Social Capital and Collusion: The Case of Merchant Guilds

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Social Capital and Collusion: The Case of Merchant Guilds
(Long Version)*

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Abstract

Merchant guilds have been portrayed as “social networks” that generated beneficial “social capital” by sustaining shared norms, effectively transmitting information, and successfully undertaking collective action. This social capital, it is claimed, benefited society as a whole by enabling rulers to commit to providing a secure trading environment for alien merchants. But was this really the case? We develop a new model of the emergence, rise, and eventual decline of European merchant guilds, which explores the collusive relationship between rulers and guilds, and calls into question the prevailing positive view of merchant guilds. We then confront the model’s predictions with the available historical data. The empirical evidence strongly supports our model, and refutes existing theories. Our findings show that merchant guilds used their social capital for socially harmful as well as beneficial ends.

Keywords: merchant guild, collusion, social capital, social networks, monopoly, taxation, rents.

* A shorter version of this paper is available from the authors on request. The long version includes more empirical examples, a fuller discussion, and precise page references to a more copious secondary literature. For comments on both versions, we would like to thank Dirk Bergemann, Jeremy Edwards, Tim Guinnane, Denis Hilton, Sven Rady, Klaus Schmidt, Jean Tirole, and seminar participants in Munich (CES) for helpful comments and suggestions.


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1. Introduction

The merchant guild is unquestionably the most important historical institution adduced as evidence that social networks and “social capital” benefit the entire economy.\(^1\) It is therefore often used as a leading example by those advocating investment in social capital and social networks to solve problems of social exclusion and regional disparities in the rich West, economic transition in Eastern Europe, and development challenges in the Third World. Thus, for instance, in a speech to the World Bank, Joseph Stiglitz lists “guilds” among those institutions which, by generating social capital, could “support entrepreneurial efforts” in Eastern European transition economies.\(^2\) Robert Putnam identifies the social capital created by northern Italy’s medieval guild tradition as a major determinant of its modern economic success, and argues that social capital produces “aggregate economic growth”.\(^3\) Pranab Bardhan claims that merchant guilds have benefited commerce historically and urges more studies of how social capital can benefit commerce in modern developing economies.\(^4\) In a survey of social capital and economic development, Partha Dasgupta refers to the merchant guild as a social network whose social capital facilitated commercial growth.\(^5\)

These views are based on a particular model of medieval European merchant guilds, advanced by Greif, Milgrom and Weingast (1994) (henceforth GMW). GMW argue that “merchant guilds emerged during the late medieval period to allow rulers of trade centers to commit to the security of alien merchants”, thereby “laying an important institutional foundation for the growing trade of that period”. Their argument is based on the following idea. Individual merchants engaging in long-distance international trade faced high risks resulting from general commercial insecurity and arbitrary confiscations by rulers. Without a credible commitment by the ruler of a given trade center to provide a secure trading environment and himself refrain from confiscations, individual alien merchants might have been deterred from trading there. GMW show that if alien merchants belonged to an organization which could act in their collective interest and which had the power to enforce compliance by each individual member, the ruler’s commitment problem could be solved. In particular, the merchant organization could threaten a trade boycott if the ruler “misbehaved”, and this (credible) threat could

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\(^1\)For definitions and discussion of the concept of social capital, see Bourdieu (1986); Coleman (1988, 1990); Dasgupta and Serageldin (2000); Glaeser, Laibson and Sacerdote (2002); Lin (2001); Ogilvie (2003); Putnam (2000); Putnam et al. (1993); Sobel (2002).


\(^4\)Bardhan (1996), pp. 6-7.

induce the ruler to behave well by providing security. GMW then argue that merchant guilds emerged with the support of alien rulers of trade centers in order to overcome their commitment problem. Although GMW was published in 1994, before “social capital” attained its current vogue, it is easy to see why this has led so many economists to regard the merchant guild as an exemplar of social capital: these guilds fostered shared norms, transmitted information effectively, punished deviants swiftly, and organized collective action efficiently. And in GMW’s story, they used this shared capital in ways that benefited the whole society.

A slightly different theory is advanced by Volckart and Mangels (1999) (henceforth VM). VM characterize the later medieval merchant guilds - discussed by GMW - as “cartellistic” and hence not beneficial to the economy at large. In the search for beneficial merchant guilds, they shift their own focus back to the so-called “elder” merchant guilds of the early Middle Ages (the tenth and eleventh centuries).6 These, they argue, were formed by long-distance merchants “to protect the property rights of their members vis-à-vis non-members” by enabling traders to travel together and provide each other with mutual security against raiders and plunderers. A subsidiary function was to provide contract enforcement for their members by generating mercantile law and the institutions to enforce it. VM thus argue that merchant guilds provided mutual security and legal contract enforcement as “club goods”, thereby substituting for the “public goods” the undeveloped states of the period were incapable of supplying. By so doing, these “elder” merchant guilds are held to have been responsible for “the emergence of nonsimultaneous transactions” (both trade and credit) in eleventh- and twelfth-century Europe.7 In their account, VM explicitly describe merchant guilds as constituting “communities of mutual trust” of the sort James Coleman regards as generating social capital.8

Both of these recent theories portray merchant guilds as solving problems of commercial security and mutual commitment in long-distance trade, whether between merchants and rulers in the late medieval period (as in GMW) or between merchants and other merchants in the early medieval period (as in VM). According to both theories, merchant guilds used their close internal relationships to generate benefits not just for their own members, but also for the wider society.

But were merchant guilds really like this? In this paper, we advance a different view of merchant guilds, which shows that the social capital created by closely-knit relationships within a social network can have negative rather than positive externalities. We demonstrate that both the GMW and the VM models of merchant guilds are inconsistent with the historical evidence. We propose an alternative model which is borne out by the empirical findings. This model explains why merchant guilds arose in medieval

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Europe, how they evolved over time, and why they ultimately declined in some societies and survived in others. We show that merchant guilds indeed did generate social capital, but used it in ways that were not “social”, in the sense of benefiting society as a whole. Merchant guilds harmed both non-members and the wider economy. We conclude that it is important to analyze the “dark side” of social capital.

We show in Section 2 that the GMW and the VM models of merchant guilds are inconsistent with four important bodies of empirical evidence. First, the vast majority of merchant guilds were local associations of traders in a particular urban community, enjoying privileges from their local rulers. Only a minority were active in alien polities, and even these only enjoyed recognition from alien rulers by virtue of support by their own local rulers. This is inconsistent with the view that merchant guilds arose and survived because they overcame risks and commitment problems in long-distance trade in alien polities. Second, merchant guilds actually contributed to commercial insecurity by engaging in legal conflicts and violent struggles with other merchant guilds over economic privileges from rulers. Third, far from being able to enforce complete boycotts against offending rulers, most alien merchant guilds operated in international trading centers containing half a dozen other merchant guilds; the inter-guild conflicts mentioned above made agreement on a joint boycott very unlikely if the ruler chose to discriminate against a particular guild, and severely limited the effectiveness of any unilateral boycott by a cheated guild. Fourth, merchant guilds obtained legal privileges to exclude outsiders from membership and thus from the right to trade, in return for which they rendered lump-sum transfers, advantageous loans, military assistance, and other benefits to rulers; neither the GMW nor the VM model accounts for this universal feature of merchant guilds and their relationships with local and alien rulers. Merchant guilds may have generated social capital - and this paper will show they did so - but the rosy view of its deployment and effects relies upon models that lack empirical foundation.

We therefore need a new theory of the emergence and rise of merchant guilds, which must be able to account for the stylized facts just listed, notably merchant guilds’ primarily local focus and rulers’ willingness to grant them privileges, particularly monopoly rights over trade. This new model should also account for the main stylized fact addressed by GMW, namely the willingness of rulers of international trade centers to welcome the establishment of alien guilds. As we shall see, all these stylized facts are closely related and can be understood within a single framework. The theory we propose identifies a key benefit which medieval rulers derived from the establishment of merchant organizations endowed with monopoly rights over local trade: these organizations enabled rulers to tax local trade much more efficiently. In the absence of merchant organizations, rulers would have had to delegate the collection of taxes on local trade to agents who would have been able to earn substantial rents from their superior knowledge of local conditions. By negotiating directly with merchant guilds, rulers were able to circumvent the need to give away a significant share of the total surplus from trade to
third parties. Most importantly for rulers, merchant organizations, unlike tax collectors, could afford to “pay” ex ante for their ex-post informational rents.\(^9\)

The ruler could therefore maximize his revenue from the taxation of local trade, as we demonstrate in Section 4, by requiring the guild to make regular fixed payments, in return for exemption from other forms of taxation, together with the legal right to exclude non-members from trade, to levy dues from members, and to sanction members who “misbehaved”. There is ample historical evidence that this is exactly what took place. Our theory can therefore explain not only the emergence of merchant guilds, but also their relationship with rulers, including the specific privileges they were granted and the transfers they made in return.

Once a guild was established in a given city, enjoying local monopoly rights and considerable power, it clearly had an incentive to use that power to become entrenched, thereby increasing its bargaining power relative to the ruler. In Section 5 we consider the implications of this for the evolution of ruler-guild relations. We show how this could generate support by rulers for alien merchant guilds, and why this often evoked considerable opposition from local merchant guilds. We also identify two further ways in which the establishment of merchant guilds benefited medieval rulers: first, by alleviating rulers’ financial constraints, which could be severe (particularly in times of war); and second, by providing a countervailing power to that exercised by the landed nobility. We review the historical evidence on this, which strongly supports our analysis.

As Section 6 discusses, our model provides an account of merchant guilds that explains the historical evidence, including the differential pattern of guild decline, more satisfactorily than the existing models of GMW and VM. But our model has very different implications. Merchant guilds did generate a “social capital” of shared norms, information transmission, effective sanctions, and collective action. But they used this social capital to secure rents for their members, at the cost of outsiders and the wider society. Our analysis of merchant guilds suggests strongly that social capital has negative, as well as positive, externalities.

The paper proceeds as follows. Section 2 reviews the historical evidence on merchant guilds and motivates our search for a new theoretical model. Section 3 presents the basic version of this model. Section 4 contains the main results, while Section 5 explores some extensions of the analysis. Section 6 presents our conclusions.

\(^9\)Individuals willing to act as tax collectors possessed very little capital as a rule, as shown by the historical evidence discussed in Section 3. Thus they could not have “paid” ex ante for their ex-post rents by making transfers to the ruler. The merchants themselves, on the other hand, typically possessed sufficient capital, by pooling their resources, to make the required payments to the ruler, as documented in Section 4.
2. The need for a new model of merchant guilds

Four major bodies of empirical evidence cast doubt on the GMW and the VM models of merchant guilds which have hitherto been widely accepted by economists. This evidence motivates our search for an alternative model that can account for the available historical data.

2.1. The local nature of most merchant guilds

The first body of evidence which contradicts the GMW and VM theories is the fact that the vast majority of merchant guilds were local associations of the traders of a particular urban community, which initially obtained privileges from their local rulers.10

2.1.1. Local merchant guilds

The origins of medieval merchant guilds are lost in the Dark Ages (c. 500 - c. 1000 AD) because of a severe lack of documentation, and modern scholars are now somewhat doubtful about whether there was much continuity between the local merchant collegia of ancient Roman towns and the merchant guilds of the Middle Ages.11 Despite the paucity of documentation, however, it is clear that among the collegia, schola, and ministeria attested in towns during the Dark Ages, local merchant organizations predominated. The same was true of the merchant ”guilds” proper which emerged in England from the tenth century, in northern France, the Low Countries, and northern Germany from the eleventh century, Italy from the twelfth century, and Iberia from the thirteenth.12 These were associations among the merchants of a particular locality, which initially obtained privileges from their local rulers, giving them exclusive rights to practise certain types of local commercial activity.13 Thus, for example, the local merchant guild of the town of Tiel in Flanders was described by the cleric Albert of Metz in 1020 as engaging in corporate activities that threatened the common good.14

11 For the view that there was such continuity between ancient Roman collegia and medieval guilds, see Waltzing (1895/1900); for a comprehensive criticism of this view, based on evidence from the period c. 600 - c. 1200, see Racine (1985), pp. 127-8, 143-9.
14 Volckart and Mangels (1999), pp. 437-8; Schütt (1980), p. 87; Johanek (1999), pp. 82-3. Members of this guild were also active in long-distance trading, but the guild enjoyed legal recognition from Tiel’s own ruler (the Emperor), and there is no record of its relations with alien rulers.
At around the same period, “the merchants resident in Magdeburg” obtained a freedom from tolls from the Emperor, a privilege granted to them “as a corporation”. In 1075, the merchants of Pisa established a local merchant guild with its own “consular court”; only in the twelfth century did the Pisan merchant guild begin to name consuls in foreign ports as well. The merchants of Genoa established a local merchant guild with its own “sea consulate” in 1206, and after that began to establish overseas branches with their own consuls in foreign polities. For most Italian cities, the earliest records of merchant guilds and merchant “consuls” date from the period 1154-83, and refer to local organizations formed by the merchants of each city to represent their own corporate interests in the regulation of local trade and industry.

Although local trade left many fewer records and was much less glamorous than long-distance trade, it is now widely recognized as having made up a significant share of medieval European commerce, and hence as offering rents to those who could obtain monopolies within it. Even when trading abroad, merchants often “specialised in commodities closely linked to their mother-city’s economic fortunes”. Many of the local merchant guilds which enjoyed privileges over local commerce never became important players in international trade - not even after about 1200, when growth in long-distance trade accelerated. But all of them enjoyed considerable economic privileges in their own cities, including monopoly rights over local trade.

Only a minority of merchants expanded their operations beyond their own local area and traded in alien polities. Most of the smaller medieval cities were hardly at all involved in long-distance trade. In German-speaking central Europe, for instance, “the economic influence of most individual towns and cities was limited to their immediate locality. Only a small number of towns succeeded in extending their influence to the whole of central Europe and beyond.” In Scandinavian towns, the vast majority of merchants engaged in local or, at most, regional trade; imports were almost wholly in the hands of foreign, especially north German merchants. The same predominantly local orientation can be observed in most French cities: the guilded merchants of Toulouse and

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15 Johanek (1999), p. 82.
18 Racine (1985), pp. 142, 146, points out that the first merchant consuls are mentioned for Piacenza in 1154, Milan in 1159, Pisa in 1162, Verceil in 1165, Verona in 1178, and Brescia in 1183.
Bordeaux, for instance, were engaged almost exclusively in local and regional trade.\textsuperscript{25} This was even the case for the largest city in Europe, Paris, whose merchants had their own guild, “The Society of the ‘Marchands de l’Eau’”, but whose activities were “primarily directed to satisfying the needs of [the city’s] own population”.\textsuperscript{26} In the Low Countries, famous for its many urban centers attracting long-distance traders, there nevertheless were important cities such as Liège whose guilded merchants exercised local economic and political influence but were not involved in international trade.\textsuperscript{27} Bruges itself, the “undisputed fulcrum” of long-distance trade in northern Europe, had an exceptionally powerful merchant guild, but its members drew their profits not from long-distance trade but from their “staple” rights through which they obliged alien merchants to trade through their sole intermediation.\textsuperscript{28} Even in Italy, the undeniable center of European long-distance trade, there were very large cities, such as Rome, whose merchants, although they formed a guild, did not participate in international trade.\textsuperscript{29} The towns of Sicily, especially Messina, lay in a favoured position en route from northern Italy to the Levant, but only a minority of local Sicilian merchants engaged in long-distance trade, so much so that they failed to form their own merchant colonies in alien polities such as Acre or Alexandria: the few Messinese merchants who traded in the Levant had to seek guest membership in the colonies of the Pisans, other north Italians, or Catalans.\textsuperscript{30} The Byzantine Empire suffered much less than northern and western Europe from the decline in trade during the Dark Ages, yet by the thirteenth century the guilded merchants of the numerous Byzantine provincial cities were trading mainly with the hinterlands of these cities, at most with neighbouring regions; they did not participate in long-distance trade.\textsuperscript{31} The same can be said for the majority of urban centers throughout Europe: almost every town had a local guild of merchants active primarily in local trade; only a minority of towns had merchants active in long-distance trade requiring security guarantees from alien rulers. Even in towns with some involvement in long-distance trade, it was only a subset of its guilded merchants who were active abroad. Thus the local merchant guild of St Omer in France, first attested at the end of the eleventh century, was later supplemented by a “Hansa” of those of its members who had interests in long-distance trade.\textsuperscript{32} The German city of Stendal had a local merchant guild, the \textit{Gewandschneider}, with privileges over local trade reaching back into the twelfth century, and an affiliated \textit{Seefahrergilde}.

\textsuperscript{27}Prevenier (2000), pp. 581-2.
\textsuperscript{28}Prevenier (2000), p. 593 (quotation); Dollinger (1970), pp. 48, 65; Bahr (1911), pp. 21-2; Daenell (1905), pp. 15-16.
\textsuperscript{29}Johanek (1999), pp. 76-7.
\textsuperscript{32}Dilcher (1984), p. 70.
whose members consisted of “a smaller circle of long-distance traders who were still going out personally on trading voyages”; interestingly, the sub-guild of the overseas traders consisted of a somewhat less prestigious subset of individuals than the larger merchant guild to whom they belonged.33

2.1.2. Alien merchant guilds as “colonies” of local merchant guilds

The minority of merchants who engaged in long-distance trade had always - even in the Dark Ages - obtained privileges, especially guarantees of protection, from alien rulers through whose territories they travelled.34 In many cases, rulers simply granted privileges to individual merchants on an ad hoc basis. But as trade picked up in the early twelfth century, that subset of a city’s merchants who were active abroad began to establish “colonies” or “consulates” of their local merchant guild by obtaining legal recognition from alien rulers.35 Paucity of documentation makes it difficult to date the origins of different types of merchant guild, but it appears to be the case that whereas the first local merchant guilds date from the tenth and eleventh centuries, as we saw above, the first alien merchant guilds or “colonies” date from somewhat later: “Alien merchants first established colonies in the early twelfth century in the markets of the East - such as Acre, Antioch, Alexandria, and Constantinople - and soon after that in Rome, Naples, and Palermo. By the end of the thirteenth century, colonies of alien merchants were to be found in cities throughout Europe.”36

However, alien merchant guilds continued to be dependent, to a greater or lesser extent, on the decision-making and privileges of the local merchant guild at home. Most alien merchant guilds were closely monitored by their home cities. Thus Florentine merchant colonies abroad had their consuls appointed by the Arte di Calimala, the local merchant guild in Florence.37 Barcelona’s merchant colonies had their consuls appointed by the Barcelona Consulate of the Sea.38 Flemish merchant guilds in Champagne and England were accompanied on trading expeditions by officers from their own local merchant guilds at home - “guild wardens and inspectors who had absolute authority over them”.39 In 1224, the Italian city of Ancona was formally held by the Emperor to be responsible for controlling the actions of its merchant guild as far away to the east as Acre.40 Venetian merchant colonies in the Levant “were closely watched, and their local

40Abulafia (1986b), pp. 530, 537-8; Abulafia (1997), pp. 54-5.
authorities strictly supervised by the government of the Serenissima’. Some merchant colonies abroad had a certain amount of autonomy. The Genoese merchant colonies in the Levant were much more independent of their home cities than were those of the other trading nations, but even so, by 1400 the commercial activities of the Genoese merchant guild in Damascus were supervised by the “Officium Alexandriae”, a supervisory body based at home in Genoa. Moreover, precisely the autonomy of Genoese merchant colonies from the metropolis is held to have given rise to unpredictable and conflictual actions which contributed to their gradual decline.

