The Rise, Persistence and Decline of Merchant Guilds. Re-thinking the Comparative Study of Commercial Institutions in Pre-modern Europe

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Abstract:

The importance of merchant guilds for the commercial development of Europe is beyond doubt. However, there is still little agreement as to why they emerged, persisted and ultimately declined between the 11th and 18th centuries. Historical studies have focused on individual cases and idiosyncratic circumstances that restrict severely comparability, while economic approaches based on game or contract theory often impose narrow assumptions on their models which find it hard to deal with two key features of these institutions: in very imperfect markets merchants used more than one institution to solve a given problem while a given institution often addressed more than one problem. In this paper we suggest a new methodological approach that allows us to pursue a comparative analysis without loosing rigour. We assess a new dataset of 185 observations of merchant organisations from four towns 1300-1800 at 50 year intervals. Our model is based on only one assumption: merchants will only delegate control over their dealings if they can expect a positive return from the loss of control. On this basis, we classify our dataset into five ordinal categories of degrees of control delegation. Using maximum likelihood estimation we investigate the probability that merchants, under a given set of market and political circumstances, delegate control.

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Introduction

The history of European commerce since the Middle Ages is intimately related to the rise, persistence and decline of what is perhaps the most famous of mercantile institutions: the merchant guild. However, we still know surprisingly little about when merchant guilds first arrived, why they were formed and what they actually did. It seems certain that before the 8th century merchants traded largely as independent actors without the assistance and organisation afforded by a collective body such as a guild, *natie, consulado, hansa* or similar organisation. At some point, however, merchants began travelling together with their ruler's representatives, early 'diplomats' who started to perform as commercial representatives as well. From the 10th or 11th century onwards formal associations emerged that helped long-distance traders solve two 'fundamental problems of exchange'. On the one hand they offered protection of traders' person and goods against crime, warfare, and arbitrary confiscation; on the other, they facilitated the enforcement of contracts whenever money or goods changed hands. [1]

Merchant guilds operated in commercial centres everywhere in late-medieval and early modern Europe (and beyond) but they were never the only institutional response to the fundamental problems of long-distance trade. Re-invigorated towns and consolidated states could and at times did provide similar support for commerce by building infrastructure, organising fairs and offering legal services as well as protection from predation. Still, none of these activities seem to have replaced merchant guilds altogether. Complementarity between different providers of services to merchants – e.g. rulers and guilds – seems to have been the norm rather than the exception. In part this would have been the obvious consequence of merchants' ‘trans-territorial’ activities; they often crossed political boundaries and therefore were unlikely to rely simply on the protective services and infrastructure provided by one particular overlord. But even within a given polity merchants used multiple institutions to solve the fundamental problems of exchange. Lane recognized this complex reality long ago: merchants typically used a *combination* of institutions to solve one particular problem, while each of these institutions helped to solve *multiple* problems.[2]

Only in the late 18th century merchant guilds disappeared in most parts of Europe, sometimes as a result of forced dissolution. Protection of traders’ life and goods, contract enforcement and mitigation of risks now became largely functions of state activity on the one hand or vertically integrated businesses on the other. In the intervening period, i.e. between the 11th and 18th centuries, merchants used multiple combinations of institutions to cope with the perils of long-distance trade. Each of these combinations presumably reflected merchants’ intention to maximise their benefits (economic or other), *given* a certain environment at a particular time and location. Understanding these multiple combinations would seem crucial to explain the rise, persistence, and ultimate demise of merchant guilds in pre-industrial Europe.

The purpose of this paper is to develop a comparative methodology to explain the rise, persistence, and decline of merchant guilds in different parts of late medieval and early modern Europe. The methodological challenge – as we see it – is to combine two research traditions that so far have remained worlds apart. Many historians have detailed the organization of trade in towns and regions across Europe. However, very few of them have teased out generalizations about the ability of merchant guilds, or similar institutions, to mitigate the fundamental problems of exchange.[3] Economists have begun to apply micro-economic theory to the organization of long-distance trade in pre-industrial Europe modelling the contribution that merchant guilds, informal coalitions of traders, periodical fairs, or specific financial contracts made to a more efficient organization of trade. The great merit of this approach is that it forces us to abstract from specific historical examples and make explicit the economic functions of the manifold mercantile institutions that existed across Europe. However, the modelling strategy employed by most, namely game theory and mechanism design, requires relatively restrictive ex-ante assumptions. To meet these, most models narrow the analysis down to one or two often mutually exclusive solutions (e.g. guilds **or** fairs) for just one problem of exchange (e.g. protection **or** contract enforcement **or** rent seeking). Neither the multi-functionality of mercantile organizations nor the combined use of different institutional solutions is easily modelled as a game. [4]

We suggest that a comparative analysis of the organization of long-distance trade across time and space is the best way to deal with this multi-functionality of institutions, and their combined use by merchants, without loosing the theoretical rigor of microeconomic analysis. Comparing the problems merchants faced in different economic, socio-political and cultural environments with the institutions they used to solve these problems, can help us to explain the rise, persistence, and decline of specific institutions. Greif – amongst others – has argued that the idiosyncrasies of (mercantile) institutions make it practically impossible to use standard comparative statistical techniques. [5] We disagree with this view. We suggest that – while acknowledging their idiosyncratic nature – all mercantile institutions shared one fundamental characteristic that can help us in the comparative analysis: through mercantile organisations merchants delegated control to fellow merchants in return for support with their contracting and enforcement problems.

This paper is a first attempt to pursue a comparative analysis of the development of commercial institutions in pre-modern Europe. The approach is data intensive. To date we have collected data on the organization of foreign merchant communities in only four towns – Amsterdam, Antwerp, Bilbao and Bruges – for benchmark years between the thirteenth and eighteenth centuries. One strength of the approach is that it can (and will) be expanded to include a much wider geographical area. However, at this stage our emphasis is on discussing the theoretical underpinnings, methodological implications and empirical feasibility of what we believe to be a new approach to the study of mercantile organisation in pre-modern Europe. [6]

Our empirical analysis employs standard maximum likelihood models to estimate the probability of observing more or less delegation of control depending on a number of political, legal, and economic variables. These variables capture four standard explanations given in the literature for the rise and decline of merchant guilds: (1) guilds offered protection against predatory rulers; (2) guilds kept merchants from cheating; (3) guilds enabled traders to extract monopoly rents; and (4) guilds facilitated the matching of supply and demand in markets of limited size. In what follows we offer a first attempt to test these four hypotheses in one simultaneous model.

