#### 6. COMMERCE AS AN ECONOMIC ACTIVITY

In the first part of the book, Chapters 2 through 5, our subject was production and the mechanisms that increase its productivity. We saw that commerce played a central role in those mechanisms. Commerce itself is the subject of the second part of the book—the current chapter and the following three. In this chapter, we begin by examining the economics of commerce—seeing what it involves as an economic activity and the nature of the inherent challenges. We will see how commerce came to organize itself during the Commercial Revolution to meet those challenges. We will conclude the chapter by considering how commerce differs, as an economic activity, from production and examining some of the implications.

In Chapter 7, we will see how, in subsequent centuries, expansion of the market and so of the market for the services of commerce, led to reorganization and technological progress in commerce. The resulting increase in the productivity of commerce lowered trading costs, making possible further expansion of the market and further economic progress. In Chapter 2, we called this mechanism the trading-cost multiplier.

As commerce developed, there was an increasing division of labor and increasing specialization within commerce. As part of this process, a number of services necessary for commerce split off as separate activities undertaken by specialized enterprises: these services included transportation and communications, payments, and financing. We will consider transportation and communications as part of our general discussion of the organization of commerce in this chapter and Chapter 7. In Chapter 8, we will trace the development of payments in preindustrial Europe. In Chapter 9, we will trace the development of financing.

#### **COMMERCE AND ITS CHALLENGES**

Commerce is the mediation of exchange. In preindustrial Europe, commerce mediated, in particular, long-distance exchange—exchange between large cities and their hinterlands, between one region and another, and between zones.

Commerce, therefore, generally involved the purchase of goods in one place and their resale in another, distant from the first. This geographic dimension of commerce posed a

number of challenges that producers, operating only in a single location, did not normally face.<sup>1</sup>

# Venturing and its demands

Commerce normally took the form of venturing: merchants purchased goods and brought them to a distant market 'on spec' in search of a buyer. This procedure was unavoidable, since the potential alternative—shipping to order—was simply not feasible. One reason was slow communications and transportation. Another was the heterogeneity and uncertain quality of goods: potential buyers needed to inspect goods before they would purchase them.

Venturing placed certain demands on the organization of commerce. First, it required a presence both in the place where the goods were purchased and in the place where they were to be sold. A merchant had either to travel himself with his goods or to rely on someone else—a representative or agent—to act for him in one of the two places.

Second, venturing required a merchant to take ownership of the goods he traded in the interval between purchase and resale. Doing so required considerable working capital. As an example, consider the sixteenth-century trade in woad, a blue dye.<sup>2</sup> Growing woad and drying and processing it took over a year: local merchants financed the process of production by paying producers in advance for their output. Shipping the dye to market and selling it there might take another year, and since woad was normally sold on long credit, it might be yet another year before merchants recouped their initial outlay. A woad merchant therefore needed to command working capital equal to three times his annual revenue.

Merchants generally financed some of their working capital out of their own resources. However, given the large sums they needed, most had to supplement their own resources by borrowing.

# The challenge of reliance

Borrowing, the extension of credit, payment in advance, and the employment of distant representatives all involved reliance on promised performance. A merchant relied

<sup>&</sup>lt;sup>1</sup>We touched on these challenges in our discussion of trading costs in Chapter 2.

<sup>&</sup>lt;sup>2</sup>(Ball 1977) p166

on his representatives to act faithfully on his behalf and on others to pay or deliver what they had promised. Similarly, others relied on him to pay his debts.

The pervasiveness of reliance meant that commerce depended on *trust*—on the expectation that promises would be kept.<sup>3</sup> There are two distinct reasons why a promise might not be kept—why the promisor might default. First, he might simply be unable to keep his promise: this happened frequently in the unpredictable and hazardous environment of preindustrial Europe. Second, the promisor might choose not to keep his promise—to renege. He might do this if the gain from breaking the promise was greater to him than the cost. Trust, therefore, depended both on the promisor's *ability* to keep his promise and on his *incentive* to do so.

### The challenge of predation

Long-distance trade was particularly vulnerable to predation. Bandits, pirates, and governments found it easy to prey on goods en route. Markets, where goods were concentrated in large quantities, were also attractive targets for predation. So too were merchants themselves: as we have seen, their business required them to marshal considerable capital and to keep it in a liquid form.