Furthermore, alien merchant colonies succeeded in obtaining recognition and privileges from alien rulers only by virtue of their legal recognition by their own rulers as guilded merchants in their home cities. Thus the Italian merchant “colonies” in the Levant and Africa secured “important judicial, fiscal and customs privileges” from rulers there, which meant that “they were ... privileged merchants, just as they were in their home cities”. In 1257 the rulers of Acre confirmed the trade privileges of the Anconitan merchant guild only on condition that the ruling body of their home town seal the agreement within two years. The merchant guild of Barcelona was able to obtain its privileges from the rulers of Tunis and Alexandria between 1250 and 1264 only thanks to the recognition it enjoyed locally in Barcelona from King James I of Catalonia. In the 1380s, the Catalan merchant guilds in Alexandria and in Damascus secured privileges from the Mamluk rulers by virtue of the recognition they enjoyed from their own ruler at home in Catalonia. Members of Norwegian merchant guilds in England enjoyed their privileges from English rulers by virtue of the recognition they enjoyed from the King of Norway.

Alien merchant colonies also remained strongly dependent on the political support of their home rulers to sustain the privileges they were granted by alien rulers. Early medieval Danish merchants on trading voyages relied primarily on their legal status vis-à-vis their own ruler to prevent alien rulers from attacking them; their own internal corporate powers played a secondary role. In the 1170s and again in the 1230s, the German merchant guilds in Danish towns relied on their privileges from the German emperor to sustain them against attacks from Danish rulers and local Danish merchant guilds. From the twelfth century on, alien merchant guilds from Italian

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44 Bernard (1972), p. 293.
50 Hoffmann (1980), pp. 45, 47.
city-states trading in eastern Mediterranean polities enjoyed commercial security because of treaties of friendship concluded between their home governments and eastern Mediterranean rulers - and threats of violent reprisals from their home navies if alien rulers mistreated them.\textsuperscript{51} In 1231, for instance, after the ruler of Cueta confiscated Genoese merchants’ goods, he was penalized not by an embargo by the Genoese merchant guild there, but by being attacked by the Genoese fleet.\textsuperscript{52} The merchant guild of Barcelona was able to maintain its privileges from the rulers of Tunis and Alexandria between 1250 and 1264 only thanks to the diplomacy and military threats its home ruler, King James I of Catalonia, was willing to exercise on their behalf with Muslim rulers.\textsuperscript{53} The Sicilian merchant colony in Armenia secured trading privileges in 1331 “as a direct reward to King Frederick of Sicily for his willingness to make real [his] promises of alliance”.\textsuperscript{54} The Genoese merchant guild in Champagne enjoyed safe conduct because the government of Genoa negotiated a treaty with the Duke which included guarantees of commercial security for Genoese merchants.\textsuperscript{55} Venetian merchant colonies abroad enjoyed particularly consistent support from their home government, which drove hard bargains with alien rulers to secure them privileges and threatened alien rulers with naval retribution if they violated these privileges.\textsuperscript{56} The limits to the ability of alien merchant “consuls” to secure commercial security for guild members are illustrated by Venice’s repeated reliance after about 1360 on government ambassadors to negotiate for trading privileges with the Egyptian sultans on the grounds that “the intervention of the consuls did not carry enough weight” or “the question seemed to be too important to be dealt with by a consul”.\textsuperscript{57}

2.1.3. “Hansas” as associations of local merchant guilds for purposes of long-distance trade

Even the famous “Hansas” of long-distance merchants were simply associations among the local merchant guilds of several cities for the purposes of foreign trade.\textsuperscript{58} The prime example is that of the German Hansa, an association among the merchant guilds of 70 north German, Dutch, and Baltic cities (with another 130 in looser association).\textsuperscript{59} However, there were also less important associations such as that formed by the merchant

\textsuperscript{51}Kohn (2003), p. 11; De Roover (1971).
\textsuperscript{52}Kohn (2003), p. 13; Reynolds (1945), p. 12.
\textsuperscript{53}Abulafia (2000), pp. 660-1.
\textsuperscript{54}Abulafia (1986a), p. 211.
\textsuperscript{55}Kohn (2003), p. 11, referring to Scammell (1981), ch. 4.
\textsuperscript{57}Ashtor (1983), pp. 74, 122
\textsuperscript{59}Dollinger (1970); Daenell (1905); Bernard (1972), p. 299.
guilds of 17 Flemish and French towns in the thirteenth century, and the coalitions of the merchant guilds of certain Italian cities for the purposes of trading in France or the Levant.

It is important to recognize, however, that “Hansas” were pre-dated by their constituent local guilds and derived their power and legitimacy from their recognition by local rulers in their localities of origin. Thus, for instance, the German Hansa “gradually grew out of merchant corporations [and] in later years ... was ... transformed from a merchant gild into a confederation of towns”. This meant that membership in the local merchant guild of a member city was a precondition for enjoying the privileges of the Hansa abroad. Thus in England, “by the thirteenth century it was impossible to join the London ‘Hanse’ directly; admission was granted only to those who had first been enrolled in the gilds of constituent towns, and these erected stiff obstacles to the recruitment of craftsmen.” Likewise in Germany, “membership in the local merchant guild was the precondition for claiming rights in a Hansa”.

Hansas in alien polities continued to derive their legitimacy from the privileges and recognition their constituent local merchant guilds enjoyed from their local rulers. Thus members of the German merchant Hansas in medieval Oslo and Tönsberg enjoyed their privileges from the Norwegian ruler by virtue of their membership in their local merchant guilds in Rostock and Wismar. Members of the German merchant Hansa in twelfth-century Novgorod derived their by-laws from the guilds of the individual home towns, paid annual dues which were sent back to their home guilds, and continued to regard their home aldermen as the highest court.

Hansas in alien polities also continued to depend heavily on political support from the rulers of the towns in which their constituent guilds were located. Thus members of the German merchant Hansa in twelfth-century Novgorod appealed back to their home towns for support and assistance in conflicts with the Novgorod ruler. Likewise in the 1350s the German Hansa in Bruges only began to be able to put serious pressure on the Flemish rulers to sustain its privileges “when the domestic cities themselves took in hand the representation of their merchants’ interests”. The cooperative merchant

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61 Goldschmidt (1891), p. 199.
63 See Daenell (1905), pp. 6, 9, 19. According to Planitz (1940), p. 19, the term ”hansa” dates only from the beginning of the twelfth century.
64 De Roover (1963), p. 111.
65 Hibbert (1963), pp. 201-2.
70 Daenell (1905), pp. 19-20.
colonies of the Mediterranean “minor nations” enjoyed privileges from Muslim rulers in the medieval Levant by virtue of the diplomatic negotiations undertaken by their home rulers.\footnote{Abulafia (1988), pp. 184-5.}

Thus \textit{some} local merchant guilds - though certainly a minority - formed “colonies” or joined “Hansas” abroad in order to transact in alien polities. But \textit{all} local merchant guilds had their origins in the privileges granted by their own local rulers. This is not consistent with the theory that merchant guilds emerged and survived because they overcame problems of security in \textit{alien} polities, as argued by VM and GMW.

\subsection*{2.2. Commercial insecurity}

A second body of evidence casting doubt on the theories of GMW and VM relates to the effect merchant guilds actually exerted on commercial insecurity. GMW argue that merchant guilds increased commercial security by enabling rulers to commit to provide a secure trading environment for alien merchants. VM argue that merchant guilds increased commercial security by enabling guild members to commit to one another to provide security as a “club good”. Certainly, the privileges secured from alien rulers by long-distance merchants - both individually and as guilds - generally included guarantees of security, although they also generally included reductions in trade taxes and other commercial privileges. But there is no evidence that when these security guarantees were issued to \textit{guilds} rather than to \textit{individual merchants} it actually had the effect of increasing the overall level of commercial security. The only support for this view is theoretical: it is contained in the GMW and VM models, not in the evidence they present. Essentially it amounts to a counterfactual argument that there are theoretical reasons to believe that a guild might help increase commercial security, and hence that without merchant guilds insecurity would have been higher.

Hard evidence, by contrast, exists for the opposite view: namely, that merchant guilds were significant \textit{contributors} to commercial insecurity. Most major centers of long-distance trade had several merchant guilds, and conflicts between them were a source of commercial insecurity for merchants. Indeed, an important function of merchant guilds was to assist their members in their vicious competition with the members of rival merchant guilds: “the rivalry for trade was a rivalry among merchants and, in particular, among merchant associations”.\footnote{Kohn (2003), pp. 9-10, 14 (quotation).}

There were frequent violent conflicts in foreign cities among the guilds of rival alien merchants, such as those among the merchant guilds of the various Italian cities in twelfth-century Constantinople,\footnote{Greif, Milgrom & Weingast (1994), p. 750; De Roover (1963), p. 62; Pryor (2000), p. 422.} those between the Pisan and Genoese merchant guilds.
in Messina in 1129,74 those between the Genoese and the Pisan merchant guilds in Acre in 1222-4 (which threatened the merchants of Ancona who were trading there),75 those between the Venetian and Genoese merchant guilds in Acre in 1256-7,76 those between the Pisan, Venetian, and Genoese merchant guilds in Cairo in the late 1280s,77 those between the Genoese and Venetian merchant guilds in the Levant in the thirteenth, fourteenth, and fifteenth centuries,78 and those among the guilds of different Spanish cities in fifteenth-century Bruges.79 In the fourteenth century, the Genoese went so far as to claim “that the Black Sea was an area where they had a privileged position and that other trading nations should pay them a tax for the right of conducting activities there”; to this end, their merchant colonies on the Black Sea actively obstructed trade by merchants from other nations, especially the Venetians.80

Even more frequent were conflicts between a guild of alien merchants and the guild (or other organization) of the local merchants. Many cases in which merchants operating in a foreign city were attacked by mobs, failed to obtain fair legal treatment, or suffered from acts of piracy occurred precisely because of rivalry with the local merchant guild over privileges from the ruler. Thus conflicts between local and alien merchants over commercial privileges from rulers lay behind attacks on German merchant guilds in the Danish city of Roskilde circa 1157,81 attacks on Hansa merchants in London and other English towns from the late thirteenth century on,82 conflicts between the Hansa and Bruges in 1280,83 attacks on German Hansa merchants in Norway in 1284,84 a violent attack on Venetian merchants by Egyptians in Alexandria in 1327 (in which several people were killed),85 the Hansa embargo on Bruges in 1358,86 insecurity for English merchants in Danzig in the fourteenth century,87 and acts of piracy against both English and German merchants in the fourteenth century.88

Indeed, one reason long-distance merchants so consistently applied to alien rulers for security guarantees was precisely because they expected to be legally harassed or violently attacked by local merchant guilds which regarded themselves as entitled to

79Smith (1940), pp. 68-9.
85Ashtor (1983), pp. 52-3.
exclusive rights to trade in particular territories or particular lines of business.\textsuperscript{89} Part of the problem was due to the “incompleteness” of the “contracts” between rulers and merchant guilds: the legal privileges originally granted by rulers to local guilds typically did not specify with sufficient precision and detail the exact nature of their rights in all possible contingencies, which left significant scope for subsequent interpretation and conflict, as well as renegotiation between rulers and guilds. Such conflicts were good business for rulers: “governments could generate revenue by intervening in the rivalry between merchant and merchant”.\textsuperscript{90}

In short, merchant organizations themselves, and the privileges granted to them by rulers, were often the source of - not the solution to - commercial insecurity.

2.3. Non-viability of guild boycotts

The theory of merchant guilds advanced by GMW in particular depends crucially on the guild’s assumed ability to enforce a complete boycott of trade with an alien ruler who “misbehaves”. This may be a reasonable assumption for a single, monolithic guild endowed with coercive powers over its members, the case GMW consider in their model. But in practice most international trading centers had at least half a dozen alien guilds trading there.\textsuperscript{91} To give just one example, by the 1320s the rulers of Cyprus had granted recognition and trading privileges to the alien merchant guilds of the Genoese, the Venetians, the Pisans, the Narbonnais, the Provençaux, the Catalans, and the Anconitans - and Cyprus was by no means the most popular long-distance trading center in the Mediterranean; larger centers typically had even larger numbers of alien merchant guilds.\textsuperscript{92} While each of these guilds was normally a “big” player (it accounted for a significant share of total trade in that center), the different guilds were typically competitors, as shown by the frequent conflicts between them noted in the preceding section. Thus if a ruler chose to discriminate against a particular guild while maintaining good relations with the others, any initiative by the cheated guild to boycott trade would have been unlikely to be matched by the other guilds.

The historical evidence confirms that this is what actually happened. When the Pisan merchant guild placed an embargo on Sicily in 1137 in response to confiscations by the ruler, the Genoese and Venetian merchant guilds continued to trade there.\textsuperscript{93} When the Venetian merchants boycotted Alexandria and Beirut in the thirteenth and fourteenth centuries because of quarrels with the Sultans, the merchants of the “minor nations” kept the trade flowing.\textsuperscript{94} When the German Hansa boycotted Bruges in

\textsuperscript{89}Kohn (2003), pp. 15-16.
\textsuperscript{90}Kohn (2003), p. 10.
\textsuperscript{91}See Abulafia (1978, 1995); Bernard (1972); De Roover (1963).
\textsuperscript{93}Abulafia (1978), p. 72.
1358 to put pressure on the ruler to maintain the Hansa’s privileges against the local merchant guild, smuggling by merchants both from individual Hansa cities and from non-Hansa cities weakened its impact. The incentive to violate future embargoes was increased by the fact that once the embargo was lifted, the Flemish rulers rewarded the merchant guilds of Kampen and Nuremberg, the chief embargo-breakers, with extensive commercial privileges. As a general rule, in fact, “the Hanseatic League’s relatively weak control over German merchants made its embargoes largely ineffective, and this may have been why it resorted so often to violence instead”. 

This is not to say that even a partial embargo on trade, by a sufficiently big player, would have been completely ineffectual. As discussed in Section 4.2, guilded merchants from a given location typically had monopoly rights over local trade in that location, including exports of locally produced goods. In those cases where locally produced goods had no close substitutes, the potential impact of competition with other guilds was considerably diminished. Thus the granting of monopoly rights over local trade by local rulers must have increased some guilds’ bargaining power in their negotiations with alien rulers. However, in view of the evidence (noted above and discussed in detail in Section 4.3) on the very widespread granting of such monopoly rights to local merchant guilds, and the very limited role played by the majority of these guilds in international trade, we argue that the benefits in terms of increased bargaining power relative to alien rulers were a consequence of, and not the primary reason for, the formation of merchant guilds endowed with monopoly rights over local trade.

2.4. Payments and transfers from guilds to rulers

Finally, the theories of merchant guilds advanced by GMW and VM do not account for a universal feature of merchant guilds - namely, that they made payments to rulers in exchange for legal privileges that gave their members rents. GMW present an internally contradictory picture of the commercial privileges enjoyed by merchant guilds. At one point they acknowledge that local merchant guilds “had quasi-monopoly rights in their own territories” and that alien merchant guilds had certain features that “were utilized during the premodern period to restrict trade”. GMW actually justify merchant guilds’ local rights to restrict trade on the grounds that “this type of monopoly rights generated a stream of rents that depended on the support of other members and so served as a bond, allowing members to commit themselves to collective action”.

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95Dollinger (1963), p. 67; Daenell (1905), pp. 21-3.
96Daenell (1905), p. 23.
98Indeed, Flanders suffered economically during the Hansa embargo of 1358-60; see Daenell (1905), p. 22.
100Greif, Milgrom, and Weingast (1994), pp. 749 (quotation), 758.
Elsewhere in their paper, however, GMW deny that merchant guilds enjoyed monopolies, claiming that although “a local guild usually had exclusive trading privileges in its own town, typically including monopoly rights over retail trade within the town, exclusive exemption from tolls, and so forth, as well as the right to exclude, under certain circumstances, members from the guild”, this did not actually amount to a monopoly, since “entry into the guild was permitted”. \textsuperscript{101} VM clearly recognize the existence of the monopoly rents enjoyed by the late medieval merchant guilds, which they dismiss as “cartellistic”, but assume that the “elder” merchant guilds of the early medieval period did not seek or obtain monopoly rents.\textsuperscript{102}

In Sections 4.3 and 5.2, we present rich evidence showing that rulers granted to both local and alien merchant guilds a wide array of legal privileges enabling them to exclude outsiders from trading, restrict admission to their own ranks, and secure economic rents. They did so both in the early medieval period discussed by VM and the late medieval period discussed by GMW. The privileges rulers granted to merchant guilds included rights to exercise monopolies over certain lines of business, exclude non-members from trade, limit membership numbers, and limit price and quantity competition among members. Counter to the argument of GMW, entry into merchant guilds was severely restricted. As Sections 4.3 and 5.2 document in detail, merchant guilds made admission contingent on a range of requirements, including approval by a sufficient proportion of existing members, payment of entry fees (sometimes set at prohibitively high levels for particular categories, e.g. craftsmen), satisfaction of catch-all “reputation clauses”, and requirements based on gender, ethnicity, religion, residence, citizenship, and property ownership. Those who were excluded, particularly large strata of craftsmen, engaged in bitter sociopolitical struggle against the legal privileges of merchant guilds, and formed their own craft guilds partly as lobbying organizations to defend their interests against the favoured position merchant guilds enjoyed vis-à-vis rulers.\textsuperscript{103} These conflicts strongly imply that the monopolies enjoyed by merchant guilds were effective, since people do not expend resources to attack or defend valueless economic privileges.

Sections 4.3 and 5.2 also provide a wealth of evidence showing that, in return for their commercial privileges, both local and alien merchant guilds made transfers to rulers. These included lump-sum payments, advantageous loans, military assistance, and other benefits. Merchant guilds’ willingness to make such payments strongly implies that merchant guilds’ rights to restrict entry created valuable rents for existing members. The GMW and the VM models fail to account for this behaviour, despite the fact that it was a universal feature of merchant guilds and their relationships with rulers.

\textsuperscript{101}Greif, Milgrom, and Weingast (1994), p. 757 with n. 12.
\textsuperscript{102}Volckart and Mangels (1999), p. 437.
3. The model

The existing GMW and VM models of merchant guilds are thus inconsistent with major bodies of empirical evidence. Here we propose an alternative theory of merchant guilds, which can account for the available historical evidence. The theory identifies a key benefit which medieval rulers derived from the establishment of merchant organizations endowed with monopoly rights over local trade: *these organizations enabled rulers to tax local trade much more efficiently.*

This section introduces the simplest version of our model; several extensions are examined in Sections 4 and 5. We consider a medieval polity with four types of player: a ruler, merchants, consumers, and a tax collector. For simplicity, we assume that all players are risk-neutral.

