

The Political Economy of Merchant Guilds: Commitment or Collusion?*

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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 because it offered a substitute for missing *political* institutions, creating a countervailing power that enabled medieval rulers to commit to provide a secure trading environment for alien merchants. But was this really the case? We develop an alternative model, in which merchant guilds emerge as a substitute for missing *economic* institutions (in particular, effective fiscal mechanisms), and their social capital is used to sustain economic and political *collusion* with rulers, to the detriment of other groups in society. We show that the available historical evidence strongly supports our “collusion model”, and refutes the existing “commitment model”.

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

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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 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.³ 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.⁴

These views are based on a particular model of medieval European merchant guilds, advanced by Greif, Milgrom and Weingast (1994) (henceforth GMW). That model presents merchant guilds as institutions that facilitated information transmission, enforced shared norms and overcame obstacles to collective action, to the benefit of society as a whole. Specifically, 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 induce the ruler to behave well by providing security. GMW then argue that merchant guilds emerged

¹For 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).

²Stiglitz (1999). On the relevance of merchant guilds and social capital to modern transition economies, see also Raiser (2001).

³Bardhan (1996).

⁴Dasgupta (2000).

with the support of *alien* rulers of trade centers in order to overcome their commitment problem. 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 theory, they used this shared capital to provide a countervailing power to that of medieval rulers, to the benefit of the whole society.

But is this appealing view of merchant guilds correct? In this paper, we identify the key empirical implications of the GMW "commitment" model and confront them with the abundant historical evidence on medieval merchant guilds. We find no support for the claim that merchant guilds emerged to enable rulers to commit to the security of alien merchants. We then propose a new model of the emergence of merchant guilds which is borne out by the empirical findings and has very different political economy implications. Far from exerting a socially beneficial countervailing power to the power of medieval rulers, merchant guilds in our model use their social capital to collude effectively with rulers, thereby maximizing their joint rents. Under the most plausible informational assumptions for the historical context under study, we find that the emergence of merchant guilds benefits rulers but harms other groups in society, notably consumers. We conclude that it is important to analyze the role of social capital in sustaining political and economic collusion.

The main steps in our argument are the following. The commitment model proposed by GMW is a theory of the emergence of *alien* merchant guilds, that is, organizations of alien merchants trading in a particular polity (trade center), with the support (legal recognition) of the local ruler. However, GMW present the model as a general theory of the emergence of merchant guilds. There are two problems with this. First, the claim is inconsistent with the historical evidence: as richly documented in section 2 below, the vast majority of merchant guilds were *local* associations of traders in a particular urban community, enjoying legal and economic privileges from their *local* rulers (notably monopoly rights over local trade). 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. Second, by ignoring merchant guilds' primarily local focus and the nature of their relationships with their local rulers, GMW miss a crucial point: the emergence of local and alien merchant guilds were closely related, and need to be understood within a single framework. Their commitment model cannot offer such a framework, since it cannot account for the emergence of local merchant guilds, as we make clear in section 2 below.

The framework we propose identifies a key benefit that medieval rulers derived from the establishment of merchant organizations endowed with monopoly rights

over local trade: these organizations enabled rulers to maximize their revenues from the taxation of local trade. 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 endowing merchant guilds with monopoly rights in return for appropriate transfers, rulers were able to circumvent the need to give away significant rents to third parties. Most importantly for rulers, merchant organizations, unlike tax collectors, could afford to “pay” ex ante for their ex-post informational rents.⁵

A ruler could therefore maximize his revenue from the taxation of local trade, as we demonstrate in Section 4, by establishing a merchant guild and requiring it 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, reviewed in section 5, that this is exactly what took place. Our theory can therefore explain not only the emergence of *local merchant guilds*, but also their relationship with rulers, including the specific *privileges* they were granted and the *transfers* they made in return.

Among the privileges generally granted by medieval rulers to local merchant guilds was the requirement for alien merchants to trade only with members of the local merchant guild, or using local guild members as intermediaries. This is consistent with our explanation, since it gave the local merchant guild all the bargaining power in negotiating with individual alien merchants, thereby protecting the guild’s rents. But it also provides a rationale, discussed in section 5 below, for the emergence of *alien merchant guilds* - typically as foreign branches (“colonies” or “consulates”) of local merchant guilds, which obtained legal recognition from foreign rulers. Our theory can therefore account for the fact that alien merchant guilds appear to have emerged somewhat later than local merchant guilds, and generally continued to be dependent, to a greater or lesser extent, on the local merchant guild of their home city, as documented in section 2 below. Our model further shows that rulers could obtain similar fiscal benefits from alien merchant guilds as from local merchant guilds. The last main body of empirical evidence we present in section 5 is consistent with this implication, and reveals a similar pattern of exchange of privileges (including monopoly rights and tax exemptions) for transfers.

⁵Individuals 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.

organization, and show that a merchant guild able to compel its members to act cooperatively offers the most credible solution to the problem, making it possible to sustain the efficient level of trade. In particular, the merchant guild needs to be able to credibly threaten a complete boycott of trade if the ruler cheats: this credible threat deters the ruler from cheating, and thereby solves his commitment problem.