Predation took a variety of forms. Goods on the road or at sea might be taken by force; goods brought to market might be 'purchased' by rulers at an arbitrarily low price set by themselves; and rulers might simply expropriate merchant wealth. Alternatively, under the threat of such actions, rulers might extract tolls, taxes, and interest-free loans.<sup>4</sup>

The cost of predation was a major part of trading costs. It included not only actual losses but also the expense of protecting against predation and the expense of avoiding it. The risk of loss to predation was a major source of uncertainty, which was itself an important obstacle to trade. Merchants who managed to reduce the cost and risk of predation enjoyed a considerable advantage over their competitors.<sup>5</sup>

<sup>4</sup>We will discuss predation in greater detail in Chapters 10 through 12.

<sup>&</sup>lt;sup>3</sup>(Levi 2000)

<sup>&</sup>lt;sup>5</sup>(Lane 1941) calls the advantage conferred by lower predation costs a 'protection rent'.

### The rivalry for trade

A merchant could profit from a given trade only if he was the one to mediate it. Merchants, therefore, were rivals for trade. One way a merchant could capture a given trade was through competition—by offering buyers and sellers better terms. He was able to do this if his trading costs were lower—if he was more successful, for example, in dealing with the problems of reliance or predation. But a merchant could also capture trade by preventing rivals from competing with him. This had the added advantage of allowing him to strike a better bargain—better for himself—with buyers and sellers.

# **Organizing to meet the challenges**

Commerce organized itself to meet these challenges. Because the challenges of commerce were far more difficult than those of production, its organization was far more complex. Indeed, the organization of production could be simpler largely because commerce took care of the difficult things for producers—like marketing output and obtaining inputs and financing.

Commerce differed from production too in the greater prevalence of advantages of scale. Some of these were the result of indivisibilities: we saw in Chapter 2 that the information costs, the transactions costs, and some of the transportation costs of a venture were the same whatever its size. Similarly, the costs of sending a representative to a distant market, or of maintaining one there, were the same whether he did a great deal of business or very little.

Another source of advantages of scale was trustworthiness. Greater wealth meant a greater ability to keep one's commitments; a larger scale of operations meant that more future business stood to be lost from damage to one's reputation and this created a stronger incentive to keep one's commitments.

Like the organization of production, the organization of commerce took advantage of the gains from the division of labor and from joint action. And in doing so it made use of the same three basic structures of organization—the enterprise, the association, and the market. We begin with the enterprise.

# THE ENTERPRISE

In production, benefits of scale were largely captured *across* enterprises. In commerce, however, because of the greater complexity of the business, it was harder to break up in this way. So the benefits of scale were captured to a greater extent, at least initially, *within* the enterprise. This tended to make enterprises larger than they were in production.

The basic form of enterprise remained the family firm—in this case, the merchant house—but this was often based, not on the nuclear family, but on the extended family. Also, new larger types of enterprise emerged in which members of several families could combine their efforts.

#### The merchant house

The family was even more important in commerce than it was in production because of the problem of reliance. Merchants preferred to employ sons, brothers, and cousins as representatives. And they relied on their families for startup capital and for additional financing when needed.

The family also acted as a guarantor of the transactions of its members with others. It was effective in this role partly because of its greater resources: it possessed more property than any individual member. And any of this was forfeit if a member of the family defaulted. The family was also longer-lived than the individual—important when a common cause of default was the premature death of the promisor. The family also had a strong interest in standing behind the promises of its members, because a family's reputation was indivisible. And the family's guarantee was credible because it was involuntary: families were universally held responsible by others for the conduct of their members.

Family support extended beyond matters of reliance. The family protected its members against predation. It provided physical protection against violence through the principle of vendetta: anyone harming a member of the family could expect retribution from his relatives.<sup>6</sup> In addition, family connections—'favor at court'—were important in protecting against predation by government.

<sup>&</sup>lt;sup>6</sup>(Pospisil 1971) Ch. 1

Family connections were essential too in commerce itself—for access to information and for a helping hand in the rivalry for trade. The family also provided its members with a safety net: a merchant knew that if he lost his fortune or his life his wife and children would be provided for.

The family was a source of trustworthy agents and of financing and it could act as a guarantor because of its power over its members. That power derived from the threat of withdrawing family support: without this, no merchant could have continued in business. The family's power over its members made it an effective internal enforcer. And this made it less likely that one family member would renege on another and reduced the likelihood that a member of the family would abuse the family's guarantee.