The paper proceeds as follows. Section I reviews existing explanations for the rise, persistence, and decline of merchant guilds in Europe between the eleventh and eighteenth century. Section II defines our dependent variable as the amount of social, political, legal, and financial control merchants are willing to delegate to fellow traders in order to solve the ‘fundamental problems of exchange’. We also offer a brief discussion of the market conditions and property rights regimes that determined this delegation of control. The results of our comparative analyses are presented in Section III. Some robustness checks are reported in section IV. Conclusions follow.

I. The Rise, Persistence, and Decline of Merchant Guilds, 1000-1800

Merchant guilds are a very old phenomenon. Formal associations of traders existed in the Ancient World and in medieval Europe they may have been formed as early as the eighth century. The remaining sources, however, only reveal the widespread existence of more or less formal associations of traders from the eleventh century onwards. These included informal coalitions of Jewish and Armenian traders and local organizations of merchants like for instance the *consulados* in Aragon, but also *Hansen* of German and Flemish traders in England and France or the *nations* of foreign merchants created in Flanders and Brabant. For the purpose of this paper we will refer to all of these mercantile groups as 'merchant guilds'.[7]

Little is known about the functioning of merchant guilds in medieval Europe in the 11th and 12th centuries. We have fragmentary evidence of brotherhoods of merchants who traded and travelled together in German lands and the Netherlands. The members of some of these guilds were sworn to help each other in case of fraud, violence, and personal hardship. Much better documented is the organization of African Jews trading in the Mediterranean in the eleventh century. This coalition of Maghribi traders, as it is commonly referred to, traded with Italian ports and developed social ties strong enough to credibly threaten to exclude from their trade any one member of the coalition who cheated on an Italian trading partner. This mechanism smoothed cross-cultural trade relations with Italians who were willing to engage in trade with each and every member of the coalition even if they did not know them personally. Due to a lack of evidence it is difficult to determine exactly how widespread this kind of coalition trading was before 1300, but we do know from later periods that peer pressure was an important instrument to discipline relatives and friends.[8]

In the twelfth and thirteenth century more and more merchant guilds were officially recognized by local or central governments everywhere in Europe. This was true not only for the local organizations of traders which closely resembled corporations of craftsmen, but also for guilds of international traders who received privileges from either their home ruler or the authorities in the foreign territory in which they traded. Echoing Adam Smith's condemnation of craft guilds and regulated companies as rent-seeking corporations, Dessí and Ogilvie have argued that most merchant guilds were granted privileges in exchange for financial support to the ruler. The equilibrium situation here allowed rulers to benefit from regular tax revenues while merchants enjoyed formal privileges that enabled them to extract rents from the rest of society who had to pay the price for the guild's rights to restrict access to the trade and impose monopolies.[9]

This hypothesis suggests that guilds *only* purpose was as a vehicle of corporate rent-seeking. Therefore they persistently lowered social welfare. Yet this implies that guilds and their protectors in ruling position could dominate society across eight centuries to a degree that seems anachronistic.[10] Historians have produced a very large number of case-studies of merchant communities in virtually every part of Europe that illustrate the multitude of functions these institutions could perform. A very practical contribution was the organization of daily exchange. Guilds provided protection against theft, civil unrest and violence by offering housing and warehousing. In markets around Europe we also find the concentration of trade on the premises of foreign merchants facilitated the matching of supply and demands. Guild members could also be subjected to rules regarding everything from the quantity and quality of traded goods to the means of shipping them or the training of apprentices.[11]

Merchant guilds also contributed to the enforcement of contracts. The privileges granted by local or foreign rulers often invested their leaders with the authority to resolve disputes between members. The *hansen* of Flemish merchants trading in England and France in the twelfth century, for instance, were explicitly created to extend the legal authority of their home government to the foreign territory. Furthermore, in the corporatist world of the Middle Ages, the formal affiliation to a town or country helped to signal one's creditworthiness to potential trading partners. When guild members bore collective liability, or community responsibility as it is sometimes called, a creditor of any one member could attach the property of any other member to settle an unpaid debt.[12]

Merchant guilds with a strict internal organization were also able to offer protection against predatory rulers. Traders who could credibly threaten to leave collectively in case of material or personal injuries stimulated their hosts to protect their persons and their goods to the best of their abilities. Instead of preying on their property, the host could now tax them only mildly, or even shift the financial burden of protection to local economic actors who benefited from the presence of merchant strangers. It is important to note that town governments were probably more important than central rulers in this context, since the latter typically lacked the political leverage or desire —the riches of foreign merchants being an enticing price in rulers' quest for funds— to provide such protection in pre-industrial Europe.[13]

One might expect merchant guilds to have lost their purpose in the fifteenth and sixteenth century when European rulers became increasingly committed to the creation of law courts and the protection of trade through diplomacy, convoying, or even outright warfare. However, the strengthening of political, economic, and legal control over their own territories was accompanied by military competition between states. This led to an increase of violence against long-distance traders at least in the medium term. Privateering was the principal means to wage war harming not only merchants whose sovereigns were fighting but also neutral traders. As a result merchants in many parts of Europe continued to act collectively to obtain safe-conducts. Even if safeguards did not always prevent infringements on their persons and goods, they gave neutral merchants at least some claim to damages.[14]

Political fragmentation may have contributed to the persistence of merchant guilds in yet another way. Foreign merchants often used a wide variety of debt and equity contracts from their home country to fund their business and manage risks. Host rulers who lacked the legal expertise or will to enforce these contracts could grant consular jurisdictions to foreign merchants in order for them to adjudicate conflicts according to the contracting rules of their home country. Once approved, the members of a merchant community could be fined or even threatened with exclusion to keep them from cheating on each other. This is why, for example, southern European merchants in Bruges and Antwerp continued to organize in nations up until the mid-sixteenth century, and English and Dutch merchants still delegated legal authority to consuls in Russia and the Ottoman Empire the seventeenth century.

Eventually, however, merchant guilds did decline in pre-industrial Europe. In the seventeenth and eighteenth century there was a clear movement away from formal associations of merchants towards entrepreneurs operating individually within informal networks of family and friends. The decline of merchant guilds began in the commercial heartland of Europe. In Venice, Antwerp, and Amsterdam formal organizations of foreign merchants lost their political, legal and economic purpose in the course of the sixteenth century. After 1600 a similar development occurred in the leading commercial centers of in Germany, France, and England. The ports where merchant guilds lost their economic purposes where typically those were town councils thought it in their interest to respect the property of all resident merchants and to enforce contracts from a wide variety of legal traditions.[15]

And yet merchants continued to organize socially in many places, even in Europe's leading commercial centres. The communities with or without a formal guild status catered for the religious needs of their members. They often had their own chapel or strong relations with a particular parish or monastery. Occasionally they owned burial grounds and founded fraternities. The surviving guilds defined sociability for local burghers, but more importantly guild houses, *fondaci,* or the Prussian *Artushöfe* offered social contacts between and amongst locals and foreigners. Groups of alien merchants often co-opted shipmasters, clerks and various other non-traders in their provisioning of education and charity. These social functions continued to appeal to merchants and secured their prolonged allegiance to the guilds.[16]

Pre-industrial European commercial history shows how the organization of traders differed according to the economic and non-economic problems they tried to solve, as well as the impact of political and economic circumstances on the choices they made. In areas with high levels of trade and strong local governments one can observe a movement away from formal associations towards informal social networks, or even more individualistic organizational forms. For social and cultural reasons corporate bodies of traders had not yet entirely disappeared even in the eighteenth century but in most places they lost their economic function.

