expected profitability. On the contrary, it "contributed greatly to the fast growth of maritime trade" (Lopez 1976, p. 76).[2]

4.3 Rendering Punishment and Reward Credible: An Impartial Legal and Administrative System

Last but not least, Venice developed an impartial regulatory and legal system, thus sustaining the shared belief among the Venetians that compliance with contracts would be rewarded with economic rents from trade, while a breach would be detected and punished through administrative and legal sanctions.

Venetian regulations were professedly designed to provide all city merchants equal access to the main routes of trade. These regulations were evaded many times but their mere existence at a time where elsewhere in Italy not such regulations existed indicates Venice's distinctive concern to distribute the economic rents from its trade widely among the citizenry (Lane 1967, pp. 582–583; 1973, pp. 145–146). Indeed, the distribution of wealth in Venice was not as concentrated as in other Italian city-states (Lane 1967, pp. 82–83; 1973, pp. 151–152, 332–334; Mueller 1997, pp. 491, 496; Rösch 1989; Greif 2006, pp. 286–287). Furthermore, trading contracts do not reflect political discrimination: both noble and non-noble merchants had access to the Venetian lucrative trade.

As discussed, the Venetian state used its administrative control over trade to exclude foreigners, thus motivating city merchants to keep their affiliation with Venice and preserving per-citizen rents. Apparently, it also excluded merchants known to have cheated other Venetians. That city merchants feared exclusion regardless of their political power or that of their financiers is well reflected in a document from 1242 showing one Omobone Barbo making commenda contracts for a convoy voyage with two noble investors. Both Omobone and one of the investors were actively involved in government and very rich. Yet, Omobone, expecting not to be allowed to join the licensed convoy, protected himself from his liability to sail with the capital received in commenda to the case in which he 'will be among those chosen men who are chosen according to the decree given by the lord Doge and his council' and specifying that 'if [he] will not be among those chosen, [he] will have the power to commit that merchandise or a part of it, with the witness of good men or with a charter, to some or to someone among those chosen' (MRL 1940, # 752, 753;

[2]Most economic historians have simply averted the transition from the sea loan to the commenda without providing any explanation for it. According to De Roover (1965, 55) and Lopez (1976, 73, 104), it can be attributed to the church's rising doctrine against usury (for a well-accepted critic, see Lane (1966). Williamson (2002) has documented a later revival of the sea loan and has associated it to disruptions in the flows of information caused by the Black Death. Since this transition was a widespread phenomena occurring under plausibly different institutional regimes, it is likely that private-order institutions played an important role in other localities (Greif 1994).

Pryor 1983, p. 141). The document does not specify why Omobone feared being disqualified from joining the licensed convoy but it might have been that a sentence was pending against him. Later in the fourteenth century administrative sanctions prohibiting 'fraudulent' merchant from entering the marketplace of the Rialto and the administrative and judicial site of San Marco de facto excluded them from Venetian trade (Cassandro 1937, pp. 99; see also Cassandro 1936, pp. 77–78; Lane 1973, p. 143; Castagnetti 1995, p. 101; Mueller 1997, pp. 124–125).

Similarly, the Venetian legal system was celebrated for providing 'a responsible justice equal to all' (Besta and Predelli 1901, p. 60; see also Lane 1973, p. 251). Venetian courts ruled according to the principle of speedy, informal, and equitable procedure and enforced their judgments as court orders. Offending merchants were subject to imprisonment and confiscation of their properties within Venice and its colonies. The procedure had already been established in the earliest Statutes ca. 1195 (Besta and Predelli 1901, St. Enr. Dand., cc. 7–14, 36, 66, 73; see also Cessi 1938, St. Nov., I, 51, 63.). If a merchant in arrears failed to pay or otherwise arrive at an agreement with his financiers within eight days after a court had sentenced him, he ought to remain within the territorial boundaries of the court for a month and thereafter ought to be incarcerated for another month. After these two months, his goods would be sequestrated. To facilitate the enforcement of court sentences, the law prohibited offenders from both leaving Venice and disposing of their goods before their disputes were settled (Besta and Predelli 1901, St. Ran. Dand., cc. 8, 28; for the application of the law, see MRL 1940, # 466, 630–631, 853; 1953, # 20, 41). Litigation over various commenda contracts in 1195 and 1226 actually resulted in the forced sale of a merchant's estate and in the transfer of property to a plaintiff (MRL 1940, # 424, 626). In 1241 the personal property of a deceased merchant was auctioned and, because the amount retrieved was insufficient, the merchant's house was sold by the court (MRL 1940, # 743). Confiscation of real property due to failed credit was also extended to colonial estates. In 1178 Leone Falier gave power of attorney to act against one of his debtor's properties in the Venetian colony at Tyre (MRL 1940, # 295).