3.1. Merchants

There is a large number \(X\) of small identical individual merchants who can sell a homogeneous good at a cost \(c > 0\) per unit of the good. The set of all merchants is denoted by \(A\). Each merchant is endowed with capital \(K > 0\).

3.2. Consumers

Consumers are represented by the inverse demand function for the good, given by \(P(\theta, q) = \theta(a - bq)\), where \(a\) and \(b\) are positive constants \((a > 0, b > 0)\), while \(\theta\) is a random variable taking the value \(\theta_L\) with probability \(\pi\) and the value \(\theta_H\) with probability \(1 - \pi\) \((\theta_H > \theta_L > 0)\). Thus \(\theta\) represents a variety of possible factors affecting local demand, including income and preference shocks linked, for example, to changes in demographic and environmental conditions (e.g. disease, weather, pests). This formulation has the advantage of capturing in an extremely simple and parsimonious way the importance of “local conditions”, which are observed either not at all or only imperfectly by the ruler.

3.3. The ruler

The ruler governs the polity: he provides certain public goods, such as law enforcement and defence, and finances these with various sources of revenue, including the taxation of trade. For the purpose of our analysis it is sufficient to treat his expenditures and his other sources of revenue as given exogenously, and to focus on the revenue he can raise from the taxation of local trade. We assume that the ruler’s objective is simply to maximize his revenues from this source. This can be justified by noting that, during the historical period we are considering, consumer welfare had relatively little weight in the typical ruler’s preferences, subject only to the constraint that it should not fall
so low as to provoke a popular revolt. We can then think of the taxation of the one good in our model as representing the taxation of all those commodities for which this constraint was not binding.

We assume that the ruler has the power to tax trade and to grant economic privileges to merchants; these privileges are discussed in greater detail in Section 4.3.

These assumptions are consistent with the historical evidence. Medieval rulers in both Europe and the Levant derived significantly large sums from taxing trade. The typical way that rulers obtained these revenues was through imposing ad valorem taxes such as customs dues, tolls, purchase taxes, staples, brokerage dues, anchorage, cranage, and keelage. By the thirteenth century, toll stations were a source of significant revenues for most European rulers. Even the Count-Kings of Catalonia, a territory by no means in the forefront of European commercial development, were by the twelfth century collecting significant sums through market taxes on local trade and tolls and albergae on the growing inter-regional trade. From 1275 onward, English rulers greatly increased their revenues through customs duties on wool exports, and by the 1330s the English crown was raising 50 per cent more through its duties on overseas trade than through direct taxation. By the later thirteenth century, the Mamluk government in Egypt was collecting significant sums from customs charges imposed on European spice merchants, with the advantage that revenues from taxing long-distance trade came directly to the crown rather than being granted as fiefs to the military or the nobility. Furthermore, as we shall see in detail below, it was an almost universal practice for medieval rulers to grant fiscal privileges and exemptions to both local and foreign merchants.

3.4. The tax collector

The tax collector is an agent who can be hired by the ruler to impose and collect an ad valorem tax on trade $\tau$. The agent, unlike the ruler, can observe the state of nature, $\theta$, and make the tax rate depend on it. We assume that the tax collector, being a single agent and not wealthy, is endowed with very little capital, which is normalized to zero. The zero capital assumption is made purely for expositional simplicity, as will become clear in Section 4: all we need for our results is that the tax collector be

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105For a survey of the variety and origin of these various taxes on trade, see Bernard (1972), p. 313.
110See Bernard (1972), p. 314, on the tax exemptions granted to the Gascon and German Hanse merchants in London.
capital-constrained.

This assumption is also motivated by the historical evidence. In twelfth-century Catalonia, for instance, rulers appointed as local tax-gatherers “vicars”, “bailiffs”, and “saigs”, recruited from the ranks of minor knights, unimportant creditors, local notables, priests, agrarian entrepreneurs, even working peasants. All of these agents were capital-constrained. In medieval England, rulers lacked civil servants to collect the valuable customs fees on exports of wool; instead, they granted the right to collect these fees to private “customs farmers”. One analysis of a series of consortia which purchased the English customs farms in the late 1340s shows that these “customs farmers” were less well-off merchants who relied on a shadowy group of rich merchant backers to provide them with the financial support necessary to purchase the customs farm from the crown. Sometimes rulers sold the right to collect certain taxes to wealthy “tax farmers”, but this simply transferred to the tax farmers the problem of delegating tax collection, and was presumably reflected in the purchase “price” they were willing to pay.

3.5. Information

To summarize, our key informational assumption is the following: consumers, merchants, and the tax collector (if hired) are aware of local conditions ($\theta$), but these are not observed by the ruler.

This assumption about information asymmetry between rulers and other agents concerning fiscally relevant data is consistent with the historical evidence. Medieval rulers did not possess a civil service which could be trusted to provide accurate information on local fiscal conditions of which consumers and merchants were aware, but rather employed a variety of agents who proved, to a greater or lesser degree, unreliable. The fiscal accounts of medieval Catalonia, for instance, show an unceasing struggle on the part of the Count-Kings to recruit more reliable agents to impose and collect taxes, and to devise more effective mechanisms for controlling the frequent fiscal malfeasance of their castellans, vicars, bailiffs, and saigs, resulting from the latter’s superior information about local conditions. When the Catalan rulers began imposing extraordinary taxes after 1196, they appointed bailiffs under the management of bishops, who received part of the revenues: “the bishops were enlisted because only the cathedral churches possessed lists of parishes to give something like complete census of population”.

The historical evidence also confirms the widespread scarcity of information in the

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111 Bisson (1984), pp. 24, 57, 61, 64-8, 71-2, 114.
medieval period about commercially relevant factors. Merchants themselves had the greatest incentive to obtain such information, and spent substantial resources doing so. Thus individual Italian merchants and their factors set up “correspondent relationships” in other cities, agreeing to keep each other informed on all matters concerning their respective markets. As the representative of a Florentine merchant in Venice wrote to the factor of a merchant in Pisa in 1383, “I shall keep you posted on news from [Venice and] Alexandria and you do the same for all news from Pisa and Genoa; write regarding any change and write often; it can only be advantageous”.

It has been argued on theoretical grounds that merchant guilds could facilitate the provision of commercial information to their members, although empirical evidence is lacking; if so, this would have increased merchants’ information advantage over rulers even further. Some doubt is cast on the superior information-gathering abilities of merchant guilds as opposed to private merchant firms by archival evidence showing that the German Hansa obtained information about commercial changes in Bruges later than the private firms within the Italian colonies there, relayed it with greater delay to its members, and reacted in ways indicating a misunderstanding of the implications of the information in question.

3.6. Timing

The timing of the model is as follows:
- at \( t = 0 \), the ruler decides whether to grant recognition to a merchant guild (see the detailed discussion in Section 4 below) and whether to hire an agent as tax collector. Ex ante transfers between the ruler and the guild or the agent, if any, take place at this stage.
- at \( t = 1 \), the state of nature \( \theta \) is realized. Trade takes place and taxes, if any, are levied. Ex post transfers between the ruler and the guild or the agent, if any, take place after trade.

3.7. Bargaining power

We assume that the ruler has all the bargaining power at \( t = 0 \). Thus if he hires an agent to collect taxes, he can do so by making him a take-it-or-leave-it offer. Indeed,
it seems likely that an agent (ordinary individual) who refused the ruler’s offer to work for him would have incurred some explicit and/or implicit sanction; moreover, the ruler could easily have found another agent willing to accept the offer.

Similarly, if the ruler decides to establish a subset of merchants as a merchant guild with a given set of privileges and obligations, he can do so by making them a take-it-or-leave-it offer. Merchants, before becoming organized in guilds, would have been in a poor position to exercise bargaining power in negotiating with the ruler. Thus, for instance, the merchants of Lombard and Carolingian Italy in the period c. 600 - c. 1100 were only able to trade because they obtained privileges from the royal court, landowning nobles, or bishops; they were not yet able to form autonomous corporate organizations, and instead were heavily dependent on royal or aristocratic favour.\footnote{Racine (1985), pp. 134-43, 148-9.}

Moreover, the set of all merchants $A$ (taken to include all agents potentially willing and able to act as merchants) would have been rather large in most cases, implying that only a smaller subset was needed to sustain the optimal levels of trade from the ruler’s point of view (see below). Indeed, merchant guilds devoted considerable attention to excluding large numbers of would-be traders among the ranks of craftsmen, peasants, Jews, women, migrants, and other outsiders, as shown by the evidence discussed in Section 4.3 below.

4. Trade and taxation in the basic model

We begin by considering what the ruler can achieve when merchants are not organized in a guild, and then proceed to examine the role of guilds.

4.1. Trade and taxation in the absence of merchant guilds

In the absence of merchant organizations, the ruler cannot negotiate directly with each merchant, as this would imply prohibitively high transactions costs.\footnote{The historical evidence suggests that before the appearance of merchant guilds, rulers did negotiate with individual merchants, but it was only worthwhile their incurring the costs to do so with the richest few; merchants operating on a smaller scale would yield too few taxes to be worth negotiating with. For suggestive evidence to this effect, see Racine (1985), p. 132; Abulafia (1978), p. 70.} He therefore has to delegate tax collection to an agent who, unlike the ruler, can observe local conditions ($\theta$), as well as realized trade (quantities and price). The agent is given the power to impose and collect an ad valorem tax $\tau$: that is, for each unit of the good sold at price $P$, the tax collector takes $\tau P$ and the merchant is left with $(1 - \tau)P$. In order to maximize tax revenue in each state of nature, the tax rate $\tau$ should depend on $\theta$. The revenue-maximizing state-contingent tax rate $\tau^*(\theta)$, as well as equilibrium prices, trade levels and total tax revenues, are given by the following Proposition.
Proposition 1 When individual merchants are not organized in guilds, the ad valorem tax on trade $\tau^*(\theta)$ which maximizes tax revenue in each state of nature, is given by $\tau^*(\theta) = (a\theta - c)/(a\theta + c)$. When the tax rate is $\tau^*(\theta)$, equilibrium levels of trade, prices and total tax revenues are equal to $q^*(\theta) = (a - c/\theta)/2b$, $P(q^*(\theta), \theta) = (a\theta + c)/2$, $T^*(\theta) = \tau^* P^* q^* = (a\theta - c)(a - c/\theta)/4b$.

Proof: see Appendix.

As might be expected, the revenue-maximizing tax rate, as well as the equilibrium price and quantity traded, and hence total tax revenues, are higher in the “good” state ($\theta_H$).

The problem for the ruler is that, unlike the agent, he is not able accurately to observe either the state $\theta$, or the realized levels of trade ($q^*$), or prices ($P^*$). In what follows, we consider two possibilities. To begin with, we assume that the ruler can observe the tax rate $\tau$ applied by the agent. We consider this case because it might have been possible for the ruler, at relatively low cost, to check (e.g. through occasional random inspections) whether the agent was applying the tax rate $\tau$ rather than any arbitrary tax rate. However, as discussed below, there are also good reasons to think that the ruler would have found it difficult to observe the “true” tax rate applied by the tax collector. We shall therefore also examine the case where the ruler cannot observe $\tau$: delegating taxation in this case is even more costly for him, which only strengthens our results. But for now, assume the ruler can observe the tax rate $\tau$ applied by the agent.

Thus the agent cannot simply apply a high tax rate and claim that he is applying the low tax rate. However, he can claim that the state is “bad” ($\theta_L$) even when in fact the state is “good” ($\theta_H$). This is enough for him to capture some rents, as shown in Proposition 2 below. Denote by $T^o(\tau, \theta)$ the total tax revenue that the agent can collect in state $\theta$ by applying the tax rate $\tau$.

Proposition 2 Assume that the ruler can observe the tax rate $\tau$ applied by the agent, but cannot observe the true state of nature $\theta$, realized levels of trade, prices, or tax revenues. In this case the second-best agreement between the ruler and the agent will specify the following:

(a) the tax rate to be applied in state $\theta_H$, $\tau^o(\theta_H) = \tau^*(\theta_H)$;
(b) the tax rate to be applied in state $\theta_L$, $\tau^o(\theta_L) = (\pi a - \alpha c)/(\pi a + \alpha c) < \tau^*(\theta_L)$, where $\alpha = 1/\theta_L - (1 - \pi)/\theta_H$;
(c) the transfer the agent should make to the ruler in state $\theta_H$, $t(\theta_H) = T^o(\tau^o(\theta_H), \theta_H) - T^o(\tau^o(\theta_L), \theta_H) + T^o(\tau^o(\theta_L), \theta_L) < T^*(\theta_H)$;
(d) the transfer the agent should make to the ruler in state $\theta_L$, $t(\theta_L) = T^o(\tau^o(\theta_L), \theta_L) < T^*(\theta_L)$.

The ruler’s expected utility from this agreement is given by $U^{DM} = \pi T^o(\tau_L, \theta_L) + (1 - \pi)[T^o(\tau_H, \theta_H) - T^o(\tau_L, \theta_H) + T^o(\tau_L, \theta_L)]$. 

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Proof: see Appendix.

The intuition for this result is the following. If the ruler simply required the agent to pay him a transfer equal to the maximum (first-best) tax revenues that can be collected in each state (i.e. $T^*(\theta_H)$ in state $\theta_H$ and $T^*(\theta_L)$ in state $\theta_L$), the agent would have an incentive to cheat in state $\theta_H$, claiming that the state was $\theta_L$, even though he would then be obliged to apply the lower tax rate, $\tau^*(\theta_L)$. By doing so, he could earn strictly positive rents; moreover, this outcome would be very inefficient from the point of view of the ruler-agent coalition, since the lower tax rate would be applied all the time, even in the good state when a higher tax rate is much more profitable. Proposition 2 describes the second-best outcome, taking into account the constraint due to asymmetric information between the ruler and the agent. As is well-known in standard adverse selection models of this kind, the second-best outcome entails no distortion in the “good” state, implying that the tax rate is set at its first-best level, whereas there is a distortion in the “bad” state, implying that the tax rate is set at a level strictly below the first-best: this is needed to discourage cheating, by making it very costly to claim that the state is $\theta_L$ when in fact it is $\theta_H$.

We can compare this second-best outcome with the first-best outcome, defined from the ruler’s point of view; that is, the outcome in which tax revenues are maximized in each state and entirely appropriated by the ruler. In this case, the ruler’s expected utility is given by $U^{FB} = \pi T^*(\tau^*_L, \theta_L) + (1 - \pi) T^*(\tau^*_H, \theta_H) > U^{DM}$. The second-best outcome entails a loss for the ruler, for two reasons: first, because total tax revenues are “too low” in the bad state; second, because even in the good state, although tax revenues are maximized, the ruler receives only a fraction of them - the remainder is kept by the agent, and represents the agent’s informational rents.

If we now relax the assumption that the ruler can observe the tax rate applied by the tax collector, the loss relative to the first-best outcome is correspondingly greater. The best the ruler can do in this case is to set the transfer $t = T^*(\theta_L)$, irrespective of the state $\theta$. Why would the ruler be unable to observe the tax rate applied, even allowing for the possibility of random checks suggested earlier? Given the second-best scheme described by Proposition 2, the agent may be tempted to collude with merchants in the “good” state, applying the lower tax rate in exchange for a bribe. If such collusion is difficult to detect, the ruler will always receive the lower transfer, $t(\theta_L) = T^*(\tau^*(\theta_L), \theta_L) < T^*(\theta_L)$. Thus a scheme in which the transfer is set equal to $t = T^*(\theta_L)$, irrespective of the state $\theta$, will be preferred by the ruler.

Could the ruler ever achieve the first-best with delegated taxation? One simple way to solve the ruler’s problem, if the agent had sufficient capital ex ante, would be for the agent to purchase the right to tax the merchants. He could then set the revenue-maximizing tax rate in each state of nature, $\tau^*(\theta)$. A simple contract that would work
(while minimizing the need for ex ante capital) is the following.\textsuperscript{121}

\begin{itemize}
\item ex ante (at \( t = 0 \)), the agent makes a payment \( L \) to the ruler, where \( L = (1 - \pi)[T^*(\theta_H) - T^*(\theta_L)] \);
\item ex post (at \( t = 1 \)), after he has collected tax revenues, the agent makes a second payment to the ruler, of value \( T^*(\theta_L) \).
\end{itemize}

However, we have assumed that the agent has insufficient capital ex ante, and therefore cannot pay \( L \). As we saw earlier, the assumption that the agent is capital-constrained is consistent with available evidence on the socioeconomic origins of the men appointed to collect taxes by medieval rulers such as the twelfth- and thirteenth-century Count-Kings of Catalonia, the thirteenth-century Counts of Flanders, and the fourteenth-century kings of England. This is where the establishment of a merchant guild can benefit the ruler, as will now be discussed.

### 4.2. Merchant guilds: trade, taxation and privileges

A possible solution to the ruler’s problem, enabling him to achieve the first-best, is the following. A subset of merchants \( S \) organize themselves as a group, able to act in the group members’ collective interest: call this group “the guild”. The guild pays \( L \) to the ruler ex ante and \( T^*(\theta_L) \) once trade has occurred, and is exempted from paying any other taxes.

Under what conditions can the guild be organized so as to implement the first-best solution? The answer to this question will shed light on the privileges that the ruler will be willing to grant to the guild. Clearly, the guild needs to be able to:

(a) enforce the profit-maximizing levels of trade, \( q^*(\theta) \), and prices, \( P^*(\theta) \). In particular, this means preventing non-members from trading, or obliging them to trade with guild members and not directly with consumers (so that the guild can earn monopoly profits from trade), and ensuring that individual members do not deviate from the group norms established to promote their collective interest (for example, by trading at prices below \( P^*(\theta) \)).

(b) levy dues on members, so as to make the required payments to the ruler.

We therefore have the following result:\textsuperscript{122}

**Proposition 3** As long as \( KX \geq L \), the ruler can achieve the first-best outcome, which gives him expected utility \( U^{FB} \), by establishing a merchant guild endowed with monopoly rights over local trade, and the right to levy dues on its members. The guild

\textsuperscript{121}This assumes that the ruler can commit not to “steal” \( L \) and then hire another agent to collect taxes - e.g. for reputational reasons.

\textsuperscript{122}This result assumes implicitly that the ruler can commit not to “cheat” the guild by accepting the payment \( L \) at \( t = 0 \) and then withdrawing its privileges and hiring an agent to levy taxes at \( t = 1 \). Section 5 will examine under what conditions the ruler can make such a (credible) commitment in a repeated game setting.
makes a transfer of value $L$ to the ruler ex ante and another transfer of value $T^*(θ_L)$ ex post.