2.2. A model of *alien* merchant guilds

It is worth emphasizing that the commitment model is a model of the emergence of *alien* merchant guilds. The reason is simple: merchants, by assumption, can always obtain a payoff of zero by not turning up for trade. This puts a convenient upper bound on their loss from boycotting trade. For alien merchants, the assumption is entirely appropriate. Indeed, alien merchants typically could stay away from a given city and take their trade to other cities. Local merchants, on the other hand, would have been under the local ruler's jurisdiction, and could therefore be punished if they behaved in ways that conflicted with the ruler's interest: for example, by boycotting local trade (not to mention the difficulties of living in a city under a trade embargo). Being members of a local merchant guild would not have afforded them adequate protection against a powerful local ruler. True, medieval rulers sometimes had relatively little power and resources. Such "weak" rulers might not be able to punish effectively local merchants who chose to boycott trade. However, the same weak rulers would not be able to confiscate local merchants' property in the first place, nor would they be able to provide effective protection against third parties and hence a secure trading environment. Thus the commitment problem considered by GMW would never arise with a weak ruler. Only "strong" rulers, with sufficient coercive power and resources, could have a commitment problem; but then the problem could not be solved by establishing a guild of local merchants.

Thus the GMW explanation for the emergence of merchant guilds, namely, that it provided a solution to the commitment problem faced by rulers, cannot apply to local merchants and local merchant guilds.

2.3. Empirical implications

We can therefore identify the following key empirical implications of the GMW theory of the emergence of medieval merchant guilds. We should find that:

- (1) Merchant guilds were first and foremost organizations of *alien* merchants, established in medieval cities with the support of the local rulers of those cities.
- (2) The establishment of alien merchant guilds enabled rulers to solve their commitment problem and hence provide a *secure* trading environment for alien

merchants.

2.4. The historical evidence

The available historical evidence, reviewed below, contradicts the first of the two implications given above, and provides no support for the other, casting doubt on the empirical relevance of the GMW explanation for the emergence of merchant guilds. For reasons of space, only a few salient examples are highlighted in the text; references to the main body of evidence are given in the footnotes, and a much more detailed and longer discussion can be found in Dessí and Ogilvie (2003).

2.4.1. Local and alien merchant guilds

The first body of evidence which contradicts the GMW theory 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.⁶ Only a minority of these local merchant guilds went on to form “colonies” abroad, which obtained legal recognition from foreign rulers. Moreover, these colonies or alien merchant guilds continued to be dependent on their localities of origin for power and legitimacy.

Origins and evolution of 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, although parallels are sometimes drawn with ancient Roman merchant *collegia*. Nevertheless it is clear that among the *collegia*, *schola*, and *ministeria* attested in the towns that survived the Dark Ages, and among the merchant “guilds” proper which emerged in old and new urban settlements alike from the eleventh century onward, *local* merchant organizations predominated. These were associations among the merchants of a particular locality, which initially obtained from their *local* rulers exclusive rights to practise certain types of *local* commercial activity.⁷ These privileges were economically significant: 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 substantial rents to those who could obtain monopolies within it.⁸ Only a minority of merchants,

⁶Bernard (1972); Dessí and Ogilvie (2003); Ehbrecht (1985); Schütt (1980).

⁷Bernard (1972); Dilcher (1985); Ehbrecht (1985); Johanek (1999); Racine (1985); Schütt (1980); Volckart and Mangels (1999).

⁸Abulafia (1995, 1997, 1999); Blockmans (2000); Bernard (1972); Epstein (1992); Spufford (2000); Theuerkauf (1996).

and only those from a minority of cities, expanded their operations beyond their own local area and traded in alien polities.⁹ These merchants often established “colonies” or “consulates” of their local merchant guild by obtaining legal recognition from an alien ruler. However, most local merchant guilds never became important players in international trade - this was the case not only in the vast majority of smaller medieval cities, but also in many more important cities, such as Bordeaux, Liège, Paris and Rome.¹⁰ While most merchant guilds were not active in long-distance trade to any significant extent, all of them enjoyed considerable economic privileges in their own cities, including monopoly rights over local trade.¹¹ Indeed, Bruges itself, the “undisputed fulcrum” of long-distance trade in northern Europe, had an exceptionally powerful merchant guild whose members drew their profits not from engaging in long-distance trade but from their “staple” rights through which they obliged alien merchants in Bruges to trade through their sole intermediation.¹²

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, the first *alien* merchant guilds 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.”¹³ Once established, alien merchant guilds continued to be dependent, to a greater or lesser extent, on the local merchant guild at home. Most alien merchant guilds were closely monitored by their home cities. Thus, for example, Florentine merchant colonies abroad had their consuls appointed by the *Arte di Calimala*, the local merchant guild in Florence.¹⁴ 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”.¹⁵ Moreover, alien merchant colonies succeeded in obtaining recognition and privileges from alien rulers only by virtue of their legal recognition by their own rulers as gilded merchants in their home

⁹Bahr (1911); Bernard (1972); Daenell (1905); Dollinger (1970); Epstein (2000); Hlaváček (2000); Johanek (1999); Laiou (2000); Prevenier (2000); Schultze (1985).

¹⁰See Bernard (1972) and Epstein (2000) on French cities; Hlaváček (2000) on German-speaking central Europe; Bahr (1911), Daenell (1905), Dollinger (1970) and Prevenier (2000) on the Low Countries; Johanek (1999) on Italy; Johanek (1999) and Laiou (2000) on the Byzantine Empire.

¹¹Bernard (1972); Frölich (1934); Racine (1985).

¹²Prevenier (2000).

¹³Kohn (2003).

¹⁴Kohn (2003).