II. The model

Merchant guilds are not the same thing for historians and economists. Historians typically highlight the different forms and functions mercantile associations could take on between 1000 and 1800. Economists, on the other hand, define merchant guilds on the basis of one unique purpose, be it the protection of property, the enforcement of contracts, or the creation of rents. Our methodology has to bridge this gap in order to combine the strengths of both approaches. To do that, we will define guilds not by any specific purpose, but by their employment of collective action as a means to minimize transaction costs.

It seems appropriate to think about commercial institutions as a continuum along the lines suggested by Williamson. At one end, there is a perfectly atomised market in which anonymous buyers and sellers meet in fleeting encounters of voluntary exchange. At the other end, all risks and decisions are incorporated into one large hierarchically organised and vertically integrated firm. Human ingenuity has produced endless permutations along the continuum between those two points, characterised by more or less anonymity, hierarchy, market control, political involvement and so forth. Following Williamson's distinction between markets and hierarchies, we view social networks, nations, consulates, guilds, and regulated companies as institutions that perform the same basic economic function – the governance of transactions – and differ merely in the degree of control delegated to fellow merchants. This approach allows us to include merchant communities operating in different parts of Europe over a very long time period (1000-1800) in one data panel.[17]

Theoretically merchants could go about maximising their returns and solving the fundamental problems of exchange, protection of life and livelihood and the enforcement of contracts, in three different ways. Firstly, they could buy solutions or bear the risk all by themselves. The second way, which concerns us in this paper, was to organize collective action with fellow merchants, and share the costs and benefits of these ‘club goods’. Lastly merchants could rely on a third party, a ruler, to provide solutions in the form of public goods.

The first solution, going it alone, was unrealistic in many circumstances. Even armed individual merchants or shipmasters stood little chance repelling organized attacks on their person and goods by themselves. More systematic protection is subject to indivisibilities, which generally required start up costs that were beyond the means of most individual merchants, who could hardly contemplate the purchase a private army or police force. From the point of view of benefits individual solutions were equally unattractive; collective action promised larger market power and thus greater benefits. Hence, some form of collective action or, for that matter, government intervention potentially promised lower costs and higher benefits, a winning combination.[18]

Merchants could organise amongst themselves and ‘produce’ a collective good that all members of their association could use but that was unavailable to non members, a ‘club good’. In this way, they could share the high start up costs of protection and transaction governance as well as the benefits of larger market power. In addition, addressing one of the three problems often helped them with the other two. Organising protection collectively could create positive externalities e.g.; the group could govern transactions more effectively and wield more market power than any individual could hope for. Yet, collective action always came at a cost. Merchants generally had to pay some fee for the membership benefits. More importantly, delegating control to the association (to the club) created a cost in the form of submitting individual decision making to choices made by the association. While those choices would be expected to be the optimal solution for the group as a whole, they did not necessarily reflect the optimal solution for each and every member. Delegating control created both benefits and costs for merchants.

The relative costs and benefits that merchants derived from club goods depended, amongst other things, on the third potential solution, the provision of public goods, accessible to everyone, through the ruler. Rulers by definition provided some amount of 'services', such as protection, for their subjects. They could step up their efforts and offer additional goods; they could e.g escort merchants, enforce contracts and regulate markets. But their ability to rule effectively and enforce rules in the pre-modern world was subject to important limitations. From the point of view of merchants, the cost of this solution came in the form of taxation and only limited influence on the exact nature of the actual public goods provided. Furthermore, by definition nobody could be excluded, creating problems of free-riding. Hence, merchants would choose the amount of club goods as a complement to the available public goods. In choosing these they would optimise their private cost benefit function.

Unfortunately, we cannot calculate costs and benefits of club goods provided by mercantile associations directly. However, history provides us with a large number of empirical observations on the **outcome** of that implicit cost-benefit calculus, namely the amount of control merchants chose to delegate to fellow traders. The outcomes reflect the constraints they were willing to put on themselves to protect their property, enforce contracts, and manage commercial risks. We also have a lot of historical data on what merchants' alternatives were. In order to use this information in a comparative setting we can group our observations of how much control a particular group of merchants chose to delegate at a given point in time into a few discrete categories. We can then analyse if there were any systematic relationships between the observed degree of control delegated to a collective body and the alternative solution to the fundamental problems of exchange available in the political and market environment merchants worked in.

Underlying our approach is thus only one crucial – and we think convincing – assumption: merchants will only give up the freedom to choose how to conduct their business to some formal or informal institution if they feel they are compensated for the loss of control, i.e. that turning over part of the control to a mercantile institution will maximise their profits. The more control they are asked to give up, the higher the compensation they will want in return. We believe that this trade-off between control over a merchant's own dealings and the potential benefits of delegation of control to an informal or formal institution that can exercise collective action, is an essential characteristic of all mercantile organizations.

Table 1. The delegation of control by merchants as a means to differentiate between mercantile organizations.

Category		**Description**	**Control delegated**
1	Individual agents	Merchants organize transactions without any interference of fellow traders.	individuals do not delegate any control
2	Informal constraints	merchants are organized loosely along social or religious lines but have no formal economic organization	Control is not formally delegated but social and/or cultural norms constrain decisions
3	Political representation	Merchants rely on spokesmen to represent them in negotiations with other groups or political authorities	Control to represent is delegated
4	Internal discipline	Merchants elect officials to enforce general rules of conduct within the community	Members delegate control to establish general rules and enforce them through sanction, but not exclusion
5	Power of exclusion	Group is endowed with a privilege granted by political body that gives it internally and externally right to exclude members/others	Members delegate control to be sanctioned through total exclusion from market entry

In the history of European long-distance trade we observe a whole array of mercantile associations that can be distinguished according to the amount of control delegated by individual merchants (table 1). A few examples from our own dataset can illustrate the lines of distinction between the five categories. On the one end of the *control-delegation-distribution* are merchants whose business transactions are in no way constrained by formal or informal control of fellow traders. A case in point are the dozens of German merchants that sojourned in Amsterdam in the second half of the sixteenth century to buy and sell grain shipped from Poland and other Baltic states. The merchants stayed in hostels, rented warehouses to store their merchandise, wrote contracts with the help of local brokers and notaries, settled disputes with fellow traders or shipmasters before the local court, and otherwise submitted to the prevailing property rights regime. They did not rely on any kind of 'club' goods provided only to members of a defined community – in fact they were no community.[19]