**Proof:** The ruler at $t = 0$ makes a take-it-or-leave-it offer to a subset of merchants $S$, requiring them to pay $L$ ex ante and $T^*(θ_L)$ ex post. In return, the ruler establishes them as a merchant guild with monopoly rights over local trade and the right to levy dues on members; moreover, he exempts them from other forms of taxation. Since $KX ≥ L$, the ruler can always find a subset of merchants $S$ endowed with sufficient capital to accept the offer and make the required ex ante payment. □

### 4.3. Historical evidence in support of our model

This model of the formation of merchant guilds has six key empirical implications. We should find that:

1. **Rulers were willing to establish and support local merchant guilds**, and endow them with **monopoly rights** over local trade. These monopoly rights might take different forms, including the right to exclude non-members from trade altogether, as well as the requirement for non-members to trade only with members of the guild, or using guild members as intermediaries.

2. **Local merchant guilds were able to use legal privileges from rulers to prevent non-members from trading** and to **exclude applicants from membership**.

3. **Local merchant guilds established norms to promote their collective interest**, particularly relating to prices, volume of trade, transactions with non-members, etc.

4. **Local merchant guilds were able to impose sanctions** to ensure that their members did not deviate from these norms.

5. **Local merchant guilds were able to levy dues from their members**, which were used, at least partly, to make **transfers to the ruler**.

6. **Local merchant guilds were granted exemptions from other forms of taxation** by the ruler.

The historical evidence strongly supports all six of these empirical implications of our model.

#### 4.3.1. Rulers were willing to establish local merchant guilds with monopoly rights over local trade

From the late Dark Ages on, we know about merchant guilds precisely because of the legal recognition they were granted in charters from rulers, often alongside reductions in taxes and other economic privileges.\textsuperscript{123} A typical charter from the English crown read:

\begin{quote}
"We grant a Gild Merchant with a hanse and other customs belonging to the Gild,\"
\end{quote}

\textsuperscript{123}See, for instance, Frölich (1934), pp. 16-17; Kuske (1939), pp. 4-5; Choroskevic (1996), pp. 78-9.
so that no one who is not of the Gild may merchandise in the said town, except with
the consent of the burgesses.”¹²⁴ One of the earliest surviving accounts of a merchant
guild, dating from 1020, describes how the local merchant guild of the Flemish town of
Tiel “claimed that an imperial charter empowered them to settle disputes not according
to law but according to their own arbitrary will”.¹²⁵ In the twelfth and thirteenth
centuries, the rulers of Flanders granted wide-ranging privileges to Flemish towns and
the merchant guilds that dominated them in return for financial aid; in the 1241 charter
granted to Bruges, Countess Joan restricted eligibility for membership of the town
council to members of the local merchant guild.¹²⁶ Such examples can be reduplicated
throughout medieval Europe: all local merchant guilds secured charters or other forms
of legal recognition from local rulers.

Some rulers were willing to establish multiple local merchant guilds in the same
city, granting each guild privileges over a different sector of commerce. Thus, in tenth-
century Constantinople, four different merchant guilds respectively monopolized the
trade in silk cloths, manufactured goods imported from Syria and Baghdad, raw silk,
and linen cloths.¹²⁷ By 1218, Florence had separate guilds for the wool-merchants, the
silk-merchants, and the merchants specializing in money-changing; by 1267 these had
been joined by the guild of the leather-merchants.¹²⁸

4.3.2. Local merchant guilds used legal privileges from rulers to prevent non-
members from trading

Local merchant guilds were granted legal privileges by their rulers that enabled them
to prevent non-members from engaging in many lines of commercial business. Rulers
also granted them legal privileges to restrict the numbers and characteristics of those
admitted to guild membership.

Exclusion of foreign merchants

For one thing, local merchant guilds enjoyed legal privileges from rulers enabling
them to exclude foreign merchants from many branches of commercial activity, both
within the town itself and in the rural territory that was politically subject to it.¹²⁹

Some merchant guilds initially defined their membership loosely enough to admit some
foreigners who did business in the town, but many did not, and soon most local merchant

¹²⁷Racine (1985), p. 139; Freshfield (1938), pp. 16-23, 27-9 (Books 4, 5, 6, and 9).
526-7.
guilds excluded foreigners. In most medieval European towns, foreign merchants had to submit to so-called “rights of staple” (discussed in detail below) which required them to unload their wares in municipal warehouses where members of the local merchant guild had the right to purchase them at privileged prices. Foreign merchants also had to pay special tolls and taxes from which the local merchant guild was exempt. In most cities, the local merchant guild enjoyed rights of brokerage, which forbade alien merchants from trading directly with one another or with local customers, obliging them instead to trade through local brokers who were appointed by the local merchant guild from among its own membership. Legal privileges from rulers enabling local merchant guilds to exclude aliens from trading are observed almost universally across medieval Europe.

Byzantine Empire: In Constantinople, by 911-12 the ruler was protecting the four local merchant guilds which had local monopolies over different branches of commerce by limiting the activities of foreign merchants, restricting their length of stay (maximum 3 months), compelling them to live in particular hostels where their activities could be monitored, setting the conditions of sale of their merchandise, and limiting the types and quantities of goods they could export. Surviving records show that these privileges were actually enforced.

Levant: In Alexandria, a powerful association of rich Egyptian wholesale traders called the Karimis enjoyed legal privileges from the Mamluk rulers which enabled them “to establish a trust of spice traders and to control other branches of Alexandria’s international trade as well”.

Italian peninsula: All the great Italian city-states enacted protective legislation seeking to limit or exclude foreigners from membership in their merchant guilds, and thus from participation in many important branches of trade in their cities. The Genoese merchant guild, for instance, had a monopoly over exports of mastic from Chios to Egypt, which it farmed out to particular groups of Genoese merchants in exchange for lump-sum payments. Venice, the most important international entrepot in Italy, was unique in not having a local merchant guild in the city. Instead, all “citizens” were allowed to trade. Consequently, however, Venice was very restrictive in admitting new

130 Kohn (2003), p. 3.
134 Freshfield (1938), pp. 16-17, 20, 28-9, 44-5.
citizens, and “defining foreigners and identifying who was really Venetian became a preoccupation of public policy”.

Foreigners were excluded from many branches of trade in Venice, had to pay higher taxes on the branches of trade they were allowed to practise, were not permitted to transact business among themselves without employing Venetian middlemen (and paying a brokerage tax on the latter’s services), were not allowed to export merchandise from the Venetian port, and were not allowed to form commercial companies with Venetians. Only naturalization enabled a foreigner to trade and enjoy the “commercial privileges (especially tariff reductions) otherwise reserved for Venetians”. Even then, Venice placed a ceiling on the sums which new citizens were allowed to invest in maritime commerce. Restrictions on the commercial activities of foreign merchants were only loosened in the period immediately following the high mortality of the Black Death, and in wartime when the Venetian government became desperate for financial assistance and was willing to sell naturalization to rich foreign merchants.

**Iberian peninsula:** Throughout the later medieval period, the local merchant guilds of the Spanish cities of Burgos and Bilbao each obtained legal privileges from the Spanish crown to enable them legally to exclude each other’s members from the wool trade, giving rise to continual conflict.

**Low Countries:** The local merchant guild of Bruges secured from the ruler staple rights, customs privileges, and rights of brokerage which disadvantaged foreign merchants so much that the German Hansa suspended trade with the town in 1280 and again in 1358 to induce the ruler to reduce these privileges.

**England:** Medieval English towns excluded foreign merchants from direct contact with local consumers and producers by limiting their residence and restricting their dealings. Thus in 1281 a Flemish merchant was prosecuted in Leicester and banned from future legal trading with any guilded merchant there because he “travelled through the countryside in the county of Leicester, taking with him foreign merchants, and with the money of those merchants buying wool wherever he might find it, to the serious damage and contravention of the liberty [i.e. privilege] of the gild of the town”. The local merchant guilds in fourteenth-century London were in continual conflict with the alien merchant guilds of the Italian cities, since each guild sought privileges from the

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143 Smith (1940), pp. 68-9.
146 Bateson (1899), pp. 205-7.
ruler that would enable it “to exclude the other from the wool and the spice trades”.  

France: The eleventh-century by-laws of the merchant guild of Valenciennes forbade existing members to enter into commercial associations with alien merchants or support applications for admission from such merchants, who were prohibited from trading in the city and within a one-mile circumference around it. In 1151, the St Omer merchant guild was granted a charter by the ruler entitling them to build a guild hall, and declaring “that a foreign merchant shall never sell or expose his merchandise for sale except in that hall or its appendages or in the open market”; this enabled the guild to exercise close supervision over the precise commercial activities of foreign merchants, to ensure that they did not violate the various monopolies of the local guild, e.g. over retail selling.

Scandinavia: In 1157, the Danish crown granted legal privileges establishing the local merchant guild as “the sole privileged guild” in the town of Roskilde, with the right to exclude alien merchants from trading; the local Roskilde guild later protested vehemently when the ruler granted privileges to alien merchant guilds from Germany. In medieval Norway, local merchant guilds enjoyed monopoly privileges in many parts of the country because the ruler forbade foreign merchants to voyage north of Bergen.

Slavic lands: The local merchants of Novgorod were “highly exceptional” in not being able to prevent the German Hansa merchants from trading directly with Russians without being obliged to employ the services of local merchants as was the standard practice in England and the Netherlands; this may have been because the Novgorod merchants “probably did not have guild associations like their western counterparts”. In the fourteenth century, the local merchant guild of Cracow obtained staple rights from King Casimir of Poland, “endeavouring to deny merchants from Torun access to Russian and Hungary and take control themselves of the trade between these countries and western Europe.”

German-speaking Central Europe: In medieval Cologne, the local merchant guild enjoyed legal rights entitling its members to rights of prior purchase of the goods of alien merchants at prices set by the town council, the exclusive right over onward transportation of goods brought by alien merchants to the town, and monopoly rights over brokerage between different alien merchants. In medieval Lübeck, local merchants enjoyed legal privileges which “led to a systematic discrimination against foreign traders.”

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147 De Roover (1963), p. 102.
148 Planitz (1940), p. 25.
149 Kemble (1876), vol. II, p. 533.
154 Kuske (1939), pp. 40-1.
The local merchant guilds in German Hansa cities enjoyed privileges from their town governments entitling them to exclude all Slavs from trading in their cities from 1309 on; from about 1370 on, they began to apply anti-alien laws against even other Hanseatic merchants.\textsuperscript{156} The local merchant guild of Vienna obtained a privilege from the ruler in 1221 which enabled it to impose a “staple” regulation preventing merchants from Swabia, Regensburg and Passau from passing through the city with trade-goods destined for Hungary.\textsuperscript{157}

In summary, throughout medieval Europe, the privileges granted by rulers to the local merchant guild “provided domestic merchants with the opportunity for rent seeking that was frequently directed against merchants from other towns”.\textsuperscript{158}

**Exclusion of locals who wished to trade**

Local merchant guilds also enjoyed privileges from rulers enabling them to exclude local individuals from guild membership and thus from the legal right to trade as merchants locally: “a monopoly position was an essential feature of the privileged merchant guild”.\textsuperscript{159} In some cases the local merchant guild (and hence alien colonies of that guild) defined its membership quite loosely, and was open to all “citizens”; this was the case particularly in the early medieval period, in Venice, and in some English towns.\textsuperscript{160} However, full “citizenship” was an exclusive legal status held only by a subset of medieval urban inhabitants.\textsuperscript{161} Venice, as we have seen, was very restrictive in admitting outsiders to citizenship; other urban centres imposed at least a minimum property qualification.\textsuperscript{162} In most medieval cities, such restrictions created significant (and growing) groups of inhabitants - females, Jews, peasants from the surrounding countryside, immigrants from other cities, pawnbrokers, wage-workers, slaves - who were excluded from citizenship and hence from the right to trade.\textsuperscript{163}

In most medieval cities, moreover, privileges granted by the ruler meant that the local merchant guild (and its alien “colonies”) was not open to all citizens, and excluded more and more categories of people as time passed. Membership was restricted to those who did not practise any other occupation than that of merchant (thereby excluding craftsmen), to sons of existing members, to those who could afford high entry fees, and to those who satisfied requirements of gender, ethnicity, religion, or reputation.\textsuperscript{164} This


\textsuperscript{158} Volckart and Mangels (1999), p. 444.


\textsuperscript{162} Reyerson (2000), pp. 53, 59.


\textsuperscript{164} Kohn (2003), p. 3.
increasing exclusiveness toward local non-members is regarded as having been caused by the increasingly valuable monopolies and other rents acquired by merchant guilds. It can be observed almost universally across medieval Europe.

**Byzantine Empire:** In tenth-century Constantinople, locals who were not members of the relevant merchant guild were excluded from trading in raw silk, silk cloths, linen cloths, and manufactured goods imported from Syria and Baghdad; a merchant of one guild could not trade in wares reserved to another guild.

**Italian peninsula:** In tenth-century Constantinople, locals who were not members of the relevant merchant guild were excluded from trading in raw silk, silk cloths, linen cloths, and manufactured goods imported from Syria and Baghdad; a merchant of one guild could not trade in wares reserved to another guild.

**Byzantine Empire:** In tenth-century Constantinople, locals who were not members of the relevant merchant guild were excluded from trading in raw silk, silk cloths, linen cloths, and manufactured goods imported from Syria and Baghdad; a merchant of one guild could not trade in wares reserved to another guild.

**Italian peninsula:** The local merchant guild of Piacenza, one of the earliest to be established in Italy (first recorded in 1154), was already in the late twelfth century imposing admissions restrictions, apprenticeship regulations, and maintaining “a monopoly situation” for its members. In Prato, one could only practise the merchant trade if one could afford to pay the entrance fee to the merchant guild; for non-trivial groups among the inhabitants of the city this was out of the question.

**Iberian peninsula:** The merchant guilds established in the Catalan and Aragonian towns of Barcelona (before 1243), Valencia (1283), Palma de Mallorca (1343), Tortosa (1363), Girona (1385), Perpignan (1388), and San Feliú de Guixols (1443) received privileges from the ruler enabling them to restrict the right to trade locally to their own members, and to exclude members who did not meet “specific qualifications of age, property, occupation, and reputation”. In particular, the merchant guilds of Barcelona, Majorca, and Perpignan enjoyed privileges from the ruler entitling them to restrict entry to candidates who were local residents, were Christian by birth, could prove that they were active merchants, and succeeded in obtain the approval of two-thirds of the Council (i.e., of existing members of the merchant guild): “the matriculation committee often failed to admit merchants who considered themselves eligible. It is undeniable that the merchant class sought to take advantage of a restricted guild membership.”

**Low Countries:** In Ghent from 1199 on, no local inhabitant was allowed to trade as a merchant unless he obtained admission to the local merchant guild; to participate in the long-distance trade, one had to seek admission to the “Hansa” of the local merchant guild, which entitled one to trade abroad as a Ghent merchant. From the thirteenth century on, the merchant guild of the “brokers” was the most powerful guild in Bruges, and enjoyed the right to compel even local citizens to trade through its sole intermediation in all commercial dealings.

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165 Kohn (2003), p. 3.
168 Origo (1986), p. 44.
169 Woodward (2003), p. 3.
170 Smith (1940), p. 38.
171 Planitz (1940), pp. 27-8.
172 Daenell (1905), p. 16.
**England:** In most English towns by the end of the twelfth century the merchant guild excluded craftsmen from most forms of commerce, excluded all non-members from any participation in certain types of trade (e.g., all the retail trade of a town, or the retail trade in finished and dyed cloths), and imposed high admissions barriers; these monopoly rights became more illiberal in the course of the thirteenth century.\(^\text{173}\) Thus, for instance, in 1281 the Leicester merchant guild claimed a monopoly over buying wool in the surrounding countryside.\(^\text{174}\) In 1355, the “poor burgesses” of Newcastle-on-Tyne complained that the “rich burgesses” of the Gild Merchant were preventing them from selling cloth, herrings, wine, groceries and wool retail.\(^\text{175}\) In 1387, the merchant guild of Chipping Camden enjoyed privileges from the crown and from the town government entitling it to prevent a merchant from Northleach from trading in the countryside surrounding the town; when he violated these legal privileges, the merchant guild pursued him with threats of violence.\(^\text{176}\) Fourteenth- and fifteenth-century English merchant companies were closed to outsiders.\(^\text{177}\)

**France:** The eleventh-century by-laws of the Valenciennes merchant guild forbade existing members to support applications for admission from craftsmen, excluded craftsmen from admission unless they were rich and gave up their crafts, and prohibited trade by non-members in the city and within a one-mile circumference around it.\(^\text{178}\) The 1156 privilege of the merchant guild of Rouen and the 1170 privilege of the merchant guild of Paris reserved solely for guild members the right to trade by ship on the Seine.\(^\text{179}\)

**German-speaking Central Europe:** In German towns from the eleventh century on, the local mercatores (merchants) formed a guild-like grouping which was distinct from the wider populace (e.g., craftsmen, shopkeepers, victual-traders), enjoyed special legal privileges in the local market, and dominated the local town council.\(^\text{180}\) In 1183, in the oldest surviving explicit documentary reference to a guild in central Europe, the local merchant guild of Magdeburg received from the town government an exclusive monopoly over trading in high-quality woollen broadcloth, the most important local trade good.\(^\text{181}\) Its membership was distinct from (and socioeconomically superior to) the guilds of the shopkeepers and shoemakers which were granted privileges by the ruler at around the same time; in 1214 a new ruler confirmed the merchant guild’s monopoly and the entry

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\(^{174}\) Bateson (1899), pp. 205-7.

\(^{175}\) Hilton (1984), pp. 145, 149.


\(^{177}\) De Roover (1963), p. 118.

\(^{178}\) Planitz (1940), p. 25.

\(^{179}\) Kohn (2003), p. 3; Planitz (1940), p. 27.