¹⁵Kohn (2003).

cities. For example, the merchant guild of Barcelona was able to obtain and keep 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, and the diplomacy and military threats he was willing to exercise on its behalf with Muslim rulers.¹⁶ Indeed, alien merchant guilds' continued dependence on the political support of their home rulers in their dealings with alien rulers is at odds with the notion that alien merchant guilds could, by themselves, provide a countervailing power to that of rulers of international trade centers, which would solve these rulers' commitment problem. Thus 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.¹⁷

Even the famous "Hansas" of long-distance merchants were simply associations among the *local* merchant guilds of a number of cities for the purposes of foreign trade.¹⁸ 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). There were also less important associations such as that formed by the merchant guilds of 17 Flemish and French towns in the thirteenth century, or the coalitions of the merchant guilds of certain Italian cities for the purposes of trading in France or the Levant. All "Hansas", however, were predated by their constituent *local* guilds and continued to derive their power and legitimacy from their recognition by local rulers in their localities of origin.¹⁹

Thus *some* local merchant guilds - a minority - formed "colonies" or joined "Hansas" abroad in order to transact in alien polities. But *all* local merchant guilds enjoyed privileges from their own local rulers over local trade. This is not consistent with GMW's theory that merchant guilds emerged and survived because they overcame problems of security in *alien* polities and problems of commitment faced by *alien* rulers.

2.4.2. Commercial insecurity

A second body of evidence casting doubt on the GMW theory 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. Is there any evidence

¹⁶On this example, see Abulafia (2000). See also Bernard (1972) on Italian merchant "colonies" in the Levant and Africa, and Hørby (1984) on Danish merchants in England.

¹⁷Kohn (2003); Reynolds (1945).

¹⁸De Roover (1963); Planitz (1940); Reyerson (2000); Volckart and Mangels (1999).

¹⁹See Abulafia (1988); Bernard (1972), Blockmans (2000); Choroskevic (1996); Daenell (1905); De Roover (1963); Dollinger (1970); Hibbert (1963); Irsigler (1985); and Planitz (1940).

for this?

Alien rulers often granted - even in the Dark Ages - guarantees of protection to long-distance merchants.²⁰ In many cases, rulers simply granted these to individual merchants on an ad hoc basis. As alien merchant guilds became established, security guarantees were increasingly issued to guilds. But there is no evidence that when these security guarantees were issued to guilds rather than individual merchants it actually had the effect of increasing the overall level of commercial security. The only support for this view is theoretical: it amounts to a counterfactual argument that the threat of guild boycotts increased rulers' incentives to enforce their security guarantees, and thus without merchant guilds insecurity would have been higher.

Hard evidence, by contrast, exists for the opposite view: namely, that merchant guilds were significant 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. There were frequent violent conflicts in foreign cities among the guilds of rival alien merchants.²¹ 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.²²

Indeed, one reason long-distance merchants so consistently asked alien rulers for security guarantees was precisely because they expected to be legally harrassed or violently attacked by local merchant guilds which regarded themselves as entitled to exclusive rights to trade in particular territories or particular lines of business. 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.

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

²⁰Planitz (1940); Racine (1985); Schütt (1980).

²¹On these, see Abulafia (1978, 1986); De Roover (1963); Greif et al. (1994); Pryor (2000); Reyerson (2000); and Smith (1940).

²²On these, see Bahr (1911); Daenell (1905); Dollinger (1970); Lloyd (1991); Postan (1973); Schütt (1980).

2.4.3. Privileges and transfers

Finally, the GMW theory does not account for a universal feature of merchant guilds - namely, that they obtained monopoly privileges in exchange for payments to rulers. As richly documented below in Section 5, both local and alien merchant guilds gave rulers lump-sum transfers, advantageous loans, military assistance, and other benefits. In return, rulers granted them a wide array of legal privileges enabling them to secure economic rents.²³ Explaining this ubiquitous stylized fact is crucial to understanding the emergence and evolution of merchant guilds, and their implications for the well-being of the societies in which they were embedded.

3. Our model

The GMW explanation for the emergence of merchant guilds is 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.

This section introduces our model, which will be analyzed in Section 4. 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 $P(\theta, q) \equiv \theta(a - bq)$, where a and b are positive constants, while θ is a random variable taking the value θ_L with probability π and the value θ_H with probability $1 - \pi$ ($\theta_H > \theta_L > 0$). Thus θ 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.

²³For a more detailed discussion of this evidence, see Dessi and Ogilvie (2003).

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. He also spends on activities that provide him with private benefits, such as military campaigns and court display.²⁴ 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 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,²⁵ and to grant economic privileges to merchants; these privileges are discussed in greater detail below.

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 τ . The agent, unlike the ruler, can observe the state of nature, θ , 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 capital-constrained. This assumption is 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.²⁶ Sometimes rulers sold the right to collect certain taxes to wealthy

²⁴See Brewer (1989) for evidence that pre-modern rulers spent the vast majority of their revenues on military activity and court display.

²⁵This assumption is consistent with the historical evidence: medieval rulers were able to tax trade through the imposition of *ad valorem* taxes such as tolls, purchase taxes, staples, brokerage dues, anchorage, crantage, and keelage. See Bernard (1972); Bisson (1984); Dessí and Ogilvie (2003); and Reyerson (2000).

²⁶Bisson (1984). See also Blockmans (2000) and Fryde (1958) for evidence on the socio-economic origins of the men appointed to collect taxes by the the thirteenth-century Counts of Flanders and the fourteenth-century kings of England, which further supports our assumption of capital-constrained tax collectors.

“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 (θ), but these are not observed by the ruler.