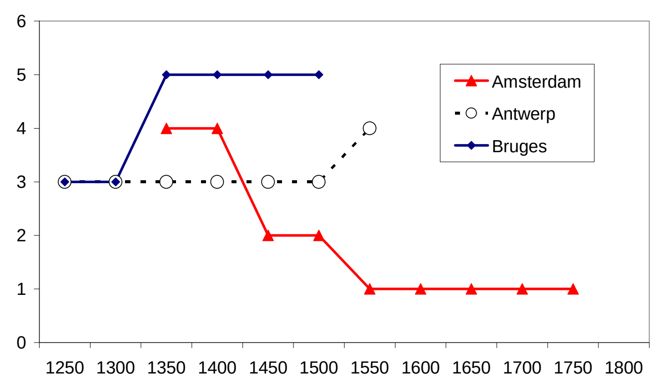
Our second category involves merchants that belong to a community with shared cultural beliefs and social norms but without any formal ties between them. The close knit English Calvinist community of cloth dealers in Amsterdam in the last quarter of the sixteenth century is a case in point. Unlike the Merchant Adventurers, whose forced staple they were trying to circumvent, the English merchants in Amsterdam were subjected to the same contracting rules as local businessmen and they used the city's commercial infrastructure. This situation, in which behaviour is directed by shared social or cultural beliefs – and related peer pressure – we would characterize as one of informal constraints (category 2).[20]

A first step towards the formal association of alien merchants is the delegation of political control to a consul or ambassador, or simply to the ruler of one's hometown or -country. As late as 1500 Florentine merchants were merely represented by a consul in Antwerp and representatives of the Scottish staple in Veere negotiated with the town magistrate on several occasions (category 3).[21] Whenever talks with rulers in a foreign territory resulted in the creation of a separate jurisdiction, the delegation of control went a step further to imply the establishment of general rules of conduct and their enforcement by one or more leaders of the merchant community (category 4). The Portuguese nation in Antwerp, e.g. enforced the registration of every subject of the Portuguese king with the consuls upon arrival in the city. The nation held weekly meetings attended by all members, and Antwerp's customs stipulated that the group had the right to settle disputes between its members.[22]

Like the Portuguese the English merchants of the Company of Merchant Adventurers in Antwerp were registered with the Court master, paid contributions, and were subjected to the company's jurisdiction. The one major difference between the two *nations* was the ability of the English association to exclude merchants from participation in the cloth trade, first in Antwerp, and then after 1582 in Middelburg. The ability of a mercantile organization to prevent free-riding, and reserve the economic benefits of its operations to the membership, is considered a distinctive next step (category 5) in the delegation of control.[23]

The above classification of mercantile organizations by degree of control delegation serves as a general tool to standardize the rich historical reality of mercantile associations. It creates an ordered dependent variable that describes the basic nature of each mercantile association during the period under consideration. By drawing comparisons between merchants in different places it highlights group preferences **and** local influences and for delegated control. This becomes very clear when we compare the organization of one particular group of traders, German merchants in Bruges, Antwerp, and Amsterdam (Figure 1). Despite their shared affiliation to the Hanse these merchants were organized very differently in the three cities over time. We can then use this classification to analyze why merchants delegated more or less control, or, in other words, operationalize our independent variables for a multinomial model.

Figure 1. A graphic representation of the control delegated by German merchants in Bruges, Antwerp, and Amsterdam, between 1250 and 1750.



Source: our dataset

Before we discuss what those local influences might be in more detail let us return for a moment to our basic classification into five categories. From a statistical point of view it matters if we should consider these merely discrete choices or if these are ordered categories, in other words can we argue that they are lined up in the form of

$$1 < 2 < 3 < 4 < 5.$$

Let us consider category 5 for illustration. We argued that this highest form of control delegation was essentially defined by its ability to exclude non-members (and members who infringed on their own rules) from a particular market. Such exclusion would require clear rules and fairly sophisticated enforcement mechanisms in the hands of the guilds (category 4). It would necessarily mean that members at some stage delegated representation of the group since total market exclusion was impossible without recourse to help or at least recognition from local authorities, with which guilds negotiated through their representatives (category 3). Our category 5 groups were essentially cartels operating in geographically diverse markets (that is a home and a host city). It is well known that monitoring costs for such arrangements are extremely high, even if these groups were granted additional enforcement from a third-party enforcer, such as a local ruler. Hence, without the help from cultural and social cohesion monitoring costs would have been prohibitively high and not surprisingly all of these organised around some common feature such as geographic origin or religion (category 2). As this example shows control delegation was cumulative and our delegation classification is ordered.

The level of control merchants were willing to delegate to fellow traders depended on the existence of alternative solutions for the problems of exchange, and the comparative costs and benefits of these solutions. In other words, merchants' choice of more or less delegation of control depended in the long run on three main sets of variables: (1) the attitude of their political rulers at home towards traders; (2) the attitudes of political rulers in their host country towards foreign traders; (3) market conditions, defined here as the scale and scope of the markets in which merchants acted, and the private solutions for protection, information supply and risk management available in these markets.

Table 2. Independent variables capturing property rights regimes and market conditions

Nr	Variable	Dummy	Description
	Home Ruler		
H1	Political representation	Yes	Do merchants participate in the ruling elite of the home town or region?
H2	Protection	Yes	Does the home ruler coordinate protective measures (convoys, caravans)?
	Local Ruler		
L6	Political representation	Yes	Do merchants participate in the ruling elite of the host town or region?
L4	Protection	Yes	Does the local ruler coordinate protective measures (convoys, caravans)?
L5	Protection	Yes	Were merchants victims of violence over the last 25 years?
L8	Protection	Yes	Does local ruler provide merchants with housing and/or warehousing?
L2	Contract enforcement	Yes	Do merchants have access to, and use specialized courts subsidiary to the general court?
L3	Contract enforcement	Yes	Do merchants have access to, and use a specialized mercantile court?
	Market conditions		
M1	Protection	Yes	Do merchants have access to, and use insurance markets?
M8	Contract enforcement	Yes	Do merchants have access to, and use periodic fairs?
M9	Contract enforcement	Yes	Do merchants have access to, and use a bourse?
M10	Contract enforcement	Yes	Do merchants have access to, and use public vending locations for specific products?
M11	Contract enforcement	Yes	Do merchants have access to, and use private vending locations?
M12	Competition	Yes	Do merchants from the host town trade in the home market?
	Size effects		
M7	Town population (^2)	No	How many inhabitants does the host town have?
M13	Size of the market	No	How big are the markets merchants have access to, including the local market? (population x wage)
M16b	Size of the market	No	How big are the markets merchants have access to, including the local market? (population x silver wage)
M17	Size of the urban market	No	How big are the urban markets merchants have access to, including the local market (population x silver wage x urbanisation rate)
M14	Scope of the market	No	How many different product groups (eight in all) are traded?