### The joint enterprise

While the family firm was relatively large in commerce, it was still not large enough to capture all the potential benefits of scale. For example, on the one hand, the benefits of scale in trading costs favored large ventures; on the other, the benefits of diversification favored multiple ventures. To engage simultaneously in many large ventures took more capital than a single family firm could mobilize and required the efforts of a larger number of people. So merchant houses found ways to pool their resources and personnel in various types of joint enterprise.

The participants in a joint enterprise were, by definition, not members of the same family. It was helpful, therefore, to reinforce mutual trust by enlisting a third-party enforcer: we will see that there were several possible candidates.

To facilitate enforcement, the agreement among the participants was formalized through the use of a written contract.<sup>7</sup> This spelled out the terms of the agreement and, if a conflict arose, it could be brought to a court for adjudication.

The joint enterprise could be created for the duration of a single venture. Or it could be created for a fixed period of time—say ten or twelve years—for a series of ventures.

#### The commenda partnership

Merchants trade initially by themselves traveling from place to place with their goods. For example, in the early twelfth century, when Genoa traded by sea with the

<sup>&</sup>lt;sup>7</sup>This was sometimes done even among members of the same family—especially distant members.

eastern Mediterranean and by land with the Fairs of Champagne and the Low Countries, both of these trades were conducted by traveling merchants.

By the late twelfth century, however, rather than traveling themselves, merchants increasingly employed representatives to travel with their goods. Doing so allowed them to diversify: by using multiple representatives, they could trade with several markets simultaneously. Doing so also allowed them to increase the scale of their operations.

The arrangement merchants made with their traveling representatives was formalized in a contract called the *commenda*—a form of partnership. One partner was the merchant who provided the goods to be traded or the money to purchase those goods; the other partner was the representative who traveled with the goods to a distant market and traded them there.

On the representative's return, the two partners divided the profits of the venture between them—the share of the representative normally being a fourth. By compensating the traveling representative with a share of the profits, the *commenda* provided him with good incentives. And, of course, profitable completion of one venture made it more likely the merchant would take him on for another.

#### The share partnership

Another form of venture enterprise was used to finance the building and operation of the ships used in long-distance trade. The many very small ships engaged in local traffic and carrying low-value cargoes were usually owned and operated by individual mariners or simple partnerships, and they often found cargo simply by 'tramping' from port to port.<sup>8</sup> For these small and simple enterprises, there seems to have been no reason to deviate from straightforward owner management with its obvious incentive advantages. However, as the size of the ship increased, so did the problems.

One major problem, as we saw in Chapter 4, was finding cargo: the larger the ship, the less likely that chance would provide sufficient cargo to keep it employed. A second major problem was risk—the risk of loss due to predation or to natural hazards, and business risk due to the uncertainty of voyage times and the difficulty of finding cargo.

<sup>&</sup>lt;sup>8</sup>(Byrne 1930) Ch. IV; (Unger 1998 [1979])

It was these two problems of operating large ships—the difficulty of filling them and the high level of risk faced by shipowners—that shaped the shipping enterprise. The need to fill ships fostered close ties between shipowners and merchants. The magnitude of the risk—large relative to the wealth of the individual shipowner or merchant—gave rise to ways of breaking down the risk and sharing it with others. Moreover, since, in terms of risk, merchants sailing with the ship and shipowners were literally 'in the same boat', merchants wanted a say in managing the ship.

The earliest organizational structure used to address these problems, and one that survived for most of the period, was the share venture. In Venice from the eleventh century and in Genoa from the twelfth, the construction and operation of large ships was financed by dividing ownership into shares or *loca*—from 16 to as many as 70.<sup>10</sup> The duration of the enterprise was generally a single voyage, with the partnership liquidated on the return of the ship. If successful, the partnership might be reconstituted with the same shareholders for another voyage.<sup>11</sup>

The principal shareholders in a share venture were the merchants whose cargo the ship carried. Large ships were generally built to order for groups of merchants who planned to employ them: building such a major piece of capital equipment 'on spec' would have been too risky. 12 One advantage to a merchant of owning a share in a ship was that it guaranteed his cargo a place on board; conversely, the shipping enterprise, organized in this way was assured of sufficient cargo. Another advantage for the merchant was that ownership gave him a degree of control over the conduct of the voyage. 13

Later, it became common to spread the risk by selling shares to purely financial investors who were not directly involved in the voyage themselves. As we will see in Chapter 9, the share venture structure later caught on elsewhere, both in the

<sup>&</sup>lt;sup>9</sup>(Lopez 1976)

<sup>&</sup>lt;sup>10</sup>(Lane 1934) p 116; (Byrne 1916). The idea was not new: the *locum maris* has its origins in Classical antiquity.