The historical importance of the information asymmetry between rulers and other agents concerning fiscally relevant data is well documented. 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.²⁷

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 θ 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 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

²⁷The 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. See Bisson (1984), and the discussion in Dessí and Ogilvie (2003).

offer. Merchants, before becoming organized in guilds, would have been in a poor position to exercise bargaining power in negotiating with the ruler.²⁸

4. Trade, taxation and merchant guilds

We begin by considering what the ruler can achieve when merchants are not organized in a guild, 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 hires an agent who can observe local conditions (θ), as well as realized trade (quantities and price). The agent is given the power to impose and collect an ad valorem tax τ : that is, for each unit of the good sold at price P , the tax collector takes τP and the merchant is left with $(1 - \tau)P$. In order to maximize tax revenue in each state of nature, the tax rate τ should depend on θ . 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 (θ_H). We can now define the first-best outcome from the ruler’s point of view as the outcome in which he receives the total tax revenues described by Proposition 1. In this case, his expected utility is given by:

$$U^{FB} = \pi T^*(\theta_L) + (1 - \pi) T^*(\theta_H).$$

The problem for the ruler is that, unlike the agent, he cannot observe either the state θ , 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 τ 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

²⁸Thus, 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 princes of the church; they were not yet able to form autonomous corporate organizations, and instead were heavily dependent on royal or aristocratic favour. See Racine (1985).

random inspections) whether the agent was applying the tax rate τ rather than any arbitrary tax rate. We shall then examine the more extreme case where the ruler *cannot* observe τ : delegating taxation in this case is even more costly for him, which only strengthens our results.

Case 1: the ruler can observe the tax rate τ applied by the agent

In this case 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” (θ_L) even when in fact the state is “good” (θ_H). This is enough for him to capture some rents, as shown in Proposition 2 below. Denote by $T^\circ(\tau, \theta)$ the total tax revenue that the agent can collect in state θ by applying the tax rate τ .

Proposition 2 *Assume that the ruler can observe the tax rate τ applied by the agent, but cannot observe the true state of nature θ , 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 θ_H , $\tau^\circ(\theta_H) = \tau^*(\theta_H)$;*
- (b) *the tax rate to be applied in state θ_L , $\tau^\circ(\theta_L) = (\pi a - \alpha c) / (\pi a + \alpha c) < \tau^*(\theta_L)$, where $\alpha = 1/\theta_L - (1 - \pi)/\theta_H$;*
- (c) *the transfer the agent should make to the ruler in state θ_H , $t(\theta_H) = T^\circ(\tau^\circ(\theta_H), \theta_H) - T^\circ(\tau^\circ(\theta_L), \theta_H) + T^\circ(\tau^\circ(\theta_L), \theta_L) < T^*(\theta_H)$;*
- (d) *the transfer the agent should make to the ruler in state θ_L , $t(\theta_L) = T^\circ(\tau^\circ(\theta_L), \theta_L) < T^*(\theta_L)$.*

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

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 θ_H and $T^*(\theta_L)$ in state θ_L), the agent would have an incentive to cheat in state θ_H , claiming that the state was θ_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 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 θ_L when in fact it is θ_H .

We can compare this second-best outcome with the first-best outcome defined earlier, in which tax revenues are maximized in each state and entirely appropriated by the ruler. The second-best outcome entails a loss for the ruler ($U^{DM} < U^{FB}$), 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.

In fact, even this second-best outcome may not be feasible. Given the agreement with the ruler 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, $t(\theta_L) = T^\circ(\tau^\circ(\theta_L), \theta_L) < T^*(\theta_L)$. But then the ruler will prefer to adopt a scheme in which the transfer is set equal to $t = T^*(\theta_L)$, irrespective of the state θ . There are two possibilities of interest: one possibility is to leave complete autonomy to the agent to set the tax rate, subject only to the constraint of having to pay the transfer $T^*(\theta_L)$ to the ruler. This would enable the agent to set the revenue-maximizing tax rate in each state, and capture rents of value $T^*(\theta_H) - T^*(\theta_L)$ in the good state. The second possibility is to set a single tax rate, $\tau = \tau^*(\theta_L)$. In this case the agent obtains smaller rents in the good state, of value $T^\circ(\tau^*(\theta_L), \theta_H) - T^*(\theta_L)$. The ones who benefit from the reduction in the agent’s rents are consumers, since a greater quantity of the good is sold at a lower price in the good state. The ruler’s expected utility is the same, and is given by $U^C = T^*(\theta_L)$. Although we have assumed, for simplicity, that the ruler only cares about maximizing his revenues, it seems reasonable to suppose that, for a given level of his revenues, the ruler prefers to make consumers better off (i.e. the vast majority of the population), rather than increasing the tax collector’s rents. Thus in what follows we shall assume that when collusion is difficult to detect the ruler sets the transfer $t = T^*(\theta_L)$ and the tax rate $\tau = \tau^*(\theta_L)$.

Case 2: the ruler cannot observe the tax rate τ applied by the agent

The best the ruler can do in this case is to set the transfer $t = T^*(\theta_L)$, irrespective of the state θ , leaving complete autonomy to the agent to set the tax rate. The implications of this case were already considered above.

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:²⁹

· ex ante (at $t = 0$), the agent makes a payment L to the ruler, where

²⁹This assumes that the ruler can commit not to “steal” L and then hire another agent to collect taxes - e.g. for reputational reasons.

$$L = (1 - \pi)[T^*(\theta_H) - T^*(\theta_L)];$$

· ex post (at $t = 1$), after he has collected tax revenues, the agent makes a second payment to the ruler, of value $T^*(\theta_L)$.