Table 2 identifies a number of independent variables that proxy our three large sets of variables. The measurement of these variables is detailed in the appendix. The first set ('home ruler') tries to capture political representation and services aimed at protecting of property rights that are offered by the rulers in the merchants' place of origin. The second set ('host ruler') looks at the same factors in the guest town. The third set aims to test for crucial market conditions, including private market solutions to property rights issues, such as insurance, and the existence of face-to-face exchanges in spot markets. The last set of variables looks at the impact of the size and scope of the market on the probability that merchants would choose to delegate more or less control.

Ex ante we do not know if merchant associations, home rulers, host rulers, and markets were complements or substitutes and we have to allow for both possibilities. The German Hanse, for example, negotiated for safe-conducts with the counts of Flanders and the town of Bruges but it also organized its own convoys in the late fourteenth and fifteenth century. Several foreign nations in Antwerp retained their separate, consular jurisdiction but they also used local and central courts in the Netherlands to resolve commercial conflicts. While in political matters English merchants in Bilbao relied on their own consul in the sixteenth century, in business affairs they delegated control to local hostellers. [24]

III Results

Since we are dealing with a discrete, ordered dependent variable, our analysis essentially tests likelihoods of outcomes and we adopt a standard maximum likelihood regression (probit) to investigate the relationship between control delegated on the one hand and property rights regime and market conditions on the other.[25] In the following we are running our model through its paces by using it to illuminate the four standard hypotheses in the literature for the rise and decline of merchant guilds. In doing so, we provide for a first time an attempt to test them in one simultaneous model.

A first look at the descriptive statistics of our new classification of pre-modern European merchant associations in table 3 already reveals some interesting facts. Our sample thins out towards the beginning and end of the observed period. The lack of category 1 and 2 type communities for the early benchmark years is almost certainly an artefact of data survival: we simply know too little about groups that left no institutional records behind. The distribution along the categories of delegated control seems to work reasonably well. Especially class 1 to 4, from no control delegated to substantial amounts of control delegated including internal discipline, are well represented. Out of a total of 185 observations for Bilbao, Bruges, Amsterdam, and Antwerp between 1250 and 1800, 60 show no discernible degree of internal cohesion. A further 40 had no formal agreements amongst themselves even if they acted as a group. The remaining 85 had, in one way or another, a formal institutional bond that kept them together.

Table 3 Distribution of dependent variable observations in four town sample by benchmark year and 'delegated-control-classification'

	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	total
1	0	2	2	2	5	5	7	9	10	6	6	6	**60**
2	0	1	4	2	4	6	5	6	7	2	2	1	**40**
3	2	5	4	7	6	5	3	0	1	1	1	1	**36**
4	0	1	3	6	9	9	5	3	1	0	0	0	**37**
5	0	0	1	1	1	3	3	1	1	1	0	0	**12**
Total	**2**	**9**	**14**	**18**	**25**	**28**	**23**	**19**	**20**	**10**	**9**	**8**	**185**

The raw data would suggest certain patterns over time in the delegation of control to mercantile organizations. The early benchmark years up to 1300 fit a process of learning and diffusion with regard to different kinds of mercantile organisation. Strikingly, however, at least between ca. 1350 and 1600 there is no obvious trend to either higher or lower degrees of control delegation. By 1650 there are more 'low-delegation-level' institutions then 'high-delegation-level' ones, but the small numbers should caution us against over-interpreting individual benchmark years.

The overall impression is quite clearly that at least until 1650 there is little evidence for some kind of ‘evolutionary’ trend either to more or less delegation of control. This contradicts the common assumption in the literature that institutions such as informal coalitions, *nations*, and formally constituted guilds became obsolete in an almost ‘natural’ progression as the emerging European nation states took over crucial functions. For about three centuries the co-existence of competitive forms of organization characterized Europe’s commercial world rather than an evolutionary path towards ever more ‘modern’ institutions.[26]

The diverging trajectories of the control delegated by German merchants in the Netherlands (figure 1) seem to be fairly representative of the overall sample. Throughout the years typically associated with the formation of a stronger state under Burgundian and Habsburg rule, very different degrees of control delegation existed in Bruges, Antwerp, and Amsterdam, suggesting a rather more complex relationship between rulers, market conditions and mercantile organisation. Though this is beyond the reach of this paper one might speculate that the existence of a pool of forms of organisation to suit different political and market circumstances lay at the heart of Europe’s commercial success in the longer run.[27]

In the tables 4 and 5 below we report the results of the probit model employed to test for the relationship between various variables and the probability that merchants delegate more or less control. The specifications 1 and 2 in table 4 provide a more formal test for the question of the presence or absence of a time trend of the evolutionary type. The results confirm largely the impression gained from table 3. A simple run of the entire dataset on a number of dummies for each benchmark year (1500 is the omitted year) would suggest clearly a break after 1600, i.e. all dummies after that date are strongly statistically significant and negative, indicating lower degrees of control delegation over time. However, once we introduce a number of variables that capture the political and institutional framework as well as market size in specification 2, all time dummies become statistically insignificant at the 10% level. The time trend seen in specification 1 is essentially a reflection of a variety of political factors, institutional developments and the expansion of market scope and scale that deserve more detailed analysis.

Table 4 Probit regression results: dependent variable degree of control delegated

	(1) control delegation	(2) control delegation
D1250	-0.02	#
	(0.03)	
D1300	-0.32	0.06
	(0.91)	(0.14)
D1350	-0.12	0.12
	(0.41)	(0.33)
D1400	0.08	0.33
	(0.28)	(0.92)
D1450	-0.08	0.29
	(0.33)	(0.88)
D1550	-0.22	0.05
	(0.84)	(0.10)
D1600	-0.74	-0.26
	(2.58)***	(0.50)
D1650	-0.90	-0.09
	(3.14)***	(0.18)
D1700	-0.94	0.91
	(2.54)**	(1.20)
D1750	-1.31	0.47
	(3.23)***	(0.61)
D1800	-1.47	0.26
	(3.26)***	(0.36)
specialised courts		0.42
		(1.36)
mercantile courts		-0.70
		(1.26)
local convoys		-0.08
		(0.38)
local pol representation		0.04
		(0.14)
(ware)housing		0.73
		(2.70)***
public vending location		0.45
		(2.04)**
private vending location		0.42
		(1.52)
town pop in 1,000		-0.01
		(3.40)***
Observations	185	174
Pseudo R-squared	0.07	0.13
McKelvey and Zavoina’s R2	0.21	0.32