\(^{181}\) On exclusion from woollen-broadcloth trading as equivalent to "exclusion from the primary activity of medieval merchanty", see Schultze (1908), p. 493.
fees it charged to new members.\textsuperscript{182} In 1219, the Emperor confirmed the local merchant
guild in Goslar in its monopoly over woollen-broadcloth trading and its right to exist
de spite a general prohibition on other guilds in the town, which is thought to have been
issued by the Emperor in response to lobbying by the Goslar merchant guild itself.\textsuperscript{183}
By 1290, the merchant guild in Goslar was charging entry fees of 8 Marks; this was
significantly higher than the 3 Marks charged by the richer craft guilds and only 1.5
Marks charged by the poorer craft guilds.\textsuperscript{184} According to a detailed surviving charter
of 1231, the merchant guild of Stendal enjoyed from the ruler an exclusive right to trade
in the town’s most important export, high-value woollen broadcloth. Local craftsmen
were prohibited from trading altogether, and foreign merchants were permitted to trade
only during the period of the annual fair. Admission could only be gained by paying
a substantial admission fee, giving up any other occupation, and satisfying a catch-all
“reputation clause”. The entry fee for local craftsmen was “such a high sum that this
provision meant the practical exclusion of all former craftsmen”. In 1304 the guild
adopted further restrictions to prevent the admission of minor clergy.\textsuperscript{185} The Halber-
stadt merchant guild (first mentioned in the early thirteenth century) enjoyed a legal
monopoly over all trade in woollen broadcloth. Its earliest surviving by-laws (dating
from around 1300) lay down careful admissions requirements for new members.\textsuperscript{186} In
the German Hanse towns, members of the guilds of shopkeepers and retailers were de-
nied admission to the guilds of the long-distance merchants.\textsuperscript{187} In the Austrian town of
Laufen in 1267, a local merchant guild consisting of 27 citizens drawn from 17 extended
families enjoyed a monopoly over navigation on the Salzach river; in 1278 the ruler
granted privileges to a new merchant guild with a fixed membership of 40 members and
a monopoly over salt-trading.\textsuperscript{188}

In summary, throughout medieval Europe, the exclusive privileges rulers granted
to merchant guilds meant that “monopolistic corporations ... were the instruments
of action, monopolistic privileges were the ends of action. If there was some kind of
balance within cities then it was a balance between monopolies.”\textsuperscript{189} Although merchant
guilds did admit new members, they admitted them in limited numbers and excluded
applicants according to a wide array of criteria, including wealth, gender, ethnicity,
religion, and local citizenship. Thus, counter to what is claimed by GMW, admissions
to merchant guilds were not open and free, and hence these guilds were in a position to
\textsuperscript{182}Schütt (1985), pp. 405-6.
\textsuperscript{185}Schulze (1985), pp. 379-81.
\textsuperscript{188}Störmer (1985), p. 366.
\textsuperscript{189}Hibbert (1963), p. 211.
act as monopolists.  

4.3.3. Local merchant guilds established norms to ensure that their members enjoyed rents

Merchant guilds typically established a structure of governance to formulate collective guild norms and penalize violations against them. These norms were directed at two main aims: first, at cementing the multi-stranded social interactions among guild members, which helped generate social capital; and second, at securing economic rents for the membership.

A first category of norms fostered by merchant guilds governed the multi-stranded relationships among guild members, particularly their regular social gatherings. James Coleman has argued that “multiplex” relationships among members of a social network, whereby they transact with one another in a range of different spheres - economic, social, political, religious - help to generate social capital, by creating multiple means for members to convey and receive information about one another, inflict penalties on other network members who violate norms, and efficiently organize collective action. Medieval merchant guilds practised, and often even mandated, regular social gatherings of their members to reinforce these multiplex relationships. In 1024, for instance, members of the merchant guild of the Flemish city of Tiel “begin their drinking bouts at the crack of dawn, and the one who tells dirty jokes with the loudest voice and raises laughter and induces the vulgar folk to drink gains high praise among them. For this purpose they pool their money and finance carouses at special times of the year where they, at higher feasts, get drunk quasi solemnly.”

Another early guild, that of St Omer in France, was by c. 1100 also fostering collective norms regarding sociability and penalizing members who violated it. The thirteenth-century merchant guild of the German city of Stendal fined members for missing guild assemblies, of which the guild held three each year. Early medieval merchant guilds also penalized members who, “by lending help to strangers, weakened the merchants’ conviction that there was no security outside their own community.” Such norms of sociability and mutual

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190 Merchant guilds’ deliberate strategies of excluding large categories of individual from membership not only limited competition among guild members, thereby enabling such guilds to act as monopolists. They also correspond to the strategies of “closure” which James Coleman regards as essential for a social network to generate significant social capital; see Coleman (1989), pp. S104-S110.
194 Pertz (1925), pp. 118-9; quoted in Volckart and Mangels (1999), p. 438. For more detail on the economic component of this guild’s collective norms, see also Dölder (1984), pp. 69-70.
assistance can be reduplicated for almost every medieval merchant guild.

A second category of norms fostered by merchant guilds were those directed at ensuring that guild members enjoyed rents. Medieval merchant guilds “submitted themselves to certain common rules with regard to prices, quantities, chartering and lading, the organization of convoys and disputes between members of the group”. The tenth-century Constantinople merchant guilds forbade members to engage in transactions over a certain value without reporting to the Emperor’s prefect, to export certain goods, to trade in goods reserved to other merchant guilds, to compete with one another on shop-rents, to offer higher wages to employees, or to sell to various categories of purchaser (notably Jews). Around 1100, the oldest surviving statute of a European merchant guild, that of the French town of St. Omer, prohibited “regrating” (buying up for re-sale), imposed rights of pre-emptive purchase, and claimed for its members the sole right over the long-distance trade to England and to French areas south of the Somme. Around 1200, Swedish merchant guilds enjoyed charters from the ruler enabling them to penalize “unfair commercial competition between guild members”. The thirteenth-century privileges of the Laufen river-merchants in Austria prevented any member from having more than three ships; those of the salt-merchants’ guild placed a ceiling on membership numbers. The thirteenth-century Karimi merchant association in Alexandria enjoyed privileges from the Mamluk rulers enabling them to fix the prices on Egyptian spice exchanges and control the sale of the European merchandise offered by Italian traders. The early fourteenth-century merchant guilds in the duchy of Brabant enjoyed privileges from the ruler entitling them to legally fix the wages that could be paid to craftsmen and labourers. Fourteenth- and fifteenth-century English merchant companies fixed prices, imposed quotas, and regulated allotment of shipping space. Fourteenth- and fifteenth-century Catalan merchant guilds secured regulations from the ruler prohibiting chartering of foreign ships for trade going out from their local cities when native ships were available, required alien merchants to use Catalan ships to re-export, fixed freight rates, secured insurance and sea-loan statutes which discriminated against foreigners, obtained customs duties which discriminated against French and Genoese merchants, placed embargoes on imports of foreign textiles, and required foreign merchants to register with the local merchant guild.

In summary, throughout medieval Europe, merchant guilds did create a social capital
of “shared norms”. However, as these examples show, the shared norms established by merchant guilds were directed at securing rents for network insiders at the expense of the rest of society.

4.3.4. Local merchant guilds imposed sanctions on members who violated their norms

Merchant guilds exercised a wide array of formal and informal sanctions which they imposed on members who violated their norms. Informal sanctions are by their nature less frequently mentioned in the sources, but scattered references suggest that they included gossiping, shunning, and exclusion from the social gatherings of the guild.\textsuperscript{207} Formal penalties were explicitly enshrined in guild by-laws and included fines, imprisonment, confiscation of wares, shaving, flogging, and expulsion from the guild.\textsuperscript{208} Thus, for instance, the merchant guilds of early-tenth-century Constantinople imposed penalties of flogging, shaving, or confiscation on any member who violated their by-laws.\textsuperscript{209} The twelfth-century merchant guild of the Swedish city of Flensburg imposed fines on any member who litigated against a fellow-member in a local or foreign lawcourt instead of solving the conflict internally before the guild.\textsuperscript{210} The thirteenth-century Leicester merchant guild threatened expulsion and exclusion from guild privileges to anyone who engaged in business with an outsider who had violated their local monopoly.\textsuperscript{211} The thirteenth-century merchant guild of the German city of Stendal fined members who violated the guild monopoly and ejected members who tried to practise crafts.\textsuperscript{212} As already mentioned, Venice was one of the minority of medieval cities in which all “citizens” could trade as merchants; but the Venetian merchant “consuls” strictly regulated local merchants and penalized violations through fines (e.g. for any local who sought to operate as an intermediary between foreign merchants and local buyers without being officially appointed as a broker) or exclusion from trading rights (e.g. for any local who broke maritime regulations or breached financial contracts).\textsuperscript{213}

\textsuperscript{207}Volckart and Mangels (1999), p. 440.
\textsuperscript{209}Racine (1985), p. 139; Freshfield (1938), 16-17, 19-22, 28-9.
\textsuperscript{210}Schütt (1980), pp. 112-121.
\textsuperscript{211}Bateson (1899), pp. 205-7.
\textsuperscript{212}Schulze (1985), pp. 379-80.
4.3.5. Local merchant guilds levied dues from their members and used them to make transfers to rulers

Local merchant guilds customarily levied financial contributions from their members.\(^{214}\) Thus, for instance, the early-tenth-century Constantinople merchant guilds collected entrance fees from new members and license fees when any member bought another’s workshop.\(^{215}\) The early eleventh-century merchant guild of the Flemish town of Tiel levied dues from members and maintained a collective fund.\(^{216}\) The twelfth-century merchant guild of the Swedish city of Flensburg collected a tax from each member at the annual guild gathering.\(^{217}\) The thirteenth-century salt-commerce merchant guild in the Austrian town of Laufen levied a money tax from each new entrant.\(^{218}\) The fourteenth- and fifteenth-century Catalan merchant guilds collected an array of dues from their members.\(^{219}\) Fourteenth- and fifteenth-century English merchant guilds levied regular dues on them, and raised extraordinary contributions by holding drinking-sessions “to loosen the purse-strings of the brethren”.\(^{220}\) Throughout medieval Europe, wherever their activities are recorded in detail, local merchant guilds levied financial contributions from their members.

Local merchant guilds then used these financial contributions to make transfers to rulers. Thus the early-tenth-century silk-commerce merchant guild in Constantinople transferred certain fees directly to the ruler.\(^{221}\) The eleventh-century Pavia merchant guild paid a tax directly to the Master of the Royal Chamber.\(^{222}\) The eleventh-century Tiel merchant guild boasted publicly of its immunity to criticism of its activities on the grounds that it yielded substantial customs revenues to the ruler.\(^{223}\) The eleventh-century merchant guild of St. Omer made transfers to the town government by maintaining streets, walls, gates and fortifications, and by contributing to communal welfare provision.\(^{224}\) The twelfth-century Flensburg merchant guild paid a lump-sum tax to the rulers of the city.\(^{225}\) The thirteenth-century Catalan merchant guilds “courted royal favor with gifts and loans”,\(^{226}\) and made substantial transfers to rulers to cover military costs and

\(^{214}\) Kohn (2003), pp. 43-4.
\(^{217}\) Schött (1980), pp. 112-121.
\(^{219}\) Smith (1940), pp. 61-4; Woodward (2003), p. 2.
\(^{220}\) Gross (1890), p. 58 (quotation); see also the discussion in Kohn (2003), p. 44.
\(^{221}\) Racine (1985), p. 139; Freshfield (1938), p. 17.
\(^{222}\) Racine (1985), pp. 135-6.
\(^{225}\) Schött (1980), pp. 112-121.
other public goods.\textsuperscript{227} The thirteenth- and fourteenth-century Karimi merchant association in Alexandria made large transfers to rulers in the form of customs fees, loans, and forced purchases of royal merchandise.\textsuperscript{228} Fourteenth- and fifteenth-century English merchant guilds made transfers to local town governments to help pay royal taxes and cover the expenses of royal visits.\textsuperscript{229} The fifteenth-century Majorca merchant guild floated a loan to help the Spanish crown furnish four galleys for a military expedition.\textsuperscript{230} Spanish merchant guilds routinely made contributions to rulers to finance foreign political adventures, getting “a quid pro quo in the form of renewal and enlargement of the guild privileges ... it was the rule rather than the exception for the Consulado to pay substantial sums for privileges and other favors granted by the crown”.\textsuperscript{231}

It might seem that many of these transfers were one-off payments made when the ruler granted privileges to the merchant guild, but it must be recognized that guilds’ privileges from rulers were subject to continual renegotiation, often involving further transfers from guild to ruler.\textsuperscript{232} Transfers to the ruler were usually made as lump-sum payments, but they could also take the form of advantageous loans (as discussed in Section 5.3).

Local merchant guilds also provided assistance to rulers by helping them collect taxes on trade. This could constitute an indirect way for the guilds to transfer to rulers a share of their rents. Thus rulers throughout Europe made a practice of mortgaging customs collection to merchant guilds or companies.\textsuperscript{233} Catalan merchant guilds collected duties on trade and then transferred them to the ruler.\textsuperscript{234} Spanish merchant guilds routinely levied tariffs and other special duties on commerce which were paid directly to the crown.\textsuperscript{235} The Seville consulado, for instance, “collected an avería tax to help pay for defending and supervising the fleets and collaborated with the government in the collection and administration of many other taxes on trade”.\textsuperscript{236} In the thirteenth and fourteenth centuries, merchant guilds and merchant companies collected the English wool subsidy, “the single most important element in the fiscal machinery of the state”, on behalf of the crown in exchange for lump-sum transfers and trading privileges.\textsuperscript{237}

The most important and ubiquitous manifestation of this arrangement was the institution of the “staple”, which rulers granted to most medieval cities from the twelfth or

\footnotesize{\textsuperscript{227}Woodward (2003), p. 2.  
\textsuperscript{228}Ashtor (1983), pp. 73-4, 271-83.  
\textsuperscript{229}Gross (1890), p. 58; see also the discussion in Kohn (2003), p. 44.  
\textsuperscript{230}Smith (1940), p. 37.  
\textsuperscript{231}Smith (1940), pp. 48, 64-5.  
\textsuperscript{232}For examples, see Pryor (2000), pp. 427-8; Ormrod (2000), p. 418; Smith (1940), pp. 64-5, 85.  
\textsuperscript{233}Bernard (1972), p. 327.  
\textsuperscript{234}Woodward (2003), p. 2.  
\textsuperscript{235}Smith (1940), pp. 61-4, 86.  
\textsuperscript{236}Woodward (2003), p. 3.  
\textsuperscript{237}Fryde (1958), pp. 2-8; Ormrod (2000), p. 292.}
The staple was a set of privileges entitling a town to compel alien merchants travelling within a particular distance of the town (often a mile, the so-called “ban-mile”) to unload their wares in municipal warehouses for a specified period (often three days). There, locals (particularly the local merchant guild, but also guilds of craftsmen) enjoyed exclusive legal rights to purchase the goods at privileged prices, or to take over their onward transport in local carts or ships. Staple rights could be maintained because towns were often established in geographically advantageous locations for trade (e.g. dominating important highways, inland waterways, or ports) and it was costly for alien merchants to travel around them. Rulers often forbade alien merchants to travel through their realms on “prohibited” roads which circumvented local staple rights. Alien merchants who sought to evade the staple were threatened with being excluded from the right to trade in the town: in Cologne, for instance, those who evaded the staple were recorded on blacklists hung in the guild halls and purchasing halls, were denied the right to use freight cranes and purchasing halls, and were boycotted by local brokers’ guilds.

The town staple right served a dual purpose: it generated rents for local guilds of merchants and brokers; and it reduced rulers’ costs of tax collection. The obligation to unload all goods in local warehouses and have them inspected by local merchants with a view to exercising their right of prior purchase simplified collection of tolls for the ruler. Rulers permitted alien merchants to buy exemptions from the local staple right by paying a tax or toll. Rulers also sometimes obliged members of the local merchant guild to collect an excise tax on the value of all goods deposited at the staple. The local merchant guilds clearly derived valuable rents from the staple, as shown by their perpetual lobbying for its enforcement and extension. So valuable were the rents from the staple that less than 20 years after the Emperor granted Cologne the right

238 On the origins of the staple, see Kuske (1939); Kohn (2003), p. 16.
239 Kuske (1939), pp. 15-16, 33-5; Daenell (1905), p. 16.
240 See Bernard (1972), p. 302 (Bruges); Kuske (1939) (Cologne).
241 On how Cologne, Venice, London, Bergen, Novgorod, and other medieval European cities (including most of the towns located on the river Rhine) exploited their geographical advantages to attract alien merchants while still enforcing staple rights for local merchant and craft guilds, see Kuske (1939), pp. 16, 25, 28, 31-3.
244 Kuske (1939), p. 38 (Cologne).
245 For examples, see Kuske (1939), p. 37 (Cologne, fee payable to town government).
246 Thus in Cologne, members of the local brokers’ guild took an official oath obliging them to collect the 1% excise tax on the value of goods deposited at the staple as they were inspecting and fixing prices for them; see Kuske (1939), p. 41.
247 On efforts by Cologne in the fifteenth century to extend the “ban-mile” for its merchants’ rights of prior purchase, in order to reduce competition by the merchants of Neuß, Düsseldorf, Bonn, Nijmegen, Wesel, and Emmerich, see Kuske (1939), pp. 27-8.
to collect a new Rhine toll on alien merchants in 1475, the town voluntarily ceased to collect it because it was endangering their profits from the staple by deterring alien merchants from using the trade route leading through the city.\textsuperscript{248} Alien merchant guilds equally clearly suffered costs from the staple, as shown by their attempts to avoid it, their perpetual agitation to have it reduced or abolished, and their strategy of entering into commercial associations with members of the local merchant guild in order to exempt merchandise from the staple.\textsuperscript{249} Rulers benefited from the staple, as shown by its ubiquity throughout medieval Europe and its survival in some polities long into the early modern period - many staple rights in central Europe were only abolished with the Congress of Vienna in 1815.\textsuperscript{250}

4.3.6. Local merchant guilds were granted exemptions from other forms of taxation by the ruler

A final implication of our model is that local merchant guilds were exempted from other forms of taxation by rulers. Empirically, this was a universal characteristic of relations between local merchant guilds and rulers. Planitz describes freedom from tolls as one of the most important privileges rulers conferred on merchant guilds.\textsuperscript{251} Over time, most merchant guilds negotiated with rulers to obtain “exemptions from various tolls and taxes”.\textsuperscript{252} Thus, for instance, the twelfth-century merchant guild of Bremen was granted by the ruler the abolition of the “hanse”, a special extra tax paid by merchants on top of the usual citizen’s tax.\textsuperscript{253} The thirteenth-century Dortmund merchant guild was granted freedom from customs charges by the German emperor.\textsuperscript{254} The thirteenth-century Schleswig merchant guild was free by the Danish king from customs duties, sales tax, and other trade taxes.\textsuperscript{255} The fourteenth- and fifteenth-century Spanish merchant guilds were issued with exemptions from tolls and blanket pardons for violations of laws regarding tax payments.\textsuperscript{256} Fourteenth- and fifteenth-century English merchant guilds purchased toll exemptions from the crown.\textsuperscript{257} In short, freedom from other forms of taxation was a central component of the privileges granted to local merchant guilds by medieval rulers.

\textsuperscript{248}Kuske (1939), p. 39.
\textsuperscript{249}Kuske (1939), pp. 38-40 (Cologne); De Roover (1963), p. 65 (Bruges); Hlaváček (2000), p. 566 (German-speaking central Europe).
\textsuperscript{250}Kuske (1939), p. 46.
\textsuperscript{251}Volckart and Mangels (1999), p. 443; quoting Planitz (1943), no page ref.
\textsuperscript{252}Kohn (2003), p. 3.
\textsuperscript{255}Hoffmann (1980), p. 49.
\textsuperscript{257}Kohn (2003), p. 12 with n. 52; referring to Masschaele (1997).
5. Some further implications and extensions of the basic model

So far, our model explains two major bodies of evidence that the existing model ignores: why most merchant guilds were local, and why rulers were willing to grant them exclusive local trading rights and other economic privileges in return for various forms of payment. We now go on to explain why rulers often welcomed the establishment of alien merchant guilds, why they were willing to grant them a variety of economic privileges in return for lump-sum payments and other forms of transfer, and why most international trade centers had multiple merchant guilds (a fact ignored by the GMW model).