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". Assume that, by pooling their resources, guild members have sufficient capital to make an ex-ante payment L to the ruler. Then the ruler grants the guild privileges that enable it to earn monopoly profits from trade. In return, 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 implement this 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:³⁰

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, the right to levy duties on its mem-*

³⁰This 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 $t = 1$. In Proposition 4, which is relegated to the Appendix for expositional convenience, we examine under what conditions the ruler can make such a (credible) commitment in a repeated game setting.

bers, and the right to impose sanctions on guild members who deviate from guild norms. The guild makes a transfer of value L to the ruler *ex ante* and another transfer of value $T^*(\theta_L)$ *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 $T^*(\theta_L)$ *ex post*. In return, the ruler establishes them as a merchant guild with monopoly rights over local trade, the right to levy duties on members and the right to sanction members who deviate from guild norms; moreover, he exempts them from other forms of taxation. Since $KX \geq L$, 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. \square

4.3. Discussion and welfare implications

Was the establishment of merchant guilds beneficial to society as a whole? Our model sheds some light on this question. If, as we argue below in the light of the historical evidence, our model captures the key reason why medieval rulers were willing to establish merchant guilds and endow them with privileges, then the answer hinges on a comparison of the welfare implications of the “guild solution” described by Proposition 3 with the welfare implications of delegated taxation. These may be summarized as follows:

(1) The ruler is better off with the guild solution; indeed, unlike delegated taxation, this solution yields the first-best outcome from his point of view.

(2) Merchants are indifferent: they make zero profits in the competitive environment with delegated taxation, while in the guild solution the transfers to the ruler are set so as to give them zero expected profits.

(3) The agent who is hired as a tax collector under delegated taxation is clearly worse off with the guild solution, since he loses the opportunity to earn informational rents.

(4) The implications for consumers depend on the informational assumptions we make for delegated taxation. In Section 4.1 we identified three possibilities in principle:

(a) the ruler can observe the tax rate applied by the agent, and can detect and punish (and thereby deter) collusion between merchants and the agent. In this case the tax rates are given by Proposition 2 above; comparing this to the guild solution shows that consumers are better off with delegated taxation, since the tax rate in the “bad” state is lower, implying a lower price and higher level of trade in equilibrium.

(b) the ruler can observe the tax rate applied by the agent, but cannot detect collusion between merchants and the agent. In this case the ruler sets the state-

independent tax rate $\tau = \tau^*(\theta_L)$. Consumers are, once more, better off with delegated taxation (this time because the tax rate in the “good” state is lower).

(c) the ruler cannot observe the tax rate applied by the agent. He therefore sets the transfer $t = T^*(\theta_L)$ and leaves the agent free to impose the revenue-maximizing tax rate in each state. Consumers are indifferent between delegated taxation and the guild solution.

In reality, the available historical evidence shows that rulers set the (state-independent) tax rate: they did not give their tax collectors discretion in setting (state-contingent) tax rates. In our model, this outcome occurs when the ruler observes the tax rate applied by the agent, but cannot easily detect and deter collusion between merchants and the agent. In this case, as described under 4(b) above, the establishment of merchant guilds implies a *loss* for consumers. Thus, in sharp contrast with GMW, we find that *the establishment of merchant guilds*, far from benefiting society at large, *was detrimental to the vast majority* of its members (i.e. consumers).

As for merchants, notice that their indifference is due to the assumption that the ruler has all the bargaining power in his dealings with merchants. This was certainly the case when merchant guilds were first established, as discussed in Section 3.7 above. However, the assumption need not apply to the subsequent historical evolution of merchant guilds. The historical evidence shows that over time some merchant guilds became a source of valuable political support for rulers, notably against the landholding nobility.³¹ This must have given them a degree of bargaining power relative to rulers, enabling them to capture some of the rents from trade.

5. The collusion model: implications and evidence

As we saw in the previous section, our explanation for the emergence of merchant guilds generates predictions and welfare implications that are very different from those associated with the explanation proposed by GMW. In section 2 above, we identified the key empirical implications of their commitment model, and confronted them with the available historical data. In this section we apply the same approach to our theory. For ease of exposition, we refer to our theory as the “collusion model”.

5.1. Empirical implications

Our theory of the emergence of *local* merchant guilds has the following five key empirical implications. We should find that:

³¹See Dessí and Ogilvie (2003).

(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, and the requirement for non-members to trade only with members of the guild (and not directly with consumers), or using guild members as intermediaries.

(2) Local merchant guilds established *norms* to promote their collective interest, particularly relating to prices, volume of trade, transactions with non-members, etc. These norms were needed to ensure guild members could earn *monopoly profits* from trade.

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

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

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

As we demonstrate below, the historical evidence strongly supports all five of these implications of our model.

What about *alien* merchant guilds? Our model, as outlined in section 4 above, focuses on the taxation of local trade and the relationship between each polity's ruler and its merchants. However, the model also sheds some light on the role of alien merchant guilds. In the model, what matters to the ruler is to maximize his revenues from the taxation of trade. In the "guild solution" described by Proposition 3, this is achieved by giving the guild monopoly rights, in return for transfers equal to the expected value of monopoly profits from trade. This is consistent with the establishment of local merchant guilds endowed with the right to exclude local non-members from trade, and the right to require alien merchants to trade only with local guild members, or using local guild members as intermediaries (brokers). As we document below, this is exactly what happened in the vast majority of medieval European cities. Notice of course that excluding alien merchants would have been inefficient: alien merchants were buyers as well as sellers (i.e. they increased demand); moreover, they often had a cost or monopoly advantage in providing certain commodities. This explains why local non-members were simply excluded from trade, whereas alien merchants were required to trade only with local guild members, or through their intermediation, thereby giving all the bargaining power to local merchant guilds in their dealings with individual alien merchants coming to trade in their cities.