Y-standardised coefficients: change of variable 0 to 1 (dummy) or plus one unit (continuous variables) is associated with coefficient*StD change in dependent variable. Observed StD 1.30 (equation 1 and 2)
Absolute value of z statistics in parentheses. Omitted variable in equation 1 is 1500.
* significant at 10%; ** significant at 5%; *** significant at 1%
# dropped due to collinearity

Table 5 Probit regression results: dependent variable degree of control delegated

	(3) Foreign and local	(4) Foreign and local	(5) Foreign only	(6) Foreign only
specialised courts	0.36	0.44	0.39	0.52
	(1.26)	(1.53)	(1.34)	(1.90)*
Mercantile courts	-1.45	-1.31	-1.97	-1.54
	(2.77)***	(2.41)**	(3.34)***	(2.66)***
Local convoys	-0.18	-0.23	-0.17	0.23
	(0.73)	(0.93)	(0.59)	(0.81)
Violence	-0.27	-0.24	-0.21	-0.19
	(1.44)	(1.31)	(1.06)	(1.08)
Local pol representation	0.06	0.02	-0.55	-0.73
	(0.15)	(0.05)	(1.21)	(1.72)*
(ware)housing	0.57	0.53	0.60	0.74
	(1.71)*	(1.63)	(1.74)*	(2.31)**
Insurance	0.07	0.16	0.09	0.16
	(0.26)	(0.56)	(0.30)	(0.58)
Bourses	0.40	0.42	0.38	0.40
	(1.54)	(1.51)	(1.40)	(1.47)
Public vending location	0.48	0.58	0.52	0.74
	(2.07)**	(2.23)**	(2.13)**	(2.89)***
Private vending location	0.42	0.44	0.39	0.28
	(1.75)*	(1.64)	(1.61)	(1.07)
Town pop in 1,000	-0.028	-0.027	-0.030	-0.019
	(3.53)***	(2.60)***	(3.58)***	(1.86)*
Town pop^2	0.0001	0.0001	0.0001	0.0001
	(2.61)***	(1.95)*	(2.71)***	(1.37)
Fairs		0.21		0.07
		(0.89)		(0.20)
Market scope		-0.04		-0.05
		(0.39)		(0.63)
Diaspora		0.69		0.29
		(1.77)*		(0.78)
Home pol representation			0.16	-0.04
			(0.48)	(0.12)
Home convoys			-0.16	0.07
			(0.50)	(0.23)
Competition				-0.92
				(4.29)***
Observations	139	139	120	120
Pseudo R-squared	0.14	0.15	0.15	0.21
McKelvey and Zavoina’s R2	0.39	0.42	0.42	0.53

Y-standardised coefficients: change of variable 0 to 1 (dummy) or plus one unit (continuous variables) is associated with coefficient*SD change in dependent variable; observed StD 1.3 (equations 3 & 4) 1.28 (equations 5 & 6);
Absolute value of z statistics in parentheses
* significant at 10%; ** significant at 5%; *** significant at 1%

In table 5 above we explore what environmental factors impacted on the probability that we observe merchants delegating more (less) control to fellow traders. In the interest of parsimonious specification we omit the time dummies based on our previous results, which showed no signs of a time trend.[28] Specifications 3 and 4 use our full dataset. Due to missing observations for some of our independent variables our sample size falls to around 140 observations. Specifications 5 and 6 test some additional variables only relevant for foreign merchant guilds, i.e. groups operating in a host town and thus the dataset is reduced further to 120 observations. The results from these specifications speak to four major themes in the literature on mercantile associations.

(1) Guilds offered protection against predatory rulers. Greif has argued that “a state with sufficient coercive power to [enforce contracts and property rights] also has the power to withhold protection and confiscate private wealth.” With Milgrom and Weingast he claimed that a ruler can only be kept from expropriating foreign merchants through guilds with strong internal cohesion, i.e. rules that allow them to exclude members, and which in turn are helped by home governments, in which merchants have a strong voice. If predatory rulers were the main problem that merchants tried to solve through strong organisation we would expect a) that when merchants had a strong voice in the home and or host government less delegation of control was needed to protect against predation b) that more sophisticated legal institutions also reduced the need for more forcefully organised guilds and c) that in environments were violence against merchants was rife stronger organisation was attractive.[29]

Our results offer only very limited support for these views. The coefficient for merchants’ political representation in the home town (specification 5 and 6) is not statistically significant. That for local political participation (specifications 3 through 6) only returns a coefficient that is statistically significant at the ten percent level in one specification (6) albeit with the expected negative sign. These results suggests that the (formal) participation of merchants in government, stressed by generations of political economists, was in fact only weakly related to the form of mercantile organisation.

To our own surprise we cannot detect any clear association between acts of violence suffered by merchants and the degree of organisation. Our measure of violence (Are merchants from this community known to have suffered acts of violence in the past 25 years?) is far from perfect but it does reveal differences in incidence of violence between groups and periods. In all our specifications this variable remains statistically insignificant, however. If nothing else this calls even more for caution against the relatively simplistic assumption about the relationship between predation and merchants' organisation common in the game-theoretical literature.

(2) Guilds kept merchants from cheating Our model also tests the possible relationship between the formation of merchant guilds and the organization of conflict resolution. Traders who delegated high levels of control (4 or 5) could rely on their consuls' adjudication of business disputes. In the four towns we investigated such consular courts existed in Bruges and Antwerp from 1300 onwards and in Bilbao since 1500. In theory, local governments who provided similar legal services might lead merchants to delegate less control to their fellow traders. This hypothesis would seem to be supported by the results for the mercantile court variable. High levels of delegated control were less likely in towns that set up a separate mercantile court, like Bilbao in the mid-sixteenth century, and Bruges after 1700.

However, the opposite might be true for towns like Amsterdam and Antwerp that extended their local courts with specialized, subsidiary courts for various kinds of business conflicts, though this result is only statistically significant in specification (6). The reason for this apparent contradiction lies most probably in the underlying data set. Our specialized courts variably measures the occurrence of any one subsidiary court, be it maritime courts, insurance chambers, or bankruptcy courts and seems too blunt a tool but data scarcity reduces alternatives here.