<sup>&</sup>lt;sup>11</sup>(Parker 1977)

<sup>&</sup>lt;sup>12</sup>(Byrne 1930) Ch. VI; (Lane 1934) Ch. VII.

<sup>&</sup>lt;sup>13</sup>(Scammell 1972)

Mediterranean and in the North.<sup>14</sup> The share venture structure was also used to finance industrial enterprises and employed in public finance.

# The compania partnership

As the volume of trade increased, it made more sense for a merchant to maintain a representative in a distant market permanently rather than having one constantly traveling back and forth. A permanent presence meant better market information—the key to successful trading. It also meant greater freedom in the timing of purchases and sales: there was no rush to buy or sell before the ship or caravan departed. Continued residence also allowed agents to develop local contacts. Resident representatives could establish their own credit and ascertain the credit of others, enabling them to buy and sell on credit; it helped in this that they remained in place to pay and collect debts.<sup>15</sup>

Of course, these advantages had to be weighed against the cost. Maintaining a representative permanently in a distant market was expensive, and it could be justified only if the volume of business was sufficiently large. Moreover, the use of resident representatives required that there exist reliable arrangements for sending to them and receiving from them information, goods, and funds. Such arrangements developed only when the overall scale of trade created a sufficient demand for them.

The *commenda* contract was not a useful framework under which to employ a resident representative, because it did not provide the representative with sufficiently strong enough credit. This was because the non-traveling partner of a *commenda* was not liable for debts incurred in a distant market by his representative. <sup>16</sup> This, of course, made it harder for the representative to buy on credit or to borrow.

A form of enterprise better suited to the purpose was the *compania* partnership. The *compania* began as a formalization of the family firm. Such formalization became desirable as more distant members of the family became involved: a formal contract spelled out their rights and obligations and provided them with better legal protection. The *compania* was established to last for a fixed number of years rather than for the

<sup>&</sup>lt;sup>14</sup>(Sella 1977); (Unger 1998 [1979])

<sup>&</sup>lt;sup>15</sup>(Willan 1959) Ch. 1; (Spufford 1988)

<sup>&</sup>lt;sup>16</sup>(Lane 1944) Ch. 3; (Kedar 1976)

duration of a venture. At the end of that period, the partnership was liquidated and the profits calculated and distributed to the partners. Often, the *compania* was reconstituted, frequently with the same partners.

Formalization made it easier to expand the enterprise to include partners who were not kin and to allow members of different families to form joint enterprises: the *compania* was commonly used for both purposes by the fourteenth century. Extending the enterprise in this way allowed it to grow larger both in capital and in the number of representatives it could place in different distant markets.

A representative employed by a *compania* enjoyed stronger credit than one operating under *commenda*. All the partners of the *compania* were fully liable for any debts their representatives incurred. Moreover, the greater size and diversification of the *compania* made it more trustworthy.

The enhanced trustworthiness was particularly important for merchant banks. These were partnerships that borrowed not only to finance their own working capital but also in order to lend to others. Particularly notable were the Florentine 'supercompanies' of the fourteenth century—the Peruzzi, Bardi, and Accaiuli. The Peruzzi, for example, had 15 branches across Western Europe and the Levant and employed some 120 partners and representatives. 18

The size of the supercompanies enabled them to borrow on an exceptionally large scale. They used the funds they raised to make loans to rulers in exchange for valuable trading monopolies—most notably monopolies over the export of grain from Sicily and over the export of wool from England.

#### **Problems of reliance in large enterprises**

Large enterprises were able to capture the advantages of scale, but they also suffered from significant disadvantages of scale. The most important of these arose from problems of reliance. There were two types of problem—an external one involving financial investors, and an internal one involving distant representatives.

<sup>&</sup>lt;sup>17</sup>We will learn more about merchant banks in Chapter 9.