Thus alien merchants could typically benefit from becoming organized as members of a guild. Of course many of them were already members of the local merchant guilds of their cities of origin. These guilds therefore had an incentive to establish branches in alien cities where a sufficiently large number of their mem-

bers traded on a regular basis, in order to promote their interests in those cities and give them some bargaining power relative to the cities' local merchant guilds. This is consistent with the historical evidence reviewed in Section 2.4.1, showing that merchants often established “colonies” or “consulates” of their local merchant guild in alien polities. In our view, therefore, the establishment and proliferation of alien merchant guilds was to a large extent a consequence of the establishment and proliferation of local merchant guilds, which in turn emerged primarily because of the fiscal benefits they offered to rulers. This is, again, consistent with the historical evidence presented in Section 2.4.1 on the evolution of local and alien merchant guilds.

Why were local rulers willing to grant legal recognition to alien merchant guilds? A simple answer would be that the guilds might otherwise have boycotted trade with those rulers who refused them legal recognition. Our model suggests an additional explanation: alien merchant guilds could represent an alternative way of implementing the “guild solution” of Proposition 3 for particular markets and particular commodities. This suggests that the evolution of relations between local rulers, local merchant guilds and alien merchant guilds over time should be thought of essentially as a dynamic common agency game,³² with the ruler as the common agent, and the guilds making offers of transfers linked to the granting of different privileges (monopoly rights, tax exemptions). In practice, this must have occurred 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. The analysis of such a game is clearly beyond the scope of the present paper, but this perspective points to a further empirical implication, which could not be obtained from the GMW commitment model:

(6) We should find that local rulers were willing to grant *economic privileges* to *alien* merchant guilds, including monopoly rights over certain lines of business and tax exemptions, in return for *transfers*. The granting of such privileges would have been opposed by the local merchant guild.

5.2. The historical evidence

The available historical evidence, reviewed below, strongly supports all of the six implications outlined above. Once more, for reasons of space, we provide a very

³²On common agency games, see particularly the pioneering work by Bernheim and Whinston (1986(a), 1986(b)). Common agency has been used to model strategic lobbying by a number of authors; see, among others, Dixit et al. (1997) and Grossman and Helpman (1994, 1995(a), 1995(b)). For a comprehensive account of the literature on interest group politics, see Grossman and Helpman (2001).

succinct summary; a wealth of additional examples can be found in Dessí and Ogilvie (2003).

5.2.1. Rulers were willing to establish and support local merchant guilds, and endow them 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 a variety of privileges.³³ Among the most important of these privileges were a wide array of powers enabling them to exclude and discriminate against *alien* merchants.³⁴ Thus in most medieval European towns, non-local merchants had to submit to so-called “*rights of staple*”, 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.³⁵ In most cities, the local merchant guild also 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 its own membership.³⁶

Local merchant guilds also enjoyed legal privileges enabling them to exclude from trade *local* individuals who were not members of the guild. Furthermore, they were able to impose significant restrictions on guild membership by making 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.³⁷

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

Medieval merchant guilds “submitted themselves to certain common rules with regard to prices, quantities, chartering and lading, the organisation of convoys

³³See, for instance, Blockmans (2000); Choroskevic (1996); De Roover (1963); Frölich (1934); Kuske (1939); Volckart and Mangels (1999).

³⁴See Dessí and Ogilvie (2003); Hibbert (1963); Irsigler (1985); Leguay (2000); Postan (1973); Reyerson (2000); Schultze (1908); Spufford (2000).

³⁵Bernard (1972); Kuske (1939); Reyerson (2000); Schultze (1908); Volckart and Mangels (1999).

³⁶Bernard (1972); Choroskevic (1996); Hibbert (1963); Schultze (1908); Spufford (2000).

³⁷See Dessí and Ogilvie (2003); Dilcher (1985); Ehbrecht (1985); Epstein (2000); Hibbert (1963); Leguay (2000); Planitz (1940); Postan (1973); Racine (1985); Reyerson (2000); Schultze (1908); Schulz (1985); Schütt (1980); Smith (1940).

and disputes between members of the group”.³⁸ Thus for example the tenth-century Constantinople merchant guilds forbade members to compete with one another on shop-rents and to offer higher wages to employees.³⁹ The thirteenth-century privileges of the Laufen river-merchants in Austria prevented any member from having more than three ships.⁴⁰ The thirteenth-century Karimi merchant association in Alexandria enjoyed privileges from the Mamluk rulers enabling it to fix the prices on Egyptian spice exchanges.⁴¹ Sometimes the economic rationale for guild norms was less explicit, but nevertheless clear: for instance, the statutes of a French guild, dating from the second half of the eleventh century, declared that “a foreign merchant who was the enemy of one member was to be treated as the enemy of all”.⁴²

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

These sanctions typically took the form of fines and confiscations, and occasionally more extreme forms, such as imprisonment, shaving, flogging, or expulsion from the guild.⁴³ For example, in the thirteenth century the Leicester merchant guild threatened expulsion for any member who did business with a certain Flemish merchant who had violated the guild’s monopoly over the wool trade in the surrounding countryside,⁴⁴ while the merchant guilds of tenth-century Constantinople imposed penalties of flogging, shaving, or confiscation on any member or outsider who violated their by-laws.⁴⁵

5.2.4. Local merchant guilds were able to levy dues from their members, and used them at least partly to make transfers to the ruler

Throughout medieval Europe, wherever their activities are recorded in detail, local merchant guilds levied financial contributions from their members. Dues included entry fees, various types of license fee (e.g. the silk-merchants’ guild

³⁸Bernard (1972).