(3) Merchant guilds enabled traders to extract rents. A recurrent theme in the literature on guilds is that association increased market power and the potential for abuse of market power, especially for those groups that could exclude competitors legally. Our evidence in this respect is indirect. We observe that when groups of merchants that competed directly with local merchants in the same line of trade this was associated with a lower degree of control delegation (specification 6). It stands to reason that the potential to actually monopolize a trade and presumably reap rents from this situation was one incentive for an increased degree of organization. Thus in the fourteenth and fifteenth century the German Hanse in Bruges used its control over Baltic imports and exports of Flemish textiles to exact extensive privileges from the city magistrate. After 1500, Castilian merchants in the same towns benefited from their role as sole suppliers of wool to the local cloth industry. Both groups had by-laws and/or privileges that allowed them to exclude competitors (cf. appendix).

(4) Guilds facilitated the matching of supply and demand in markets of limited size. This hypothesis would imply at least two mechanisms. On the most basic level we should see that in larger markets less delegation of control was necessary, an argument often made by historians of merchant guilds. Our results prove them right. Our two measures for the size of markets come out statistically significant. Though there could be an endogeneity problem (an ‘optimal’ choice of control delegation might have a positive impact on market development), it seems more likely that

market development was driven largely by exogenous population growth. As we would expect, trading in larger size towns is associated with merchants delegating less control to a mercantile organisation. Seventeenth century Amsterdam is the most obvious example, but the lack of formal association between traders from Venice, Lucca, Aragon, southern Germany, and France in Antwerp in the mid-sixteenth century speaks to the same rationale. The quadratic term of town population, and its positive sign in the specification, suggests this relation does not hold for very small towns. Here higher degrees of mercantile organization were unlikely, presumably because the start-up costs of merchant guilds were too high in such an environment. If size of the reachable market is substituted for population (results not reported here) the result still hold.[30] Size mattered. Indicators of market diversification fare less well. The diversity of goods traded in these markets (the market scope variable) does not seem to be strongly associated with the delegation of control.

The second mechanism in which size and scope of markets might have been associated with different kinds of guild organisation is through the availability of sophisticated private market solutions, such as insurance, and/or pressure for the provision of public goods that benefited merchants. The coefficient for the availability of private market insurance is not statistically significant in our specification. This does not necessarily imply that being able to insure against risk did not matter. Instead it seems that the ubiquitously available risk sharing contracts (bottomry, participations, limited liability companies) were fairly close substitutes for formal insurance contracts. The result points towards the importance of guilds in focussing rulers' minds on the provision of public goods to merchants. Courts e.g. contributed to the legal force of a wide range of debt and equity contracts, which in turn gave merchants better means to manage risk.

As we suspected some of the services that could lower transaction costs were provided as club good by merchant associations while others were produced as public goods by rulers. The pattern of possible complementarity rather than substitution stands out clearly. The positive statistically significant coefficients for public goods, such as warehousing, bourses and other public vending locations (e.g. cloth-halls) suggest that highly organised merchant communities actually pressured towns for these services. The Merchant Adventurers in Antwerp are a case in point: their textile trade was so important for other foreigners and local cloth finishers that the town magistrate in the late fifteenth century supplied extensive premises to organize the inspection and sales of cloth. This result throws new light on the potential place of merchant guilds in general institutional development. Far from being the backward-looking institutions of Adam Smith's imagination that were opposed to all novelty they might have played a positive role in the establishment of a whole variety of mercantile institutions in Europe.

But not all of the typical public goods directed at mercantile activity seem to have been linked to mercantile organisation. The provision of protective convoys through either the local or the home ruler is not statistically significant in any specification. In other words, the delegation of control to fellow traders apparently did not hinge on the protection offered by third parties.

IV. Some robustness checks

Additional information about the factors that influence the delegation of control between merchants in our dataset can be glanced from looking at the individual predicted probabilities for the statistically significant variables in particular specifications. Table 6 reports these for equation 3 above. In each case the maximum for the independent variable is set (or the dummy = 1 for discrete variables) and all other independent variables are set at their mean value. Probabilities are then calculated for the degree of control delegation.

Table 6: Individual predicted probabilities equations 4 and 6

variable	Z-stat	1	2	3	4	5
Spec 4: all groups						
specialised courts	1.53	0.186	0.244	0.266	0.268	0.035
mercantile courts	2.41**	0.809	0.135	0.044	0.011	0.000
local pol participation	0.05	0.263	0.270	0.247	0.201	0.019
warehousing	1.63	0.112	0.200	0.267	0.356	0.069
Public vending location	2.23**	0.126	0.208	0.269	0.337	0.059
diaspora	1.77*	0.069	0.152	0.248	0.420	0.111
town pop	2.60***	1.000	0.000	0.000	0.000	0.000
town pop^2	1.95*	0.000	0.000	0.000	0.008	0.992
Spec 6: foreign only						
specialised courts	1.90*	0.094	0.252	0.330	0.295	0.030
mercantile courts	2.66***	0.856	0.120	0.021	0.002	0.000
local pol participation	1.72*	0.172	0.318	0.306	0.192	0.012
warehousing	2.31**	0.026	0.127	0.279	0.463	0.105
Public vending location	2.89***	0.045	0.173	0.311	0.404	0.067
Diaspora	0.78	0.082	0.237	0.330	0.316	0.035
Competition	4.29***	0.414	0.345	0.181	0.059	0.001
town pop	1.86*	1.000	0.000	0.000	0.000	0.000
town pop^2	1.37	0.000	0.000	0.004	0.101	0.895

The profiles illustrate further the overall results. The existence of mercantile courts and larger town size is associated with a decreased probability of higher degrees of control delegation across all categories. Direct competition with the local merchant community (specification 6) also reduces the likelihood of much control being delegated to fellow traders. In the case of the supply of (ware-)housing and public vending locations we observe the highest probability for category 4. Sample size again means we should be cautious but these results illustrate the additional potential that our modelling strategy offers. They also demonstrate that the individual probability profiles are broadly consistent with our argument that this is indeed an ordered variable.

Finally, the question remains if our results would remain broadly consistent if we relax the assumption that our control delegation categories are ordered. The obvious test is to run a set of multinomial logit regressions rather than ordered probits. Since multinomial logits are essentially just sets of binary pairs, i.e. each category is run as a binary set against a predetermined comparison group, they are notoriously difficult to interpret because depending on the comparison group the parameterization and therefore the results change. We have nevertheless re-run all specifications as multinomial logits across all possible base categories.