Since the records of the Merchant Consuls, who adjudicated commercial disputes, have been lost, we do not have evidence on legal sanctions due to accounting frauds. Yet, the court's enhanced ability to verify a merchant's trading accounts is manifest from the various compilations of the Civil Statutes. The earliest Statutes, which were written in about 1195 but codified previous customs, specifically called for the verification of a merchant's claims concerning losses at sea or from the action of hostile people but recognized the merchant's oath as legal proof of his commercial accounts, which he simply had to render by the date of due (Besta and Predelli 1901, p. 24; St. Enr. Dand., cc. 30–32). The Statutes of 1229, however, mandated a detailed account of each and every commercial operation, one by one in sequence, and the revision of 1233 made the court responsible for verifying them in case of litigation (Besta and Predelli 1901, St. Tiep., 1229, c.16; St. Tiep, IIIA, c.2.). The final Statutes of 1242 further entailed the investor to present reliable witnesses and established the merchant's obligation to compensate her for whatever she could prove to be owed (Cessi 1938, St. Nov., III.2, gloss 3).

5 Self-Enforcing Economic and Political Institutions

The discussion so far assumed that regulators, public gatekeepers and judges took the actions that were most beneficial to Venetian citizens instead of abusing their power or shrinking. But why was this case? Why did investors trust that the Venetian officials would do what was required for the above public-order institution to effectively enforce their contracts? What institutional elements within the system curtailed corruption, and to what extent? Was the system worthy of its cost?

To understand the complex mechanisms that were used to ensure officials' impartiality and diligence, one must turn to the political system. Venice's governing structures reduced each office holder's space of strategies in a way that curbed his ability to use the state power in his own interest at the expense of the rest of the society. Furthermore, a vigilant oversight supported a system of punishments and rewards that made each office holder's best strategy not to abuse his (limited) power or shirk from his duty.

Venice was established as an autonomous political unit in the eighth century after a period of Byzantine dominance. Initially it was ruled by a dictator-like doge but beginning in 1032, the autocratic prerogatives of the doge were progressively limited until he became only a top magistrate elected for life. The doge was at first responsible for enacting laws, implementing policy and administering justice. However, with the transformation of Venice from dukedom to commune during the thirteenth century, political, administrative and judicial power was distributed among a large number of interlocking councils and magistracies whose members were appointed for short terms and could not be reelected for a consecutive term. To further avoid the concentration of power in one individual or family, campaigning for office was outlawed, officers (including the doge) were nominated by randomly selected official committees, and only one family member was allowed on any such committee or office (Cessi 1963/1965).

Unlike modern limited governments, the division of power in Venice ignored completely the separation of the legislative, administrative, and judicial functions. Instead, various governing bodies were given overlapping jurisdictions so that each council or magistracy was checked by some other council or magistracy as to assure the rule of law. For example, the (three) Consuls of the Merchants were responsible for the safety of Venetian trading voyages and for the adjudication of commercial disputes. Yet the *Signoria* – composed by the Doge, the six Ducal Councilors and the three heads of the Forty – initiated maritime legislation, named the commanders of galleys and fleets, and had the authority to assign particular cases to a higher court of law. If any such board was proceeding contrary to the statues laid down for it, the State Attorneys could suspend proceedings and call for a meeting of the Great Council, in which all important families had representatives, to hear their charges. They in turn could be sued for dereliction of duty by the Heads of the Forty and in last resort the case would be judged by the Great Council (Lane 1973, pp. 88–117).