³⁹Freshfield (1938); Racine (1985).

⁴⁰Störmer (1985).

⁴¹Ashtor (1983). For other examples of norms fostered by merchant guilds to secure rents for their members, see Daenell (1905); De Roover (1963); Dessí and Ogilvie (2003); Fryde (1985); Hoffmann (1980); Irsigler (1985); Planitz (1940); Prevenier (2000); Schütt (1980); Smith (1940); Volckart and Mangels (1999).

⁴²Volckart and Mangels (1999), citing Planitz (1940).

⁴³Choroskevic (1996); Dessí and Ogilvie (2003); Freshfield (1938); González de Lara (1991); Planitz (1940); Racine (1985); Schulze (1985); Schütt (1980).

⁴⁴Bateson (1899).

⁴⁵Freshfield (1938), Racine (1985).

of tenth-century Constantinople levied a license fee on all members who bought workshops, which was delivered to the political authorities),⁴⁶ and regular (e.g. annual) membership dues.⁴⁷ Local merchant guilds then used these financial contributions to make transfers to rulers. For example, Spanish merchant guilds routinely made financial contributions to rulers, 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”.⁴⁸ Transfers to the ruler were usually made as lump-sum payments, but they could also take the form of advantageous loans.⁴⁹

5.2.5. In return, the local merchant guild was often exempted from other forms of taxation by the ruler

Indeed, freedom from customs, tolls, and trade-taxes was one of the most universal of the privileges rulers conferred on merchant guilds.⁵⁰

5.2.6. Rulers granted *economic privileges* to alien merchant guilds, including monopoly rights over certain lines of business and tax exemptions, in return for *transfers*; these were strongly opposed by local merchant guilds

In the vast majority of documented cases, rulers welcomed the establishment of alien merchant guilds and granted them economic privileges. This occurred in polities as distant and different as Norway,⁵¹ Constantinople,⁵² Cyprus,⁵³ and Jerusalem.⁵⁴ The granting of such privileges to alien merchant guilds was typically opposed by the local merchant guild, whether it be in Denmark,⁵⁵ Norway,⁵⁶

⁴⁶Freshfield (1938); Racine (1985).

⁴⁷See Dessí and Ogilvie (2003); Schütt (1980); Smith (1940); Volckart and Mangels (1999).

⁴⁸Smith (1940).

⁴⁹See, e.g., Dessí and Ogilvie (2003); Klein (1932); Kuske (1939); Pryor (2000); Racine (1985); Schütt (1980); Smith (1940).

⁵⁰As pointed out by Planitz (1940); for examples, see Dessí and Ogilvie (2003); Ehbrecht (1985); Hoffmann (1980); Volckart and Mangels (1999).

⁵¹Blom (1984).

⁵²De Roover (1963).

⁵³Abulafia (1993).

⁵⁴Abulafia (1986).

⁵⁵Schütt (1980).

⁵⁶Dollinger (1970).

Bruges,⁵⁷ London,⁵⁸ Danzig,⁵⁹ or Bilbao.⁶⁰ The privileges rulers granted to alien merchant guilds included rights to exercise monopolies over certain lines of business: specifically, they could exclude non-members from trade, limit membership numbers, exclude applicants with certain personal characteristics, and limit price and quantity competition among members.⁶¹ Privileges also included tax reductions. For example, from the eleventh to the fourteenth century, the rulers of Constantinople granted tax reductions to the merchants of (in descending order of the value of the exemptions) Venice, Genoa, Pisa, Catalonia, Narbonne, Ancona, Florence, and Ragusa.⁶²

Alien merchant guilds levied dues from their members and used them to render financial payments and military assistance to rulers in return for the grant of these economic privileges. This pattern is, again, observed in the majority of documented cases, in polities as diverse as Denmark,⁶³ Russia,⁶⁴ Egypt,⁶⁵ Jerusalem,⁶⁶ and Venice.⁶⁷

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 their social capital. True, merchant guilds did constitute 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,

⁵⁷Dollinger (1970).

⁵⁸Bernard (1972); Lloyd (1991).

⁵⁹Postan (1973).

⁶⁰Smith (1940).

⁶¹Abulafia (1986, 1997); Choroskevic (1996); De Roover (1963); Dessí and Ogilvie (2003).

⁶²Balard (2000). For further evidence of the granting of privileges to alien merchant guilds, see Abulafia (1978) on the twelfth-century Kings of Sicily; Abulafia (1993) on the early fourteenth-century ruler of Cyprus; Hørby (1984) on the twelfth-century rulers of Utrecht; and De Roover (1963) on the thirteenth-century Kings of England.

⁶³Hoffmann (1980).

⁶⁴Choroskevic (1996).

⁶⁵Abulafia (1995).

⁶⁶Abulafia (1986; 1997).

⁶⁷Choroskevic (1996); Kedar (1976).

and the collective action they organized have disturbing implications for the impact of social capital on society as a whole. Merchant guilds used their social capital to collude effectively with rulers and maximize their joint rents. Rulers may have allocated some 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, and their military campaigns often brought few benefits to the population at large.⁶⁸ 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-guilded 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. 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. Our findings suggest strongly that economists should focus on the negative, as well as the positive, externalities of social capital.

7. References

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⁶⁸Brewer (1989).