5.1. The evolution of ruler-guild relations and the role of alien guilds

To examine the evolution of ruler-guild relations, consider the simplest possible extension of the basic model to a repeated game setting. Let the two-period model described in Section 3 represent the stage game in an infinitely repeated game. Thus in what follows each “period” $t$ will represent one realization of this stage game. The players’ common discount factor is denoted by $\delta$. During each stage game, the random variable $\theta_t$ will be an independent random draw from the distribution described in Subsection 3.2; that is, $\theta_t$ takes the value $\theta_L$ with probability $\pi$ and $\theta_H$ with probability $1 - \pi$.

The timing of the game is now as follows. At $t = 0$, the ruler decides whether to grant recognition to a merchant guild and on what terms. We can model this as the offer of a long-term contract to a subset $S$ of merchants, specifying the privileges to be enjoyed by the guild (formed by this subset $S$ of merchants) in all subsequent periods $t$ ($t = 0, 1, \ldots \infty$), together with the transfers to be made by the guild to the ruler at the beginning ($y_0$) and end ($y_1$) of each period. The merchants can accept or refuse the offer. If they refuse, the ruler adopts the delegated taxation solution, which gives the merchants zero profits. If the offer is accepted, the game continues as specified in the contract, unless one of the two parties decides to deviate (see below).

In this setting, the first-best outcome from the ruler’s ex ante ($t = 0$) point of view can be defined as one in which the ruler obtains utility $U^{FB}$ in every period $t$, implying that his ex ante expected utility is given by:

$$U^* = \sum \delta^t U^{FB} = U^{FB} / (1 - \delta).$$

Denote by $C_0$ the ruler’s contractual offer to the subset $S$ of merchants at $t = 0$, and let the variable $p_t$ take value 1 if the subset $S$ of merchants is established as a merchant guild in period $t$, with monopoly rights over local trade and the right to levy dues on members; otherwise $p_t$ takes value 0. Thus a contract $C_0$ is defined as $C_0 = \{p_t, y_{0t}, y_{1t}\}$ for $t = (0, 1, \ldots, \infty)$.

The first-best outcome can be sustained as a subgame perfect equilibrium of the infinitely repeated game between the ruler and the merchants as long as players are
sufficiently patient.\footnote{For simplicity we abstract from the possibility of involuntary default by the guild - that is, the possibility that at the beginning of some period \( t \) the guild may find itself with insufficient resources to make the payment \( y_0 \) (to the extent that the ruler cannot distinguish between voluntary and involuntary default, the latter will be punished in the same way as the former). Clearly if the likelihood of involuntary default is high, the first-best outcome is unlikely to be sustained in equilibrium over time. In practice this does not seem to have been a significant problem. Moreover, it is worth emphasizing that guilds were often able to provide non-financial assistance to the ruler (e.g. various forms of political support) which could substitute, at least partly, for financial transfers; evidence to this effect is presented below.}

**Proposition 4** Suppose that the following condition holds:

\[
U_{FB}(1 - \delta) \geq L + U_{DM}(1 - \delta)
\]  \hspace{1cm} (C1)

Then the following strategies form a subgame perfect equilibrium of the infinitely repeated game between the ruler and the merchants: at \( t = 0 \), the ruler offers the contract \( C_0 = \{p_t = 1, y_0 = L, y_{1t} = T^*(\theta_L)\} \) for \( t = (0,1,\ldots,\infty) \) to the subset \( S \) of merchants. If the merchants accept and respect the agreement, the ruler respects the agreement. If the merchants refuse the agreement, the ruler adopts the delegated taxation solution. If, having accepted the agreement, the merchants deviate during any period \( t \), the ruler withdraws their privileges and adopts the delegated taxation solution from then on. The merchants at \( t = 0 \) accept any offer from the ruler that gives them non-negative expected profits. If the ruler respects the agreement, so do the merchants. If the ruler deviates from the agreement during any period \( t \), the merchants refuse to cooperate from then on.

**Proof**: The payments profile implied by the contract \( C_0 \) gives the ruler expected utility \( U^* \); the ruler cannot do better than this. Given the ruler’s strategy, the merchants cannot do better than accept his offer \( C_0 \) at \( t = 0 \). It remains to show that neither the ruler nor the guild can gain by deviating in any subsequent period \( t \). Deviation by the guild entails non-payment (or partial payment) of either \( L \) or \( T^*(\theta_L) \). If the guild does not pay \( L \) in full, the ruler withdraws its privileges and hires an agent to collect taxes; the guild therefore cannot benefit from such a deviation. The same is true if the guild does not pay in full \( T^*(\theta_L) \). Deviation by the ruler entails withdrawing the guild’s privileges and delegating tax collection to an agent just after the guild has paid \( L \) in full. The gain from this deviation in period \( t \) is \( L + U_{DM} - U_{FB} \); the loss is the difference between \( U_{FB} \) and \( U_{DM} \) in all subsequent periods. Condition (C1) implies that the ruler cannot benefit from such a deviation.\footnote{Notice also that if the ruler tries to deviate by taking \( L \) from the existing guild, then withdrawing its privileges and offering to form a new guild with a different subset of merchants, the new subset of merchants will not be willing to make any ex ante payments to the ruler, for fear of suffering the same fate as the original guild. The ruler therefore could not gain from this type of deviation either.} \( \square \)

Proposition 4 shows that the first-best outcome, in which the ruler obtains the
total expected surplus from trade while the guild makes zero expected profits, can be sustained in equilibrium over time as long as $\delta$ is not too low. How robust is this result?

We have assumed so far that the subset of merchants $S$ that forms the guild is smaller than the set of all merchants $A$ (which includes all agents potentially willing and able to act as merchants, i.e. to trade); indeed, this is what gave value to the guild’s power to exclude non-members from trade (monopoly rights). This is consistent with available historical evidence, as discussed in Section 4.3 above.

However, once a guild was established and endowed with such monopoly rights, it typically used its power to try to become entrenched, eliminating or at any rate undermining potentially viable competitors so as to become the only credible player who could commit to providing the required levels of trade and regular sources of income for the ruler. Thus in the course of the twelfth- and thirteenth-century conflicts between the merchant guild and craftsmen’s guilds in the German town of Goslar, the merchant guild actually prevailed upon the ruler to outlaw all guilds (except that of the merchants themselves) in 1219. When this prohibition was lifted again in 1223, the two guilds that continued to be prohibited were those of the carpenters and linen-weavers, a decision that is regarded as reflecting the economic interests of the merchants in dominating local trade.\footnote{Frölich (1934), pp. 36-7; Dilcher (1984), p. 71.}

To the extent that a merchant guild succeeded in undermining potential local competitors, it acquired some bargaining power relative to the ruler; it could then try to use this to obtain a share of the surplus from trade.

Going back to Proposition 4, notice that the ruler’s “punishment” strategy, used to sustain the equilibrium, entails adopting the delegated taxation solution, which gives the ruler per-period utility $U^{DM}$. However, if the guild is fully entrenched, it can withdraw from trade and thereby reduce the ruler’s utility to zero (no trade, no revenue). The guild, once entrenched, might be able to use this fact to renegotiate the original contract in its favour (i.e. so as to make positive expected profits); clearly, the extent to which it will be able to do this depends on the nature of the bargaining (renegotiation) game between the ruler and the guild. In practice, given that medieval rulers’ coercive powers were typically subject to substantial limitations (rulers often faced both financial and political constraints - indeed merchant guilds played an important role in helping to alleviate both types of constraint, as will be discussed below), it seems highly likely that entrenched merchant guilds were indeed able to secure a significant share of the surplus from trade for themselves.

We therefore have the following implications for the evolution of ruler-guild relations over time. When guilds were first established, they were typically in no position to earn significant rents: more precisely, they did earn substantial rents from trade (monopoly profits), but these rents were used to obtain the continued support of rulers, without whom guild merchants could not have earned the rents in the first place. However, as
time went by, those guilds that succeeded in becoming entrenched were able to acquire some bargaining power, which they used to obtain a share of the surplus from trade: the rents were then divided between rulers and guilds.

So far we have been referring to relations between each local ruler and the local guild. When a sufficiently well-organized guild of alien merchants arrives on the scene and tries to negotiate with the local ruler to obtain trading rights, this obviously affects the relative bargaining power of the local ruler and the local guild in their negotiations. To the extent that the alien guild represents a credible alternative to the local guild, the result is a decrease in the local guild’s bargaining power, to the ruler’s advantage. The implication is that, in many cases, the arrival of alien guilds should have been welcomed by local rulers, and opposed by local guilds.

Of course, in some cases the local guild may have been able to retain all its monopoly privileges - at a price. In other cases, the local guild’s offer to the ruler may not have been sufficient to induce the ruler to turn down rival offers from alien guilds, partly because of differences in what each guild could provide, and partly because each guild’s bilateral negotiations with the ruler must have taken place under conditions of asymmetric information (thus, for example, the local guild probably possessed better information concerning local trade, while each alien guild probably had superior knowledge of its own costs). In practice, negotiations could take place over “partial” monopoly privileges: rulers of international trade centers were typically able to grant a wide range of privileges, including exclusive rights to trade in particular commodities, in particular areas, to particular customers, with corresponding reductions in, or exemptions from, different taxes on trade. This would have been of considerable interest to rulers, since in most cases they were likely to have even less direct access to relevant information than the guilds. In particular, their information about the true value to the guilds of the different privileges they could grant them must have been obtained to a large extent indirectly, from the offers that guilds were willing to make to be given those privileges. This suggests that rulers should have been willing to grant different privileges to a different extent to different guilds, with periodic renegotiations, in order to elicit information about the (changing) value of privileges over time.

5.2. Historical evidence in support of our model

We can now identify seven key empirical implications of this extensions of our model, which can be confronted with the historical evidence:

(1) Rulers welcomed the establishment of alien merchant guilds in their polities and granted them economic privileges.

(2) Local merchant guilds, on the other hand, objected to local rulers granting privileges to alien merchant guilds.

(3) Alien merchant guilds were able to prevent non-members from trading and to
exclude applicants from membership.

(4) Alien merchant guilds established norms to promote their collective interest, particularly relating to prices, volume of trade, transactions with non-members, etc.

(5) Alien merchant guilds were able to impose sanctions to ensure that their members did not deviate from these norms.

(6) Alien merchant guilds were able to levy dues from their members, which were used, at least partly, to make transfers to the ruler, in return for their privileges.

(7) Rulers granted different privileges to different guilds in return for different transfers, with periodic renegotiations. These privileges included reductions in trade taxes. Part of the transfers from alien merchant guilds to rulers might take the form of assistance in tax-gathering rather than direct financial payments.

Once again, the empirical implications of our analysis are strongly supported by the historical evidence.

5.2.1. Rulers welcomed alien merchant guilds

In the vast majority of documented cases, rulers welcomed the establishment of alien merchant guilds and granted them privileges. There were two reasons for this. First, an alien merchant guild could improve a ruler’s bargaining position vis-à-vis other (local or alien) merchant guilds. Second, a new alien merchant guild could provide the ruler with additional fiscal assistance.

Medieval rulers are widely observed deliberately seeking to attract alien merchant guilds to their cities. Thus, for instance, from the twelfth century on, Danish rulers openly welcomed and offered privileges to guilds of north German merchants in Malmö, Copenhagen, and Ripen.262 From the thirteenth century on, Swedish rulers did the same, granting north German merchant guilds commercial privileges and equal rights with domestic merchants in cities such as Stockholm and Lödöse.263 From the 1340s on, Norwegian rulers actively encouraged the German merchant guild in Bergen through granting it official contracts and privileges.264 In 1417, the Genoese government tried to entice a German merchant colony to Genoa by promising better conditions than those offered by the Venetians, including the privilege of exporting merchandise from the city’s port, something Venice prohibited to foreign merchants.265 In the fifteenth century, town rulers in the Low Countries competed with one another to attract the English guild of the Merchant Adventurers, because of the monopoly it enjoyed from the English ruler on exports of unfinished English woollen cloths, a central input into

262 Daenell (1905), pp. 25-6.
263 Daenell (1905), pp. 25-6.
the textile sector of most towns in the Low Countries.  

Rulers’ willingness to welcome alien merchant guilds was sometimes explicitly motivated by the desire to reduce the entrenched power of an influential local or alien merchant guild. Thus, for example, in 1257 the ruler of Jerusalem granted privileges to the Anconitan merchant guild, in an attempt to obtain the political support of “a group of Italian merchants who did not yet enjoy the special legal status of the Genoese or the Venetians”. In the 1350s, the ruler of Flanders granted staple privileges in Antwerp to the merchant guild of Amsterdam, in the hope of replacing the German Hansa which was embargoing his cities. Likewise, in the 1420s, the Sultan issued new privileges to the Venetian merchant guilds in the Levant, and granted recognition to the Florentine merchant guild, motivated partly by his desire to reduce the powers of the powerful local Karimi merchant association.

Rulers are also widely observed encouraging, or even ordering, alien merchant guilds to proliferate in their cities with a view to reducing the individual influence of each guild. Thus, for instance, the Greek emperors encouraged the formation of different alien merchant guilds in Constantinople and then deliberately fomented conflict between them so as to reduce their power. As time passed, rulers in the Levant and other Mediterranean trading centers increasingly compelled merchants from minor Italian and Spanish cities to form separate guilds rather than trading as guest members of the colonies of the Venetians, Genoese, or Pisans. In 1257, for instance, the rulers of Jerusalem explicitly stipulated that the merchants of Ancona were to trade as members of their own guild rather than pretending to be members of the Genoese and Venetian merchant guilds. Around 1299, the rulers of Cyprus encouraged the separation of Provençal merchants into separate guilds for the merchants of Narbonne, Marseilles, and Montpellier, each with its separate “consul” in Famagusta.

In summary, most rulers of long-distance trading centers welcomed alien merchant guilds and encouraged their proliferation, explicitly in order to reduce the bargaining power of any individual merchant guild, including those of local merchants.

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273 Abulafia (Narbonne), p. 192.
5.2.2. Local merchant guilds objected to local rulers granting privileges to alien merchant guilds

Not surprisingly, local merchant guilds strongly objected to local rulers granting recognition and economic privileges to alien merchant guilds. In the mid-twelfth century, local merchants in Messina “grew restive” when the Sicilian rulers granted trading privileges to the merchant guilds of the Genoese, the Venetians, and the Pisans. In 1157, the local merchant guild of the Danish city of Roskilde objected to the privileges granted by Waldemar I to German merchant guilds. In 1280, the local merchant guild of Bruges objected to privileges granted to the German Hansa by the Flemish ruler. In 1284, the local Norwegian merchants objected to privileges granted to the German Hansa by the Norwegian crown. In the late thirteenth and early fourteenth century, the local merchant guild in London vehemently opposed what it regarded as the “exorbitant” privileges granted by English rulers to the German merchant Hansa. From the thirteenth century on, local merchants in Novgorod sought to limit the trade of the German Hansa there by introducing the legal requirement (common in most major European trading cities) that alien merchants could only trade with locals through the intermediation of brokers who were members of, or appointed by, the local merchant guild. In 1327, the local Karimi merchant association in Alexandria objected to the commercial privileges granted by the Sultan to European merchant guilds so strongly that it fomented a violent riot against the Venetian merchants. In the fourteenth century, the Danzig merchant guild strongly opposed to the privileges granted by the ruler to the English merchant guild. In the fifteenth century, the Bilbao merchant guild strongly opposed the recognition granted by the Spanish crown to English, Dutch, and French merchant consulates in the city.

Alien merchant guilds which became established in a particular polity also sought to prevent the subsequent establishment of additional alien merchant guilds. The Venetian, Pisan and Genoese merchant colonies in the Levant went so far as to permit selected merchants from other alien cities to trade under their flag so as to prevent the erosion of their own political and economic power vis-à-vis the local ruler. This willingness waned, however, with the growing problems posed by “reprisals” - the practice by which rulers, particularly in the Levant and Byzantine Empire, penalized an entire merchant colony.
when one member offended. Reprisals enormously increased the risks of admitting outsiders who could not easily be pursued in the home city, and created incentives for guilds to become more exclusive.\footnote{Abula\'a (1988), pp. 189-91; Abula\'a (1993b), p. 55.}

\subsection*{5.2.3. Alien merchant guilds prevented non-members from trading and excluded applicants from membership}

Alien merchant guilds actively sought to exclude non-members from trading in the alien polities in which they established themselves. Some alien merchant colonies defined membership quite loosely, and permitted citizens of allied cities to trade as members of the colony. This was particularly the case immediately after the colony was founded, or in alien polities where there were relatively few alien merchants from each metropolis. Thus it was most widely observed among the early Italian, Catalan, and French merchant colonies in the Levant, while it remained unusual in later periods and in centers with a greater density of alien merchants.\footnote{Abula\'a (1986a), pp. 211-2; Ashtor (1983), pp. 68, 135, 138, 142, 145-6, 148, 237-8; Kohn (2003), p. 7.} Early merchant colonies in alien polities had three incentives to widen their admissions policies: it increased their size and hence their bargaining power vis-à-vis the alien ruler; it increased their revenues from membership dues and hence the size of the transfers they could make to rulers; and it ensured that these merchants did not compete with guild members but rather complied with guild regulations directed at sustaining monopoly rents for the membership.\footnote{Abula\'a (1978), p. 68; Kohn (2003), p. 7.} Unaffiliated merchants without an alien colony of their own had an incentive to seek guest membership in the alien merchant colony of another city, so as to enjoy its tax advantages and other privileges from the alien ruler.\footnote{Abula\'a (1986a), p. 201.}

However, even those few alien colonies that did grant guest membership to merchants from allied cities progressively ceased to do so. Alien rulers preferred the merchants of each separate alien city to establish their own separate colonies, so as to increase lump-sum payments to rulers and decrease the bargaining power of any one guild. Thus in 1257 the rulers of Acre required the Anconitan merchant guild there “to search out and remove from their midst all pseudo-Anconitans”; its membership was restricted to “men of Ancona and its surrounding area”.\footnote{Abula\'a (1986b), pp. 539-40 (quotation); Abula\'a (1997), pp. 54-5.} Alien merchant colonies themselves, because of the growing threat of reprisals against an entire guild when one member committed an offence, began to prefer to exclude foreigners, whose behaviour they were less able to monitor and control through information networks in their home locality.\footnote{Abula\'a (1988), pp. 189-91; Abula\'a (1993b), p. 55; Ashtor (1983), p. 411.} And home cities themselves came to prefer that their own merchants trade in their own merchant...
colonies which were controllable by the home city, rather than encouraging competition by alien merchant guilds: thus in 1404 the Venetian government threatened confiscation for Venetian merchants trading on Anconitan ships.  