<sup>&</sup>lt;sup>18</sup>(Hunt 1994) In comparison, the papal curia, the largest government bureaucracy of the time, numbered only about 250.

Financial investors in *compania* partnerships or share ventures were nominally partners, and they therefore had a voice, at least formally, in running them. However, most investors had little interest in becoming involved in day-to-day management. This created a problem of governance. How could financial investors be sure that those who did control the enterprise would act in the interests of all the partners—including the financial investors? In the absence of close monitoring, there was a danger that those in effective control would pursue their own interests at the expense of the interests of others.

The second problem of reliance was possible malfeasance or incompetence on the part of representatives. The problem was particularly serious for large *compania* partnerships with branches in many distant cities. Because of the slowness of communications, there was no choice but to grant branch managers on the spot the authority to make decisions. However, the partners had unlimited liability for the consequences of those decisions. So a branch manager was in a position to harm or even destroy the partnership. The danger was particularly acute for merchant banks, because their branch managers handled large sums of money and made substantial loans.

# The development of accounting

Problems of reliance, internal and external, created a need for record-keeping and accounting. Merchants and their representatives needed to keep track of the goods they sent one another, of the prices at which these goods were bought and sold, and of the costs incurred. Creditors and debtors needed to keep a record of what was owed and paid. And participants in joint enterprises needed to calculate the profits so that each could receive what was due to him.<sup>19</sup>

Initially, with literacy still uncommon, written records were usually created and kept by some sort of public scribe or notary. But by 1200, merchants in Italy were keeping their own records in the form of account books.<sup>20</sup> The use of account books soon spread throughout southern Europe. The practice remained rare in the North, however, and merchants there generally recorded debts by means of promissory notes.

<sup>20</sup>(Reynolds 1952)

<sup>&</sup>lt;sup>19</sup>(de Roover 1956)

Account books and promissory notes provided less legal protection to a creditor than formal, publicly recorded debt, since non-mercantile courts did not initially recognize them. Nevertheless, in their dealings with one another, merchants found that the additional security provided by a public record was not enough to justify the additional expense and delay.<sup>21</sup>

While double-entry accounting was invented during the Commercial Revolution, it was not widely used, either at the time or later. Throughout our period, most merchants continued to rely on 'single entry' methods, which they found quite adequate to their needs.<sup>22</sup> The only exception was in merchant banking, which involved many, more complex transactions.<sup>23</sup>

#### ASSOCIATIONS

Merchants, like producers, formed associations as frameworks for joint action.

Because advantages of scale were so pervasive in commerce, the need for joint action was greater, and associations were consequently more important—at least initially.

#### Different forms of merchant association

Merchant associations took a variety of forms. One was the merchant guild, which predated the artisan guild and indeed served as a model for it.<sup>24</sup> Another was the merchant colony—an association formed by merchants not in their home city, but in a distant market in which they traded.

By the early twelfth century, the merchants of Mediterranean Europe had established colonies in the markets of the Levant; by the end of the thirteenth, there were merchant

<sup>23</sup>This explains why accounting methods were most advanced in northern Italy, where most merchant banks were headquartered. (de Roover 1956).

<sup>&</sup>lt;sup>21</sup> (Postan 1973 [1930]); (Muldrew 1998). Private records also provided greater confidentiality ((Reyerson 2002)). Notaries continued to be important for transactions between non-merchants ((Berman 1983)).

<sup>&</sup>lt;sup>22</sup>(Yamey 1949)

<sup>&</sup>lt;sup>24</sup>(Nicholas 1997). Surviving records of merchant guilds go back to the eleventh century.

colonies in most of the market centers of Europe.<sup>25</sup> The fairs of Champagne hosted some fifteen merchant colonies or 'nations' from different cities and regions.<sup>26</sup>

Sometimes merchants from a number of different cities formed joint colonies. For example, merchants from dozens of cities in North Germany and the Rhineland formed joint colonies, called *kontore*, in the markets of Scandinavia, Russia, Bruges and London. Cooperation among merchants in these colonies eventually led to the formation of a political alliance among their home cities—the Hanseatic League.<sup>27</sup>

There was, in general, a close connection between merchant associations and the associational governments of cities. In northern Europe, where cities remained subject to territorial rulers, merchant guilds took on many of the tasks of local government. They assumed responsibility for maintaining streets and city walls and for organizing relief for the poor; rulers were generally happy to let them do these things. Later, when local government was established formally in these cities, it was often built on the foundation of the existing merchant guilds.<sup>28</sup>

In northern Italy, the process was different. There, cities achieved independence quite early on, so that formal city government preceded the emergence of merchant guilds. Guilds in these cities were often established, top-down, by city governments as a form of self-regulating organization. Many municipal functions were delegated to them.