Within each magistracy or *officia*, the clerks exercised mutual monitoring and rendered various sets of accounts on the basis of which performance was evaluated. For example, to assess if the maritime codes had been violated or a fraud had been committed while on voyage, the Consuls of the Merchants relied on two ship scribes who they inducted since 1252. Besides, every official, including the Doge, was subject to strict independent reviews after his office came to term and was liable to prosecution for abuse of his office or dereliction of duty. This prosecution was carried out by a distinctively Venetian group of officials, the State Attorneys, who had investigating powers and to whom all office holders were to notify any observed wrongdoing (Cessi 1963/1965; Lane 1973, pp. 95, 251).

Severe punishment for failing duty was applied to all Venetian officials. Not even the head of the state escaped such punishment, for "doges were leaders, no lords, nay not even leaders, but honored servants of the State" (Petrarch, in a letter of May, 1355, cited by Lane 1973, p. 181). All office holders had to give an oath of impartiality and good behavior and were subjected to both hefty monetary sanctions and retirement from office if caught in whatever kind of fraud. For example, any official found guilty of having "put his hands in the state's goods" had to pay back the amount taken plus a fine of half the amount within three days from the conviction (Stahl 2000, p. 271). In addition, he was to be banned for ever from the specific office in which he embezzled the money and, if the amount taken was relatively high, from holding any public office.[3] Such penalties ensured that tax receipts were properly allocated to the provision of economic rents, verifiable information, impartial contract enforcement, and other public and collective goods. Lesser offenses were punished with smaller but significant penalties. For example, any crewman who failed to help in the recovery of a damaged Venetian ship, its equipment and cargo for the fifteen days prescribed by the Maritime Statutes of 1255 was to be deprived from his entire salary (Predelli and Sacerdoti 1902, p. 134 and St. Zeno c. XCIII).

Good performance, on the contrary, ensured the continuation of a very profitable public life. Although the same man could not serve in the same council or magistracy for two consecutive terms, nothing prevented an individual to rotate through the most important offices, so far as he proved himself honest and competent. Also, the re-election of public clerks was tied to the auditing of accounts by the councils or magistrates who chose them. Furthermore, all officers charged with enforcing regulations were induced to diligence by receipt of a portion of the fines levied in addition to their salaries (Lane 1973, pp. 98, 100).

Asserting that Venice distinctive limited government constrained political agents to protect rather than abuse the contract and property rights required for the

[3]This 1359 law basically standardized the punishment for embezzlement of state goods. To make sure that it was enforced, the State Attorneys were given the right to sell the property of the convicted official. For a 1385 case in which this procedures was applied to a noble, see Stahl (2000, p. 261). Evidence on the payment of fines for breaking the law dates back to at least the mid-twelfth century (MRL 1940, # 143, 163, 226 and 402). More generally, see Lane (1973, pp. 98–100).

operation of the financial market hides a key question. Why did Venetian prominent families and the doge, in particular, support the Venetian institutional system instead of attempting to establish an autocracy and misappropriate all Venetian rents?

Arguably, the Venetians were motivated to support rather than challenge the existing system by the belief that cooperating to render the polity of Venice conducive to trade would ensure each of them a sufficiently high share in the gains from their collective action, while any attempt to subvert Venice limited government would be successfully resisted and penalized with capital punishment. This belief was rendered self-enforcing by the operation and internal organization of the Venetian state, which, on the one hand, generated economic and political rents and allocated them among Venetian citizens widely and, on the other hand, guaranteed a balance of power among all the important Venetian families, thereby making it impossible for any one family or group to attain unchallenged supremacy. Given the gains the Venetians expected to obtain from supporting the prevailing institutional system and the fear of becoming victims of autocratic extraction, the best they could do was to join together to confront anyone's attempt to make himself a dictator and to impose on him the heaviest punishment, which in turn deterred each of them from trying.