Outside the eastern Mediterranean, most alien merchant “colonies” never admitted members of other cities, and as a general rule guild membership was a pre-requisite for permission to trade. Thus, for instance, “refusal of an Italian merchant to join the appropriate colony in Flanders meant ostracism by his compatriots and commercial boycott”. The Genoese merchant guild in the Crimea trading center of Caffa were of the view “that non-Genoese merchants should be discouraged from intensive competition”, and in pursuit of this strategy its consul confiscated the goods of Sicilian merchants trading there on trivial excuses: “The Genoese regarded Caffa as entirely theirs.” The German merchant guild in Venice required every German merchant desiring to trade in Venice or the surrounding countryside to register with the guild; German traders who did not do so were forbidden to trade in the city or its contado. In 1260 the German merchant guild in London placed limitation on the numbers and personal characteristics of those admitted to enjoy its privileges. The trade between Venice and southern Germany was entirely in German hands, “and any infringement of this monopoly was severely punished”. In 1368, the German Hansa obtained privileges from Danish rulers over the Skåne fair, the main fixed international market of the Baltic region, and by this means “they excluded Scottish and English merchants and later forbade Flemish and northern French traders”. The English Merchant Adventurers appealed to royal courts to penalize unaffiliated English merchants who violated the Merchant Adventurers’ monopoly by selling in Germany. In the fourteenth and fifteenth centuries, citizens of Winchester were required to prove that they were members of the Winchester merchant guild before they were allowed to enjoy the reciprocal trading privileges negotiated in 1304 between the merchant guilds of Winchester and London. The merchant guild of Burgos enjoyed a monopoly over Spanish trade to the Low Countries, and exclusion from this guild made it impossible to trade. The merchant guilds of the Genoese and Venetians trading in the Levant issued rules forbidding their members from forming partnerships with members of other alien merchant

290 Kohn (2003), p. 6 n. 20, referring to De Roover (1948).  
293 De Roover (1963), p. 113.  
297 Bird (1925), pp. 11, 23.  
guilds there.\textsuperscript{299} It became the norm for most alien merchant guilds to limit membership and thus trading rights to guilded merchants from the metropolis and its dominions.

5.2.4. Alien merchant guilds established norms to promote their interest

Alien merchant guilds established a variety of norms in order to promote their collective interest, and a structure of governance to decide upon these norms, monitor compliance, and punish violators.\textsuperscript{300} As with the local merchant guilds of which alien merchant guilds were usually branches, the norms established fell into two categories: social norms directed at regulating the multi-stranded relationships among guild members that sustained solidarity; and economic norms explicitly directed at securing rents for the guild, particularly relating to prices, volume of trade, transactions with non-members, etc.

The first set of norms governed the social interactions between guild members which were often compulsory. Such norms of sociability - e.g. regular participation in guild assemblies and feasts - fostered the multi-stranded relationships by which guild members conveyed information about one another and informally penalized violations of guild norms. Thus, for instance, De Roover describes the social events organized by alien merchant guilds in Bruges as being held in order “to bring social pressure to bear upon the members”.\textsuperscript{301}

A few examples from well-documented alien merchant guilds illustrate the kind of economic norms they established and enforced. Thus the German merchant guild in Novgorod (founded in the twelfth century) imposed increasingly severe limits on the value of the wares each merchant could sell, the number of times he could visit Novgorod annually, the length of time he could stay, and the means of transportation he could use; it prohibited members from selling to individual Russians who visited the guild hostel, from dwelling in Russian compounds instead of the guild compound, from trading with Russians without a fellow guild member present, from competing with fellow-guild-members in buying wares from Russians, and from entering into any commercial association with Walloon, Flemish, or English merchants.\textsuperscript{302} In 1278, the Venetian merchant guilds in Alexandria and Acre ruled that members arriving earlier than the annual convoy in August should not sell certain commodities and that no member should depart for Venice before mid-September, so that merchants travelling in the official convoy should not have to fear competition.\textsuperscript{303} The Venetian merchant

\begin{footnotes}
\footnotetext{299}{Ashtar (1983), pp. 410-11.}
\footnotetext{300}{Ashtar (1983), pp. 411-15; Kohn (2003), p. 8.}
\footnotetext{301}{De Roover (1948), p. 20.}
\footnotetext{302}{Choroskevic (1996), pp. 72, 75, 79, 83. We are particularly fully informed about the activities of this merchant guild because seven editions of its by-laws survive, covering the period 1225-1392 (ibid., p. 68). See also Daenell (1905), p. 10.}
\footnotetext{303}{Ashtar (1983), p. 10.}
\end{footnotes}
 guild in Acre in 1283 required all its members to pool their funds and purchase cotton jointly, “to prevent competition among them from driving up prices”.  

That same year, the Venetian merchant guild in Egypt proposed that all members should buy pepper in Alexandria collectively. The Venetian guild in Alexandria also forbade its members to make purchases in Cairo, firstly “because there was no Venetian consul in the capital who could control the activities of the merchants and, secondly, because that would have resulted in dishonest competition since the spices were sold in Cairo at lower prices than in Alexandria”. The German merchant guild in Venice required every German merchant desiring to trade in Venice or the surrounding countryside to accept the services of a Venetian broker appointed from among the ranks of the local Venetian merchants, to trade only through the intermediation of this local broker, and to present a certificate from this broker before being permitted to export any wares from Venice. The English Company of Merchant Adventurers in the Low Countries and Germany allocated a sales quota to each member and required members to ship collectively and display their wares publicly at the guild’s staple in Antwerp, enabling easy detection of violators of the quota. The collective norms established by merchant guilds thus included economic rules directed at securing economic rents for members and social rules directed at enhancing the “multiplex” relations among members which enhanced the guild’s ability to transmit information swiftly and organize collective action effectively in order to enforce its economic interests.

5.2.5. Alien merchant guilds imposed sanctions against deviations from guild norms

Like the local merchant guilds of which they were branches or consulates, alien merchant guilds imposed sanctions on those who violated their norms. Typically, penalties included fines, imprisonment, confiscation of wares, ostracism by fellow guild members, and expulsion from the guild which involved loss of the right to trade. The German guild in Novgorod had two prisons in its hostel in which offenders against guild norms were incarcerated; the “cellar” prison was reserved for those who “sought to falsify or arbitrarily change the Skra [the guild by-laws]”. The German merchant colony in Venice fined members who concealed wares from the colony directors, sought to trade without using the services of a local broker, or violated the colony by-laws in any other

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way. The merchant guilds of various European nations in Alexandria and other Levantine cities imposed drastic penalties on individual European merchants who applied to the Moslem authorities for the status of permanent residents, because their resulting “privileged status rendered unlawful competition with the other European merchants possible”.

Venetian and Genoese merchant guilds in the Levant were continually having to impose penalties on members who tried to avoid paying their dues to the guild, engaged in trade through prohibited middlemen, violated guild rules on spice purchases from the locals, or disclosed guild decisions to locals.

5.2.6. Alien merchant guilds levied dues from members which were used to make transfers to rulers

Like local merchant guilds, alien merchant guilds were able to levy financial contributions from their members. The German merchant guild in Novgorod (founded in the twelfth century) levied annual duties from members based on the value of their wares. The Catalan merchant guilds levied special duties on commerce from their members at home, in Flanders, and in any part of the world where their members traded. The Pisan merchant consulates in Sicily and Tunis levied taxes within the fondaco and expropriated the goods of merchants who died overseas. The Genoese merchant consulates in Alexandria and Damascus regularly imposed and collected trade taxes, which usually amounted to 1 per cent of the value of merchandise shipped to or from these cities, and 3 per cent on shipments of gold and silver. In times of financial need, however, the tax rates rose to much higher levels, as in 1406 when Genoese merchant guild in Alexandria imposed an import tax of 6 per cent and an export tax of 1 per cent on all members to help pay off extraordinary financial demands. The Venetian merchant guild in Alexandria maintained a common fund called the cottimo which was used partly to make transfers to the Mamluk rulers, and which was sustained by regular imposts on its members, which rose from 1 per cent in the first half of the fifteenth century to 4, 5, or even 10 per cent by the second half of the century - sufficiently high that individual merchants were constantly seeking ways to evade payment.

The contributions guilds levied from members were used, at least partly, to make transfers to the ruler. These transfers typically took the form of lump-sum fiscal pay-

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315 Smith (1940), pp. 61-4.
ments, but also included assistance in tax gathering and promises of military and political support.

Throughout medieval Europe, alien merchant guilds “offered foreign governments payments in cash and loans on preferential terms”\(^{320}\). As early as the 1080s, associations of alien merchants were providing “important fiscal revenues” to the Danish king, Knut the Holy, in return for which he “granted ‘strangers and foreigners’ equal rights with locals in Denmark”.\(^{321}\) From the later twelfth century on, the German merchant guild in Novgorod levied a “king’s tax” from each member each year which was delivered directly to the Novgorod ruler.\(^{322}\) In the early fourteenth century, the English kings granted trading privileges to alien merchant guilds in London in exchange for their paying additional customs duties, which the English crown need to finance its extended warfare in France.\(^{323}\) In the fourteenth and fifteenth centuries, the German merchant colony in Venice represented “a significant source of money” for the Venetian government.\(^{324}\) In the fourteenth and fifteenth centuries, the Venetian merchant guilds in Alexandria and Damascus made lump-sum payments to the Mamluk authorities, and agreed to make annual purchases of a certain quantity of pepper and sugar from the Sultan at above-market prices, in return for the grant of trading privileges.\(^{325}\)

Transfers from alien merchant guilds to rulers sometimes took the form of assistance in tax-gathering rather than direct financial payments. Thus Edward III of England granted the German Hansa the right to collect the entire revenues from the customs from 1340 to 1343 in exchange for military loans made in 1338-41.\(^{326}\) Many of the regular imposts on trade collected by the Venetian merchant guilds in Alexandria and Damascus from their members were actually “extorted by the Moslem authorities but collected by the European consuls”.\(^{327}\)

Transfers to rulers also took the form of military assistance. During the Crusades, Genoa, Pisa and Venice offered naval assistance to the Crusaders in exchange for trading privileges for their merchant colonies in the ports of Palestine and Syria.\(^{328}\) In 1189, the Pisan merchant colony gained full trading privileges at Acre in return for providing aid to the Third Crusade; the merchants of Amalfi, Marseille, Montpellier, and Catalonia were also offered trading privileges in exchange for material assistance to the Crusade.\(^{329}\)

In the twelfth and thirteenth centuries, the Venetian and Genoese merchant colonies in

\(^{321}\)Hoffmann (1980), pp. 30-1.
\(^{322}\)Choroskevic (1996), pp. 70-1.
\(^{326}\)Fryde (1958), pp. 2-8.
Constantinople secured trading privileges in the town by offering naval support to the Greek Emperors there.\textsuperscript{330} In the twelfth and thirteenth centuries, Italian merchant colonies supplied prohibited armaments to Egyptian rulers in order to secure expanded trading privileges there.\textsuperscript{331} In 1245, the Pope granted trading privileges to the Anconitan merchant guild in the Kingdoms of Sicily and Jerusalem in “an attempt to win the firm support of Ancona in the early phases of the struggle between Innocent IV and the Hohenstaufen”.\textsuperscript{332} In 1257, the rulers of Jerusalem granted trading privileges (and land) to the Anconitan merchant guild in exchange for providing the then sizeable force of 50 armed soldiers to help defend the city, failing which the guild would have to pay a forced financial levy to recruit and equip such men; in addition, in time of military need all Anconitans actually present in Acre were to be obliged to help the ruler defend it.\textsuperscript{333} In 1261, the Genoese merchant guild was awarded exceptionally handsome privileges from Emperor Michael VIII and his successors for Genoa’s help in restoring Greek rule at Constantinople.\textsuperscript{334} In the 1340s, King Magnus of Norway secured military support from the German Hansa and its constituent towns by granting it trading privileges.\textsuperscript{335}

In summary, throughout medieval Europe, it was the norm for alien merchant guilds to make payments to rulers, whether directly in the form of financial contributions or indirectly in the form of assistance with tax collection or promises of military support.

5.2.7. Alien merchant guilds enjoyed tax exemptions from rulers

The privileges granted by rulers to alien merchant guilds usually included exemptions from trade taxes. These tax exemptions, like other privileges rulers granted, often varied from one merchant guild to another in the same polity, according to the differing value of the transfers and other benefits each guild could offer to the ruler.

Apart from commercial privileges, the most universal benefit granted by rulers to alien merchant guilds was freedom from tolls and other trade taxes.\textsuperscript{336} Thus from the eleventh century onward, Italian merchant colonies secured “important judicial, fiscal and customs privileges” from rulers in the Levant and Africa.\textsuperscript{337} French rulers granted reductions in tolls to Italian merchant guilds who passed through their realms on the way to the Champagne fairs.\textsuperscript{338} In the mid-twelfth century, the Sicilian rulers granted the

\textsuperscript{330}Kohn (2003), p. 18, referring to De Roover (1971).
\textsuperscript{331}Abulafia (1995), pp. 16-17.
\textsuperscript{332}Abulafia (1986b), p. 531 (quotation); Abulafia (1993), p. 53.
\textsuperscript{333}Abulafia (1986b), pp. 535-6, 543; Abulafia (1997), pp. 54-5.
\textsuperscript{334}Abulafia (1986a), p. 204.
\textsuperscript{335}Daenell (1905), p. 27.
\textsuperscript{336}Volckart and Mangels (1999), p. 443; quoting Planitz (1943), no page ref.
\textsuperscript{337}Bernard (1972), pp. 292-3.
\textsuperscript{338}Kohn (2003), p. 12, referring to Verlinden (1971).
merchant guilds of Genoa, Venice and Pisa major tax reductions in Sicilian ports. In 1257, the ruler of Acre granted to the Anconitan merchant guild a tax reduction according to which its members were to pay 1 per cent of the value of goods brought in and taken out by sea from and to Christian lands, were totally freed from the *seur plus* tax on the different between the value of imports and the value of exports, but still had to pay tax on goods imported from pagan lands. In 1331, the king of Armenia granted the Sicilian merchant guild a tax reduction, so that they would only have to pay 2 per cent tax on imports and exports. In the first half of the fourteenth century, the Genoese merchant colony in the Tatar kingdom of the Golden Horde was granted reductions in customs charges. In 1359 the rulers of Parchim in Schwerin confirmed customs reductions for three different alien merchant guilds trading in the town. The fifteenth-century rulers of Flanders granted to the York merchant guild reductions on tolls and customs fees in Bruges, Antwerp, Barow, and Middleburg. Thus throughout medieval Europe, from the Levant and Constantinople to England and northern Germany, rulers granted exemptions from trade taxes to alien merchant guilds.

Rulers granted different privileges to different guilds in return for different transfers, with periodic renegotiations. From the eleventh to the fourteenth century, the rulers of Constantinople granted tax exemptions or reductions to the merchants of (in descending order of the value of the exemptions) Venice, Genoa, Pisa, Catalonia, Narbonne, Ancona, Florence, and Ragusa, in contrast to local Greek merchants who had to pay full taxes. In the Levant, the most powerful alien merchant guilds, particularly those of Venice, Genoa and Pisa, enjoyed generous tax exemptions from rulers, much larger than those enjoyed by the “minor nations” which could offer less fiscal and political support to rulers; “unprivileged merchants” (i.e., those without their own merchant guild to negotiate tax privileges for them) paid the highest taxes of all. The twelfth-century rulers of Utrecht let the Norwegian merchants trade customs-free, required the Friesian and Saxon merchants to pay customs individually in money or wares, and charged Danish merchants a collective customs fee per ship. The thirteenth-century Kings of England granted reductions in customs duties to the German merchant guild which

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341 Abulafia (1986a), p. 211.
342 Ashtor (1983), p. 82.
were lower than those paid by other alien merchant guilds. In the early fourteenth century, the ruler of Cyprus granted the Genoese and Venetian merchant guilds total exemption from trade taxes at Famagusta, and the merchant guilds of Pisa, Narbonne, Provence, Catalonia, and Ancona a reduction of the *commercium* (payable on entering or leaving the port) to 2 per cent of the value of the goods. In the mid-fourteenth century the Genoese and Venetian merchant guilds in Egypt enjoyed the privilege of paying only 10 per cent customs dues, whereas other foreign merchants paid 15 per cent; in 1353, after diplomatic intervention by the Barcelona government with the Sultan, the Catalans were granted the privilege of paying 10 per cent as well.

However, rulers generally continued levying some tolls from alien merchant guilds, alongside receiving lump-sums from them. As argued above, this was because rulers did not know how large the rents from trade privileges were, and preferred to retain the right to levy taxes that could be varied as circumstances changed or revealed themselves more clearly. This is well illustrated by the way in which Charles of Anjou found himself obliged to alter the prices of licenses to export wheat from Sicily: at the beginning of 1276, the price was set too high, which discouraged purchasers from buying export licenses; by August, the ruler “was obliged to lower the wheat tariff by a third in order to reduce market resistance; the court felt obliged also to permit grain sales to areas earlier under boycott, namely Pisa and Genoa”.

Compelling alien merchant guilds to continue paying some trade taxes conveyed valuable information to rulers about the value of the trading privileges they were granting to the guilds.

### 5.3. Other benefits to the ruler

The establishment of merchant guilds is likely to have brought other benefits to rulers, beyond the key benefit identified in Section 4, namely the opportunity to tax local trade more efficiently, thereby increasing rulers’ revenues from this source. In this section we consider two other possible benefits to rulers.

#### 5.3.1. Financing constraints

Medieval rulers could not easily borrow to finance their preferred investment projects, which included military campaigns, grand buildings, court display, and rewards to politi-
cal allies. Thus, for instance, the fiscal initiatives of the rulers of Catalonia, particularly from 1162 onward, were largely directed toward securing large lump sums to finance military campaigns, diplomacy, court travel, and crusades. Catalan rulers increasingly mortgaged the right to collect taxes and tolls to creditors in order to secure ready money, but they also sold economic privileges to favoured groups. By the early thirteenth century, “credit may have approached the sum of taxation”.\footnote{Bisson (1984), pp. 80-3, 88, 120, 130, 138, 141-2.} In later centuries, other Spanish rulers routinely granted privileges to local merchant guilds in exchange for assistance in floating military loans, or even for direct forced loans from the guild membership.\footnote{Smith (1940), pp. 37, 48, 64-5, 85.} The governments of medieval Italian towns, too, borrowed heavily “to finance ordinary as well as extraordinary expenses” and were perennially short of sources of credit.\footnote{Botticini (2000), pp. 166, 179-83.}

Regular and reliable payments from merchant guilds could help to alleviate these financing constraints. In the context of the simple model developed in Section 3, for example, it is easy to see that the combination of the ex ante payment $L$ and the ex post payment $T^*(\theta_L)$ made by the guild could be valuable to the ruler (relative to the uncertain ex post payment associated with the delegated taxation solution).