In some cities, most notably in Genoa and Venice, merchants were from the beginning so firmly in control of city government that merchant guilds proved unnecessary. City government itself functioned as a merchant association.<sup>29</sup>

All these different forms of merchant association performed similar functions. These included addressing the problems of reliance, protecting members against predation,

<sup>&</sup>lt;sup>25</sup>(Spufford 1988); (Coornaert 1967)

<sup>&</sup>lt;sup>26</sup>(Verlinden 1971); (Bautier 1970)

<sup>&</sup>lt;sup>27</sup>(de Roover 1971). More on the Hanseatic League in Chapter 11.

<sup>&</sup>lt;sup>28</sup>(Reynolds 1997) Ch. 3

<sup>&</sup>lt;sup>29</sup>In Venice and Genoa "the commune itself was simply the ruling organ of the wealthy bourgeoisie" ((Luzzatto 1953) p46). In contrast, early Florence was dominated by the landed aristocracy, and merchants and artisans organized themselves in fraternities to defend their interests. ((Goldthwaite 1987)).

furthering members' interests in the rivalry for trade, and providing essential infrastructure.

# Addressing the problem of reliance

The merchant association played an important role in addressing problems of reliance. Like the family, it acted as an enforcer of transactions among its members and as a guarantor of transactions between its members and outsiders. Indeed, the association was, in a sense, a compounding of the family—a sort of family of families.<sup>30</sup>

# The power of the association

Like the family, the association could act as an enforcer and guarantor because of its power over its members. As with the family, this power derived from the threat of ostracism.<sup>31</sup> In the case of the association, ostracism meant the loss of potential transactions with other members. Further, if the association had acquired trading privileges, these too would be lost. And, as with ostracism from the family, there was the additional loss of physical protection and of the social benefits of membership.

The threat of loss of future transactions could be used too to protect members in their dealings with outsiders. For example, at the English fairs of the thirteenth and fourteenth centuries, if an English merchant cheated a Flemish merchant or defaulted on a debt owed to him, the Flemish 'nation' as a whole would declare an embargo on the Englishman: no Flemish merchant would have any further dealings with him.<sup>32</sup>

Of course, ostracism and embargo were effective only insofar as the association could ensure they would be honored by its members. This was a problem, because an individual member might do better for himself by ignoring an ostracism or embargo, even though doing so undermined the position of the association as a whole. Ostracism and embargo were therefore effective only if the association was able to enforce discipline on its own members.

<sup>&</sup>lt;sup>30</sup>Compounding is, in general, a way of creating larger organizational structures. We will encounter it again when we discuss federal forms of government in Chapter 11.

<sup>&</sup>lt;sup>31</sup>Grief has written extensively on this mechanism in the context of representation (e.g., (Greif 1989), (Greif 1997)). However, it applied more broadly to any relationship of reliance.

<sup>&</sup>lt;sup>32</sup>(Moore 1985)

# Informal and formal orders

Enforcement, whether of ostracism and embargo or of transactions between members, required a system of order—a set of rules regulating behavior and a mechanism to identify and punish violations. Merchant associations possessed not one such system but two—a formal order and an informal order.

A formal order consists of a set of explicit laws and regulations, together with some sort of court to judge violations and impose sanctions. The courts established by merchant associations both enforced their laws and regulations and adjudicated disputes between their members. As we have seen, merchants formalized their agreements as written contracts to facilitate such adjudication.

In addition to this formal order, merchant associations also possessed an informal order. An informal order emerges spontaneously in any group out of prolonged interaction among its members.<sup>33</sup> Over time, members of the group develop a shared culture—shared beliefs and values; out of this culture, norms evolve to regulate behavior.<sup>34</sup> Through the sharing of information, members of the group acquire reputations.<sup>35</sup> A member who violates the norms damages his reputation, making others less willing to have dealings with him. Reputation, and its threatened loss, is therefore the mechanism of enforcement of an informal order.