On the one hand, trading profits and political authority remained highly diffused. As we have seen, trade regulations and state's control over the city and her colonies assured all Venetian merchants almost an equal chance to make a profit in oversea trade. Furthermore, any Venetian with little money to invest could obtain up to 40% interest on sea loans or three fourths of the net venture's return on commenda contracts without venturing overseas. Finally, the large number of governing bodies, high turnover in office and the regulation of the electoral procedures resulted in a wide distribution of political power and honors.

To preserve the economic and political rents that rendered the institutional foundations of markets self-enforcing and to make the resulting institutional system more likely to be a equilibrium, the Venetians established barriers to entry and created intergenerational links. Between the end of the thirteenth century and the early years of the fourteenth century, those families who had taken active part in political life during the former century became a hereditary aristocracy, whose male members of age would henceforth exercise a monopoly over political activity. This, of course, deprived the vast majority of Venice residents from any political power, but assured all the members of the existing ruling class that they and their offspring would continue enjoying economic and political rents (Lane 1973, p. 111; Chojnacki 1973, p. 56; for an alternative view, see Rösch 2000). Furthermore, Venice dwellers that were at the time comfortably well-off but who they themselves or their forefathers had not sat in the Great Council during the previous century, and were hence excluded from the aristocracy, soon came to form an hereditary privileged class of citizens-by-birth, who were admitted to foreign trade with almost the same rights as the patricians and from whose ranks all the public clerks were to be chosen. Nobles and citizens had all much the same interests and, although they did not obviously treat common people below the rank of citizens as well as they treated themselves,

they nonetheless granted them economic rights according to the guilds to which they belonged (Lane 1973, pp. 151–152).

On the other hand, a broadly equal dispersion of economic and political power made it imprudent for any leader or group to attempt to overpower the others. After the ignominious endeavor by doge Domenico Orseolo to seize power in 1032 and the subsequent constitutional reform, there were only two attempts in over seven hundred years to subvert Venice limited government. Both occurred at times of exceptional distress. Both miserably failed. In 1310 Bajamonte Tiepolo, taking advantage of the disruptions caused by the papal excommunication of the City and the general discontent with the ruling doge, led a plot to overthrow the doge and establish himself and his followers as despots in the Venetian domains (Lane 1973, pp. 115–116). Bajamonte was generously sentenced to exile in Dalmatia for fear of provoking a civil war if otherwise, but his house was razed to the ground and on its site it was raised a Column of Infamy bearing the inscription: "This land was the property of Bajamonte//And now, through his infamous betrayal,//Is held by the Commune as a lesson to others//So let these words proclaim to all, for ever" (Norwich 1989, p. 195). In 1355, after the "most disastrous decade Venetians had ever known," the doge Marin Falier was discovered conspiring to slaughter most of the nobility and make himself an autocrat (Lane 1973, p. 179). He was beheaded according to due process of law and his portrait in the Hall of the Great Council was substituted with a black curtain reading "Here is the place of Marin Falier, beheaded for his crimes" (Lane 1973, p. 183). Subsequent doges were followed in official procession by a sword-bearing symbolic executioner as a reminder of the punishment intended for any leader who attempted to assume dictatorial powers (Norwich 1989, p. 299).

6 Conclusions

In late-medieval Venice self-enforcing public-order institutions prevailed. Litigation and regulation conjointly provided investor protection thus enabling the Venetians to exchange through impersonal markets and ensuring a wide distribution of trading profits. This motivated them to cooperate in rendering the polity of Venice supportive to trade and to resist anyone's attempt to gain political control over the City and its economic resources, which in turn reduced anyone's incentives to challenge the prevailing institutional system. Venice's institutions for contract enforcement thus generated the political support they needed to perpetuate.

The nature and role of the state in Venice differed from those posited by economic historians and economists to pre-modern and modern states. The state has been modeled as a negligent ruler, who does nothing or little to maintain the rule of law, a predatory ruler, who abuses property rights, or a benevolent ruler, who provides an impartial legal system based on coercive power (for a discussion, see Shleifer and Vishny 1998). The Venetian state was neither negligent nor predatory on its citizens. Like a benevolent ruler, it played an active and salutary role in

promoting trade by providing third-party contract enforcement to the Venetians. Yet, it went beyond the coercive role traditionally attributed to the legal system, namely 'forcing solvent borrowers to repay if they failed to do so spontaneously' (Bianco et al. 2005, p. 225).