A further potential role in alleviating rulers’ financial constraints emerges from our analysis of the evolution of relations between rulers and merchant guilds. To the extent that guilds were able to acquire some bargaining power vis-à-vis rulers, thereby securing some rents, they may also have become a valuable source of loans for rulers. This may have been the case for entrenched local guilds and also for powerful alien guilds. Merchant guilds possessing sufficient bargaining power (because the ruler would suffer a significant loss if they decided to boycott trade) would have been in a much better position to lend to rulers than most other possible creditors. The guilds’ power may therefore have helped rulers when they needed to borrow but could not easily do so from other sources because it was difficult for them to commit (credibly) to repay.

The historical evidence shows that this was indeed the case. Both local and alien merchant guilds made very large loans to medieval rulers, who occupied “first place among their customers and consumers of credit”.\footnote{Bernard (1972) (quotation); Spufford (2000).} Indeed, in their demand for loans from merchants, medieval rulers “were importunate and often could not be denied”.\footnote{Bernard (1972), p. 326 (quotation); Spufford (2000), pp. 195-6.} In return for supplying credit to rulers, merchant guilds and merchant companies were granted “legal privileges and exemption from export duties, the mortgaging of customs to them and the profits from rights of moneying”.\footnote{Bernard (1972), p. 326 (quotation).}

Local merchant guilds were a very common source of credit for their local rulers.
In 1174, for instance, the Cologne merchant guild made a large loan to its ruler, the Archbishop of Cologne. 358 English merchant companies levied special dues from their member in order to finance huge loans to the ruler, “and as a result of such assistance, the privileges of these companies were increased from time to time”. 359 Between 1250 and 1382, the Karimi merchant association in Alexandria made large loans to the Sultan of Cairo and the King of Yemen, in return for legal privileges over the spice trade. 360

Alien merchant guilds were also a frequent source of loans for rulers. In the mid-thirteenth century, the Genoese merchants lent 80,000 livres to King Louis IX of France for a crusade, with the debts being underwritten by the merchants of Piacenza. 361 From the end of the thirteenth century onward, the German Hansa made huge loans to the English crown, particularly to finance wars with France. Edward III was helped to the throne in 1327 in place of his father through loans from the Hansa. In return for these loans, English rulers rewarded the Hansa with wool-export licenses, reductions in customs dues, and the right to collect customs dues from other merchants. Nevertheless, the crown never fully repaid the Hansa. 362 In 1312-3, members of the Florentine merchant colony in Venice were threatened with expulsion from the city unless they provided financial services at below market rates to the Venetian state. 363 Throughout its fourteenth-century wars, the Venetian government granted foreign merchants the right to engage in local as well as maritime trade, in exchange for their assistance with war finances. 364 Thus, for instance, in 1380-2, “privileges rained upon foreigners, as a cure for the profound liquidity crisis brought on by the War of Chioggia”; these included permits to purchase real estate, relaxation of ceilings on participation in maritime trade, reductions in discriminatory commercial taxation, and greater ease of becoming Venetian citizens. 365 In 1400, the Lithuanian ruler’s sole source of credit was the German Hansa; when the Hansa refused him a loan (following a rule passed by Hansa headquarters temporarily outlawing all lending activity because of a currency crisis in Bruges), the ruler interpreted this refusal as falsely implying that he tended to default on his debts, and “ordered a whole series of severe measures against the Hansa merchants”. 366 In the 1470s the ruler of Naples borrowed heavily from Florentine merchants, in return granting the Florentine merchant guild in Naples tax reductions, monopolies, and grain export licenses. 367

358 Planitz (1940), p. 73.
359 Scott (1912), p. 10.
364 Kedar (1976), pp. 54-5.
367 Abulafia (1990), pp. 135-6.
In summary, throughout medieval Europe, both local and alien merchant guilds played an important role in providing loans to credit-strapped rulers, who returned the favour by granting them with legal privileges enabling them to reap rents from these rulers’ subjects.

5.3.2. Countervailing powers: merchants and nobles

In some cases, rulers may have benefited from the formation of merchant guilds because they enabled merchants to exercise some countervailing power to the (considerable) power held at the time by the landholding nobility. This possibility can be illustrated very simply. Suppose that the ruler has a policy instrument at his disposal, denoted by $P$, with the following characteristics:

- if $P$ is implemented, the nobles (as a group) receive net benefits of value $B > 0$, while merchants (as a group) incur a net loss of value $C > 0$. For simplicity, assume that $P$ entails no costs or benefits for any other players;
- if $P$ is not implemented ("status quo"), the net benefits to everyone are equal to zero.

Consider first the case where the nobles are powerful and well-organized, so that they can negotiate effectively with the ruler as a group, while merchants are not organized at all, and unable to negotiate with the ruler in any way. The ruler’s objective, as before, is to maximize his revenue, which in this case comes from “contributions” made by players wanting to influence his policy decision (more generally, the ruler’s objective may also be to keep/increase his political power, in which case the “contributions” may include an element of political support, as well as financial transfers).

Since the merchants are not organized and unable to “lobby” the ruler, the only possible contributions come from the nobility. Thus nobles have a great deal of bargaining power relative to the ruler (particularly if the ruler’s need for contributions is high - e.g. when he faces a potential threat or challenge). As a consequence, nobles will be able to “persuade” the ruler to implement $P$ at a low cost to themselves in terms of contributions. Let the value of their contributions in this case be $y_B < B$.

Now suppose the merchants are organized in a guild, which can negotiate with the ruler and offer a contribution to influence his policy decision. If $B > C > y_B$, the ruler will still implement $P$ (which is socially efficient in this case), but he will be able to extract a higher contribution from the nobles, of value $C$. If, on the other hand, $C > B > y_B$, the ruler will not implement $P$ (the status quo is socially efficient in this case), and he will be able to extract a contribution of value $B$ from the merchant guild.

This simple example clearly illustrates the more general point: rulers, given the power held by the nobility, had an interest in encouraging and helping the merchants to become organized as a group, so as to represent a countervailing power to the nobility.

The historical evidence shows that medieval rulers did seek to diversify their sources
of economic contributions and political support. The nobility was probably the most important source at the beginning of the medieval period. This gave it considerable power: for instance, the rulers of medieval Catalonia were constrained in their ability to expand extraordinary taxation by the power of the nobility, who preferred peasants to pay exactions to themselves as feudal dues.  

However, by the twelfth century at latest, merchant guilds were beginning to constitute another important constituency from which rulers could hope to derive political support as well as economic contributions. Thus, for instance, in the 1120s and 1130s King Roger of Sicily granted tax privileges to the merchant guilds of the Venetians and the Genoese in exchange for their political support against Emperor Lothar, while the merchant guild of the Pisans, who supported Lothar, had to pay normal taxes. In 1162, the German emperor Friedrich Barbarossa promised tax and other privileges to the Pisans for their merchant guilds in Sicily if they helped him overthrow the upstart kingdom there.

There is also evidence that merchant guilds became valuable political allies for rulers vis-à-vis their own landholding nobility. In the twelfth and thirteenth centuries, the rulers of Flanders granted wide-ranging privileges to Flemish towns and the merchant guilds that dominated them in return for “financial aid, in their struggles against the still active nobility”. In the late thirteenth and early fourteenth century, the Catalan monarchy saw the overseas consulates formed by the Barcelona merchant guild in Tunis and Alexandria as “a major source of revenue which might enable the king to emancipate himself from dependence on internal taxation” - i.e., from the necessity of making political concessions to the landowning nobility represented in the corts. In the late fifteenth century, the ruler of Naples granted extensive tax reductions and monopolies to the Florentine merchant guild in return for large loans to help him quell a rebellion by his nobles. That is, merchant guilds gained institutional powers as part of a wider process of decline in the influence of the nobility.

6. Conclusions

"Social capital" is widely advocated as the cure to many modern economic ills, and history is mined for examples of institutions that generate it. Merchant guilds are unquestionably economists’ favourite example of an institution whose social capital
benefited entire economies.

We question this rosy view of merchant guilds and social capital, and propose an alternative model which accords better with the empirical evidence. We identify four major bodies of evidence that are inconsistent with the prevailing theories of GMW and VM, that merchant guilds emerged to guarantee security in long-distance commerce. First, most merchant guilds were local organizations of those trading in a particular city, enjoying economic privileges from local rulers; only a minority were active in long-distance trade and so formed branches abroad; thus the commitment problems of alien rulers were irrelevant to most merchant guilds. Second, merchant guilds themselves created commercial insecurity for outsiders by attacking those whom they regarded as infringing their monopolies. Third, most international trading centers contained several merchant guilds, rendering guild boycotts of alien rulers ineffectual. Fourth, merchant guilds universally made transfers to rulers in return for economic privileges. The prevailing theories of merchant guilds are inconsistent with these stylized facts about merchant guilds.

We advance an alternative model of merchant guilds that better accounts for the facts, but has very different implications. Our theory argues that merchant guilds enabled rulers to tax trade much more efficiently. As we show, this fiscal advantage was the basis for a collusive relationship between rulers and merchant guilds which evolved to provide substantial mutual benefits - often to the detriment of other members of society.

Our theory explains not only the rise and behaviour of merchant guilds in medieval Europe, but also their disappearance. The GMW theory argues that merchant guilds disappeared at the end of the medieval period when rulers became better able to provide commercial security: “as the state system evolved, the need for the merchant guilds to secure merchants’ rights declined”. From the twelfth century onward, as VM acknowledge, medieval rulers developed state structures which guaranteed commercial security increasingly effectively, “thereby supplementing and gradually replacing the elder guilds as suppliers of rules for trade”. Both these arguments are inconsistent with the empirical findings. By 1500, the “military”, “fiscal” and “bureaucratic” revolutions meant that most Europe rulers were more than capable of guaranteeing commercial security in normal times. However, in most parts of Europe, merchant guilds did not disappear. True, in England and the Netherlands, merchant guilds did decline rapidly after about 1500. But this cannot have been because English and Dutch rulers had very precocious armies and bureaucracies - if anything, they lagged behind the “absolutist” rulers of the rest of the continent in these respects. Rather, England and the Netherlands

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were precocious in developing new fiscal methods - both taxation and borrowing - which freed them from financial dependence on the practice of granting economic privileges to favoured groups such as merchant guilds. By contrast, in France, Germany, Austria, Spain, and Italy, “absolutist” sovereigns satisfied their huge demand for revenues to fight wars and engage in court display by continuing to grant economic privileges to merchant guilds in return for lump-sum transfers throughout the sixteenth, seventeenth and eighteenth centuries. They only abolished merchant guilds in the eighteenth or nineteenth centuries - i.e., when they developed alternative fiscal mechanisms.

What implications does our alternative interpretation of this important medieval institution have for how we think about social capital more generally? Merchant guilds constituted closely knit “social networks” in which members transacted with one another repeatedly in a wide variety of different spheres of activity, thereby generating a “social capital” of shared norms, rapid and accurate transmission of information about members’ actions, efficient punishment of deviations from group norms, and effective organization of collective action. But the norms they fostered, the information they conveyed, the deviance they punished, and the collective action they organized have disturbing implications for the impact of social capital on society as a whole. Merchant guilds colluded with rulers to obtain rents, which they then shared between them. Rulers may have allocated some of their share of these rents to providing public goods, but probably very little: all available evidence shows that pre-modern rulers spent the vast majority of their revenues on military activity and court display. Merchant guilds enjoyed their share of rents as supra-normal profits. Consumers were harmed by this exercise of social capital, since they paid a higher price for the traded goods supplied by monopolistic guilded merchants. Non-guided merchants who were excluded from guild membership were harmed by this exercise of social capital, since they were prohibited from trading; often those excluded from merchant guilds constituted the less well-off members of society in any case (women, Jews, foreigners, migrants, peasants). Finally, the economy at large was harmed by this exercise of social capital because, by acting as monopolists and raising prices, merchant guilds ensured that fewer transactions took place. These theoretical and empirical observations suggest strongly that

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382 For empirical examples drawn from other time-periods and societies in pre-industrial European history, see Ogilvie (2002), pp. 22-31; Ogilvie (2003), pp. 21-2, 340-4.
384 For an example of these heightened prices, and the incentives they created for smuggling, see Woodward (2003), pp. 3, 5.
economists must be willing to focus on the negative, as well as the positive, externalities of social capital.

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8. Appendix

Proof of Proposition 1

In any given state of nature $\mu$, the tax rate that maximizes tax revenues has the following two properties: (a) it induces the same level of trade, $q^*(\mu)$, which would be chosen by a profit-maximizing monopolist facing a constant marginal cost of production $c$; (b) it leaves exactly zero profits to the (competitive) merchants. We can therefore obtain the optimal tax rate, $\tau^*(\mu)$, by first solving the monopolist’s problem to find $q^*(\mu)$, and then noting that, by property (b) above, we must have:

$$\left(1 - \tau^*(\mu)\right)P(q^*(\mu)) = c$$  \hspace{1cm} (8.1)

The monopolist would choose $q^*(\mu)$ such that:

$$q^* = \arg \max [\theta(a - bq) - c]q$$  \hspace{1cm} (8.2)

which yields the solution:

$$q^*(\mu) = \frac{a\theta - c}{2b\theta}$$  \hspace{1cm} (8.3)

The price is then given by:

$$P(q^*(\mu)) = \theta[a - bq^*(\mu)] = \frac{a\theta + c}{2}$$  \hspace{1cm} (8.4)

From (7.1) and (7.4), we obtain the optimal tax rate:

$$\tau^*(\mu) = 1 - \frac{c}{P(q^*(\mu))} = \frac{a\theta - c}{a\theta + c}$$  \hspace{1cm} (8.5)

and hence total tax revenues:

$$T^*(\mu) = \tau^* P(q^*)q^* = \frac{(a\theta - c)^2}{4b\theta}$$  \hspace{1cm} (8.6)

$\square$

Proof of Proposition 2

To begin with, we need to derive $T^*(\tau, \theta)$, the total tax revenue the agent can collect in state $\theta$ by applying the tax rate $\tau$. This will be given by:

$$T^*(\tau, \theta) = \tau P(\tau, \theta)q(\tau, \theta)$$  \hspace{1cm} (8.7)

where $P(\tau, \theta)$ and $q(\tau, \theta)$ are the equilibrium price and quantity traded in state $\theta$ when
the tax rate is $\tau$. Merchants will trade up to the point where marginal revenue equals marginal cost, i.e. $P(1 - \tau) = c$. Using this condition, we obtain:

$$P(\tau, \theta) = \frac{c}{1 - \tau} \quad (8.8)$$

$$q(\tau, \theta) = \frac{a - c}{b(1 - \tau)} \quad (8.9)$$

Assume the ruler can observe the tax rate $\tau$ applied by the agent, but not the true state of nature $\theta$, nor realized values of $q$, $P$ and $T$. Let the ex-ante agreement between the ruler and the agent specify the following:

- the tax rate to be applied by the agent in state $\theta_i$ ($i = H, L$), $\tau_i$;
- the transfer to be made by the agent to the ruler in state $\theta_i$ ($i = H, L$), $t_i$.

The ruler chooses $\tau_i, t_i$ ($i = H, L$) to maximize his expected revenue subject to two types of constraint: the agent should be induced to reveal truthfully the state of nature $\theta$ (incentive compatibility constraint), and he should be able to raise sufficient revenues from taxation to pay the required transfer (feasibility or limited liability constraint). The ruler’s problem is given by:

$$\text{Max} \quad \pi t_L + (1 - \pi)t_H \quad (8.10)$$

s.t. 

$$T^0(\tau_H, \theta_H) - t_H \geq T^0(\tau_L, \theta_H) - t_L \quad (ICC_H) \quad (8.11)$$

$$T^0(\tau_L, \theta_L) - t_L \geq T^0(\tau_H, \theta_L) - t_H \quad (ICC_L) \quad (8.12)$$

$$T^0(\tau_H, \theta_H) - t_H \geq 0 \quad (LL_H) \quad (8.13)$$

$$T^0(\tau_L, \theta_L) - t_L \geq 0 \quad (LL_L) \quad (8.14)$$

The binding constraints are $ICC_H$ and $LL_L$, while $ICC_L$ and $LL_H$ can be neglected. Thus:

$$t_L = T^0(\tau_L, \theta_L) \quad (8.15)$$

$$t_H = T^0(\tau_H, \theta_H) - T^0(\tau_L, \theta_H) + T^0(\tau_L, \theta_L) \quad (8.16)$$

and the ruler’s problem can be written more simply as:
\[ \text{Max} \quad \pi T^o(\tau_L, \theta_L) + (1 - \pi)[T^o(\tau_H, \theta_H) - T^o(\tau_L, \theta_H) + T^o(\tau_L, \theta_L)] \quad (8.17) \]

Clearly the ruler can set \( \tau_H \) so as to maximize \((1 - \pi)T^o(\tau_H, \theta_H)\), which implies setting the tax rate at its first-best level in state \( \theta_H \):

\[ \tau_H = \tau^*_H \quad (8.18) \]

The ruler then has to choose \( \tau_L \) to maximize the following expression:

\[ L = \pi T^o(\tau_L, \theta_L) + (1 - \pi)[T^o(\tau_L, \theta_L) - T^o(\tau_L, \theta_H)] \quad (8.19) \]

Using (8.7), this becomes:

\[ L = \tau_L[P(\tau_L, \theta_L)q(\tau_L, \theta_L) - (1 - \pi)P(\tau_L, \theta_H)q(\tau_L, \theta_H)] \quad (8.20) \]

which, after some manipulation, can be written as:

\[ L = \frac{\tau_L \pi ac}{b(1 - \tau_L)} - \frac{\tau_L \alpha c^2}{b(1 - \tau_L)^2} \quad (8.21) \]

where

\[ \alpha = \frac{1}{\theta_L} - \frac{(1 - \pi)}{\theta_H} > 0 \quad (8.22) \]

The first-order condition with respect to \( \tau_L \) then gives:

\[ \tau_L = \frac{\pi a - \alpha c}{\pi a + \alpha c} < \tau^*_L \quad (8.23) \]

Thus in state \( \theta_L \) the tax rate is set below its first-best level, implying that:

\[ T^o(\tau_L, \theta_L) < T^o(\tau^*_L, \theta_L) \quad (8.24) \]

i.e. tax revenues are not maximized in state \( \theta_L \).

In state \( \theta_H \) tax revenues are maximized, so that

\[ T^o(\tau_H, \theta_H) = T^o(\tau^*_H, \theta_H) \quad (8.25) \]

but the ruler receives only a part of the taxes collected:

\[ t_H = T^o(\tau_H, \theta_H) - [T^o(\tau_L, \theta_H) - T^o(\tau_L, \theta_L)] < T^o(\tau_H, \theta_H) \quad (8.26) \]

The ruler’s expected utility is equal to:
\[ U^{DM} = \pi T^o(\tau_L, \theta_L) + (1 - \pi)[T^o(\tau_H, \theta_H) - T^o(\tau_L, \theta_H) + T^o(\tau_L, \theta_L)] \quad (8.27) \]

which can be compared to the first-best level given by:

\[ U^{FB} = \pi T^o(\tau_L^*, \theta_L) + (1 - \pi)T^o(\tau_H^*, \theta_H) > U^{DM} \quad (8.28) \]