The informal order of merchant associations played a particularly important role in policing distant representatives. Representatives generally traveled together and resided together in colonies: they were indeed often required to do so. The merchants who sent them received news of their behavior by way of social interaction, marketplace gossip, and correspondence.<sup>36</sup> Merchants also received information on market conditions, verified by multiple reports, that enabled them to monitor the trading of their representatives, enabling them to judge their performance. Representatives who

<sup>&</sup>lt;sup>33</sup>Even less structured groups, such as ethnic or religious merchant diasporas, that had no formal order boasted an informal order. (Greif 1989); (Powell 1990).

<sup>&</sup>lt;sup>34</sup>(Reynolds 1997) Ch. 1; (Schlicht 1993)

<sup>&</sup>lt;sup>35</sup>(Granovetter 1973).

<sup>&</sup>lt;sup>36</sup>(de Roover 1948) p 20

performed badly damaged their reputations and found it difficult to obtain future employment.

The relative advantages of formal and informal order

In addressing problems of reliance, the formal and informal orders complemented one another. Contracts and courts were most useful in enforcing agreements where the nature of the obligation was clear, where performance was relatively easy to assess, and where the remedy was simple and obvious.<sup>37</sup> These conditions were most closely approximated in the case of debt. If the debtor defaulted, courts enforced performance by having the debtor's property seized and sold to pay off the creditor.<sup>38</sup> If the debtor avoided this through flight, the court would order his ostracism. Of course, if there were guarantors, the same measures could be taken against them.

In other types of agreement, contracts and courts were less useful, because the obligations were less easy to specify precisely.<sup>39</sup> Courts were not very useful, for example, in resolving disputes between merchants and their representatives. A court could help with egregious violations: merchants did take to court representatives who failed to remit the proceeds of sales or failed to give account. However, most problems with representatives did not lend themselves to resolution in a court of law: it was hard, for example, to sue someone for being lazy or incompetent. So merchants had to rely instead on positive incentives for good performance and on the informal order—on the reputational cost of misbehavior and of being dismissed.

Similarly, courts were of limit use in addressing the problem of governance faced by financial investors. Partners not active in managing a company could sue if they did not receive an accounting or were not paid their share of the profits. However, a court could not oversee the calculation of the profits or monitor the insiders whose actions determined their extent. Again, financial investors had to rely on the discipline of the informal order.

<sup>&</sup>lt;sup>37</sup>(Barzel 2001);(Barzel 2002)

<sup>&</sup>lt;sup>38</sup>Alternatively, a court might seize the debtor's person, and hold him until his family paid the debt.

<sup>&</sup>lt;sup>39</sup>(Greif 1989)

Even in the case of debt, matters were not quite so simple. In the unpredictable world of preindustrial commerce, debtors frequently found themselves unable to pay on time. Their creditors did not generally rush to court, but tended, rather, to be flexible. And even in cases of outright default, merchants did their best to work things out through negotiation and arbitration, resorting to litigation only as a costly last resort. So even with debt, informal order had an important role to play: a merchant who failed to pay his debts destroyed his reputation—his 'credit'—as did too one who was excessively litigious.

More generally, the informal order fleshed out the formal order. Since no contract could ever cover all possible contingencies, merchants relied on general standards of behavior—on norms—to fill in the gaps.<sup>40</sup> Indeed, even the courts relied on the norms of the merchant community as a model against which performance could be judged.

## Guaranteeing transactions with strangers

Not surprisingly, merchants preferred when possible to do business with members of their own associations and with citizens of their own cities. These shared with them the same norms and culture, so that their behavior was more predictable. Moreover, they were of known reputation. And they had stronger incentives to perform as promised: nonperformance damaged their reputation and they could, if necessary, be brought before an appropriate court.<sup>41</sup>

Despite these advantages of dealing with their own, merchants engaged in longdistance trade often had no choice but to transact with strangers. Such transactions frequently involved debts: merchants bought and sold on credit, and most trading involved some element of deferred payment.

The available mechanisms of enforcement were of limited use in supporting transactions between strangers. The courts of merchant associations could not generally be trusted to enforce against their own members and in favor of strangers. Government courts initially either did not exist or were unsuited to commercial disputes.<sup>42</sup> And the

<sup>&</sup>lt;sup>40</sup>(Greif 1993)

<sup>&</sup>lt;sup>41</sup>The tendency of members of an association to trade with fellow members raised the value of belonging to an association and so the cost of ostracism.