Table 7 Relative risk ratios for equation 3 (Logit category 4 compared to category 1)

	Control delegation level 4	Z stat
Specialised courts	6.82	1.05
Mercantile courts	*0.01*	*-1.56*
local convoys	1.69	0.43
Violence	0.20	-1.74
Local pol repr	1.39	0.23
(ware) housing	*0.76*	*-0.18*
Insurance	4.71	1.27
Bourses	7.25	1.35
Public vending locations	*48.90*	*2.64*
Private vending locations	5.41	1.11
Town pop in 1,000	*0.88*	*-1.60*
Town pop^2	*1.00*	*-0.21*

Table 7 above reports just one set of relative risk ratios for category 4 compared to category 1 merchant groups using equation 3. Italics indicate variables that were statistically significant in the probit. A relative risk ratio < 1 indicates a negative relationship; a larger town size e.g. lowers the risk that a group of merchants will find themselves in a control delegation level 4 group rather than a control delegation 1 group. A relative risk ration > 1 in turn suggests a positive relationship; the risk to find a control delegation level 4 compared to a level one increases significantly if there is a public vending location. Additional results not reported here have been used to check especially the patterns of the individual probability distribution derived from the probits reported above, and have been found to be consistent.

VI. Conclusions

The importance of merchant guilds for the commercial development of Europe is beyond doubt. However, there is still little agreement as to why they emerged, persisted and ultimately declined between the 11th and 18th centuries. Historical studies have focused on individual cases and idiosyncratic circumstances that restrict severely comparability, while economic approaches based on game or contract theory often impose narrow assumptions on their models which find it hard to deal with two key features of these institutions: in most markets merchants used more than one institution to solve a given problem while a given institution often addressed more than one problem. In this paper, we have argued for a re-integration of the rich empirical evidence on pre-modern mercantile organisation in Europe provided by many generations of historians with comparative quantitative techniques of analysis to understand better the rise, persistence and decline of merchant associations.

We have suggested a new methodological approach that allows us to pursue a comparative analysis without loosing rigour. The most important step towards making different forms of mercantile organisation comparable while accounting for their idiosyncrasies was to establish a useful classification of merchant associations. From the traders' point of view membership of a merchant guild was meant to create benefits, economic or otherwise, but it did so at the expense of delegating certain functions to the group. This logic underlies our control delegation index. Obviously, we simplify the variety of institutional forms significantly when we group them into five categories. Nevertheless, the five categories seem to perform well as basic types of merchant association. While we could think about these groups simply as discrete types of guilds, they actually reflect an inherent ordering. Political representation of a merchant group (category 3) realistically required at least at an early stage mutual knowledge and trust, most often based on common origin, ethnicity or religion (category 2). Sanctioning by consuls (category 4) needed to be legitimised by a formal organisation that established verifiably who belonged and who did not (category 3). The exclusion of fellow merchants from a trade (category 5) required an internally cohesive group that could punish members who continued collaborating with outsiders.

This classification has allowed us to review existing explanations of the rise, persistence, and decline of merchant guilds in pre-modern Europe. In essence, we wanted to know what impact a variety of political and market conditions had on the probability that we observe a particular degree of control delegated by a particular group of merchants in a specific town at a given date. Therefore, we chose as statistical technique standard maximum likelihood models looking at the outcomes as either ordered or unordered categorical variable. We have tested the empirical feasibility of this approach with a sample of 185 observations of foreign and local merchant communities trading in four European towns between 1250 and 1800.

The results of our analysis speak to four large themes in the literature on pre-modern merchant associations Firstly, the measurement of control delegated by merchants indicates strongly that the key to understanding mercantile organisation in this period is not an evolutionary succession of first-best institutions emerging over time but the co-existence of competitive forms of organisation that suited different political and market circumstances. We observe an early ‘learning phase’ when more differentiated forms of associations emerge. Yet, as early as 1350 a full set of institutional alternatives seems to be known. For the next three centuries these provided a pool of alternative solutions that could be and were adapted to local circumstance. Only after 1650 there seems to be a trend for merchant groups to delegate less control to fellow traders.

Secondly, the results open up important questions with regard to the role of the state in institutional development. Political economists regularly depart from the idea that rulers shaped institutional development largely by predating on their subjects thus giving rise to solutions that would allow subjects to keep their ruler in check. In the context of merchant guilds this could take two forms. Merchants organised in strong merchant guilds in order to protect themselves through collective action against extortionist taxes and expropriations. Or they tried to control local and/or home government, i.e. become the ruler. Our results do not support either of these hypotheses. Violence suffered by merchant groups was not associated with higher degrees of control delegation, i.e. stronger collective action. Nor was political participation strongly associated with lower control delegation. More research is required but the results raise doubts about the overwhelming importance often given to predatory rulers in accounts of institutional development.

Thirdly, the analysis hints at a more positive role played both by guilds and rulers. Guilds apparently helped the development of other institutions. Warehousing and protective convoys are cases in point. Strong guilds could press rulers for the provision of public goods. Obviously the guilds profited, but these public goods created positive externalities for others in the market place who did not necessarily belong to the guild. Finally, the scale of markets in which merchants operated was crucial for the level of control they delegated, with larger markets presumably lowering the potential benefits of organisation and raising its costs. This result vindicates generations of historians from Ehrenberg to Braudel and Lopez and many more recent ones who stressed the importance of market integration and its link with institutional development.

It is important to note that these conclusions follow from the limited dataset we employed here to test our new methodological approach. Adding new towns and merchant communities to the dataset may show other effects of political and economic circumstances on the organization of traders. With more observations included in the analysis, we could also test the likelihood of combinations of economic and political factors changing the level of delegated control. The influence of social, religious and cultural factors on the organization of traders has also remained beyond the scope of our present analysis but we are confident that our methodology would lend itself for such an investigation.

The most important conclusion is that our methodology delivers fairly robust results and it will be able to enlighten many more detailed questions regarding the role of various independent variables than we could include in this paper. In this sense we think that our results can actually help to set a new agenda for related research in historical economics, because it allows us to identify the key variables based on an in-depth empirical analysis rather than ad-hoc assumptions about what kind of problem merchants were trying to solve. Hopefully, it will also allow historians of merchant guilds to extend and challenge our results in comparison with different groups and towns. Overall this paper has argued that the comparative analysis of pre-modern institutional forms is possible.

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[10] Ogilvie has recently argued that persistence is a weak test where powerful groups have an interest in rents. Theoretically, this is correct. However, given the almost total transformation of Europe's power and governance structures over these eight centuries it is empirically difficult to see how a power monopoly could have survived this long in the absence of more widely spread economic benefits .Sheilagh C Ogilvie, "Rehabilitating the Guilds: A Reply," *Economic History Review* 61, no. 1 (2008): pp.175-176.

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[28] A sufficient sample size (generally >100) is crucial in multinomial models and given the sample size at present an exclusion of the non-significant time dummies improves considerably the quality of the probit estimates.

[29] Greif, *Institutions*, 91; Greif et al., "Coordination".

[30] We have run alternative specifications of the same model substituting more sophisticated measures of market size for town population. Introducing a measure that estimates purchasing power in the markets a town had regular trade with by multiplying population with silver wages yields very similar results.