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8. Appendix

Proof of Proposition 1

In any given state of nature θ , the tax rate that maximizes tax revenues has the following two properties: (a) it induces the same level of trade, $q^*(\theta)$, 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, $\tau^*(\theta)$, by first solving the monopolist's problem to find $q^*(\theta)$, and then noting that, by property (b) above, we must have:

$$(1 - \tau^*(\theta))P(q^*(\theta)) = c \quad (8.1)$$

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

$$q^* = \arg \max[\theta(a - bq) - c]q \quad (8.2)$$

which yields the solution:

$$q^*(\theta) = \frac{a\theta - c}{2b\theta} \quad (8.3)$$

The price is then given by:

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

From (8.1) and (8.4), we obtain the optimal tax rate:

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

and hence total tax revenues:

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

□

Proof of Proposition 2

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

$$T^\circ(\tau, \theta) = \tau P(\tau, \theta)q(\tau, \theta) \quad (8.7)$$

where $P(\tau, \theta)$ and $q(\tau, \theta)$ are the equilibrium price and quantity traded in state

θ when the tax rate is τ . Merchants will trade up to the point where marginal revenue equals marginal cost, i.e. $P(1 - \tau) = c$. Using this condition, we obtain:

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

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

Assume the ruler can observe the tax rate τ applied by the agent, but not the true state of nature θ , 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 θ_i ($i = H, L$), τ_i ;
- the transfer to be made by the agent to the ruler in state θ_i ($i = H, L$), t_i .

The ruler chooses τ_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 θ (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:

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

$$s.t. \quad T^\circ(\tau_H, \theta_H) - t_H \geq T^\circ(\tau_L, \theta_H) - t_L \quad (ICC_H) \quad (8.11)$$

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

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

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

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

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

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

and the ruler's problem can be written more simply as:

$$Max \quad \pi T^\circ(\tau_L, \theta_L) + (1 - \pi)[T^\circ(\tau_H, \theta_H) - T^\circ(\tau_L, \theta_H) + T^\circ(\tau_L, \theta_L)] \quad (8.17)$$

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

$$\tau_H = \tau_H^* \quad (8.18)$$

The ruler then has to choose τ_L to maximize the following expression:

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

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:

$$L = \frac{\tau_L \pi a c}{b(1 - \tau_L)} - \frac{\tau_L \alpha c^2}{b(1 - \tau_L)^2} \quad (8.21)$$

where

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

The first-order condition with respect to τ_L then gives:

$$\tau_L = \frac{\pi a - \alpha c}{\pi a + \alpha c} < \tau_L^* \quad (8.23)$$

Thus in state θ_L the tax rate is set below its first-best level, implying that:

$$T^\circ(\tau_L, \theta_L) < T^\circ(\tau_L^*, \theta_L) \quad (8.24)$$

i.e. tax revenues are not maximized in state θ_L .

In state θ_H tax revenues are maximized, so that

$$T^\circ(\tau_H, \theta_H) = T^\circ(\tau_H^*, \theta_H) \quad (8.25)$$

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

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

The ruler's expected utility is equal to:

$$U^{DM} = \pi T^\circ(\tau_L, \theta_L) + (1 - \pi)[T^\circ(\tau_H, \theta_H) - T^\circ(\tau_L, \theta_H) + T^\circ(\tau_L, \theta_L)] \quad (8.27)$$

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

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

□

The remainder of the Appendix considers the simplest possible extension of our 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 δ . During each stage game, the random variable θ_t will be an independent random draw from the distribution described in Subsection 3.2; that is, θ_t takes the value θ_L with probability π and θ_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 ($t = 0, 1, \dots, \infty$), together with the transfers to be made by the guild to the ruler at the beginning (y_{0t}) and end (y_{1t}) 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. Denote by U^{SB} the ruler’s expected utility from the delegated taxation solution in any period t . 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 all the privileges described in Proposition 3; otherwise p_t takes value 0. Thus a contract C_0 is defined as $C_0 = \{p_t, y_{0t}, y_{1t}\}$ for $t = (0, 1, \dots, \infty)$.

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:⁶⁹

Proposition 4 *Suppose that the following condition holds:*

$$U^{FB}/(1 - \delta) \geq L + U^{SB}/(1 - \delta) \quad (C1).$$

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 $C_0 = \{p_t = 1, y_{0t} = L, y_{1t} = T^(\theta_L)\}$ for $t = (0, 1, \dots, \infty)$ 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 by not paying y_{0t} at the beginning of any period t , the ruler withdraws their privileges and adopts the delegated taxation solution from period t onward. If the merchants deviate by not paying y_{1t} at the end of any period t , the ruler withdraws their privileges and hires an agent to collect the payment due for period t ; he then adopts the delegated taxation solution from period $t + 1$ onward. 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 withdraws their privileges during any period t , the merchants refuse to pay him any further transfers.*

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 . Suppose the guild deviates by not paying y_{0t} at the beginning of some period t . The ruler then withdraws its privileges and adopts the delegated taxation solution from then on; the guild therefore cannot benefit from such a deviation. Now suppose the guild deviates by not paying y_{1t} at the end of some period t . The ruler then withdraws its privileges and hires an agent to collect the amount due for that period. Moreover, the ruler adopts the delegated taxation solution for all subsequent periods. Thus, once more, the guild cannot benefit from deviating. Now consider the ruler. Suppose he deviates by accepting the transfer y_{0t} at the beginning of some period t , then withdrawing the guild's privileges and adopting the delegated taxation solution from then on. In this case his payoff in period t is $L + U^{SB}$, and his payoff in every subsequent period is U^{SB} .

⁶⁹For 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_{0t} (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). 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; on this, see Dessí and Ogilvie (2003).

If on the other hand he does not deviate, his payoff is U^{FB} in period t and in all subsequent periods. Condition (C1) implies that the ruler cannot benefit from such a deviation. \square