Venetian courts could and did force merchants within its jurisdiction to comply with their verifiable contractual obligations but could not exercise coercion over a merchant who embezzled capital and fled, nor could it enforce contracts based on asymmetric information. It was therefore necessary to motivate merchants to submit to the authorities and to limit their ability and interests to act opportunistically, but this required more extensive state intervention than is usually associated with good corporate governance and a benevolent ruler.

Venice, in particular, took the military and diplomatic initiative required to gain exclusive trading privileges, organized protective convoys and restricted foreign entry, thereby making Venetian commerce more profitable and secure than that of other rival cities and ensuring Venetian merchants a rent as long as they kept their city affiliation. Venetian regulations thus complemented rather than substituted for judicial enforcement. As the Venetian public-order institutions for contract enforcement relied both on the threat of coercion and the promise of future rents from trade, it was necessary to maintain per-citizen rents. Licensing and registration requirements that restricted entry were not the result of regulatory capture by the elites, as the political economy literatures commonly asserts (e.g. Acemoglu and Robinson 2008). Despite their static inefficiency, eliminating these barriers to entry would have undermined growth: anticipating outright embezzlement of funds, prospective investors would not have mobilized their capital to otherwise productive investments in overseas trade. The Venetian evidence thus lends support to the view that institutional reform based on first-best practices can easily do more harm than good (Rodrik 2008). Entry regulations are not only necessary to sustain relational contracting, as the institutional literature has noted (e.g. Dixit 2004, Chap. 2); they are also necessary to support dispute resolution in courts when courts have limited jurisdictional power.

Tight regulations and administrative controls over trade were also necessary to cope with asymmetric information. To enforce contracts, a court needs to know when and to what extent a contract has been violated, but neither judges nor investors could generated the required information, among other things because they remained in Venice and so could not monitor merchants on board and abroad. To enlarge the set of contracts that could be legally enforced, Venice instituted various public gatekeepers and placed merchants under their permanent oversight. Specifically, colonial governors, convoy admirals, ship scribes, custom officials, and public brokers generated the (verifiable) information required to prosecute merchants for profit diversion, prevented excessive risk taking by merchants, and rendered profits less responsive to their lack of application. Venetian regulations coping with asymmetric information thus went much beyond mandatory disclosure.

In Venice the combined used of regulation and litigation thus effectively provided public contract enforcement. It also paid for the high fixed costs of setting up the required administrative and legal system. Unlike in other historical and

contemporary episodes in which the threat of revoking a license and other regulations disciplined market participants and private gatekeepers on the basis of monopoly rights granted by the state (e.g. Greif et al. 1994; Glaeser et al. 2001), in Venice the required rents were created mainly by making Venetian commerce more profitable than it would have been otherwise. Venetian regulations thus increased the total gains to be realized from trade and generated the surplus (and political support) required to pay for their implementation. As a byproduct, merchants were motivated not to embezzle an investor's capital outright and never return to Venice. Likewise, as part of their rent-generating activity, various government officials monitored trade and acted as public gatekeepers, thereby enabling the legal system to enforce contracts otherwise characterized by asymmetric information at a low extra cost.

The Venetian institution for contract enforcement was exogenous to each individual, but endogenous to the society. Venice's governing structures both supported the operation of financial markets and restrained the tyrannical exercise of power. This ensured a wide distribution of trading profits and political authority among the Venetians and motivated them to cooperate and contribute to the maintenance of Venice' distinctive limited government.

While this paper accounts for the Venetian institution as being politically self-enforcing, it does not inquire into the process of equilibria selection. Why did Venice evolve along such a distinctive institutional trajectory? Did a unique historical experience, geographical position, and cultural heritage ultimately bring about what seems to be a particularly successful equilibrium? And if so, what prevented other Italian city-sates from adopting similar public-order reputation-based institutions? These questions lead the way to a future comparative and historical institutional analysis that may facilitate our understanding of both past economic developments and the political impediments to economic growth in contemporary developing countries.

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