<sup>&</sup>lt;sup>42</sup>For example, government courts would not enforce debts they considered 'usurious': see Chapter 9.

courts of organized markets, which would later play an important role, were only beginning to develop.

As a result, transactions between strangers came to depend, not on enforcement but on guarantees—on guarantees by the associations of the parties involved. Such a guarantee was implicit rather than explicit, and it was embodied in the custom of reprisal.<sup>43</sup>

Reprisal allowed an unsatisfied creditor to seize the property of any member of the association to which the debtor belonged, wherever he was able to do so.<sup>44</sup> In general, to obtain the right of reprisal, the creditor had to receive authorization from his own association, and this was granted only after an investigation into the justice of his claim.<sup>45</sup> By the mid-thirteenth century the practice of reprisal was almost universal throughout Western Europe.<sup>46</sup>

This system of guarantee did facilitate trade between strangers, but it was not without problems of its own. Reprisal became a hazard for any merchant traveling abroad: his goods or even his person might be seized at any time to satisfy someone else's unpaid debts; in which case, his only recourse was to seek compensation from the original debtor.<sup>47</sup> In addition, the system was open to abuse, with small merchants benefiting disproportionately at the expense of large.

Nonetheless, the system made some sense when merchants or their representatives visited distant markets only briefly and then left. However, as merchants came increasingly to rely on resident representatives, who could more easily be held to account for their debts, reprisal became unnecessary. Consequently, by the late fifteenth century, the practice had largely died out..<sup>48</sup>

<sup>&</sup>lt;sup>43</sup>(Greif 2001) calls this the Community Responsibility System.

<sup>&</sup>lt;sup>44</sup>(Origo 1986); (Greif 2001); (Favier 1998) Ch. 4

<sup>&</sup>lt;sup>45</sup>(Origo 1986) Florence, for example, appointed a special official for this purpose.

<sup>&</sup>lt;sup>46</sup>(Greif 2001)

<sup>&</sup>lt;sup>47</sup>(Cheyette 1970)

<sup>&</sup>lt;sup>48</sup>(Mitchell 1904)

#### **Protection against predation**

A second important function of the merchant association was to protect its members against predation. Such protection was a function of the association rather than of the individual enterprise, because it required the exercise of power. And the exercise of power exhibits significant benefits of scale. Indeed, so important was joint action in protecting against predation that most merchant associations were initially formed specifically for this purpose.<sup>49</sup>

Merchant associations organized caravans and convoys to protect their members against bandits and pirates. For example, Flemish merchants attending the English fairs in the thirteenth and fourteenth centuries traveled together in convoys organized by their city guilds.<sup>50</sup> Venice went even further: from the thirteenth century, the city invested in official fleets of galleys to provide secure transportation for its merchants.

Merchant associations also protected their members against predation by governments. In doing so, they sometimes relied on force. Genoa, for example, responded to Cueta's expropriation of its merchants by sending a fleet to attack that city.<sup>51</sup> And the Hanseatic League frequently responded militarily to expropriations of its members or to violation of their rights.<sup>52</sup>

Often, however, merchant associations relied not on force but on the threat or imposition of an embargo. For example, when the ruler of Tabriz seized the goods of Genoese merchants, Genoa—rather than responding militarily—declared an embargo on that city until the ruler paid an indemnity and promised better behavior.<sup>53</sup>

Governments feared an embargo, partly because they did not wish to be deprived of imported goods, but mainly because predation on trade was an important source of revenue to them. Obviously, therefore, it was impossible to eliminate government

<sup>&</sup>lt;sup>49</sup>See (Glete 2005), for example, on the origins of the Hanseatic League.

<sup>&</sup>lt;sup>50</sup>(Moore 1985)

<sup>&</sup>lt;sup>51</sup>(Reynolds 1945) p12

<sup>&</sup>lt;sup>52</sup>(Mauro 1990)

<sup>&</sup>lt;sup>53</sup>(Greif, Milgrom et al. 1994). In general, as we have seen, an effective embargo required discipline and enforcement. As Greif notes, it may therefore have been the relatively weak control of the Hanseatic League over its own merchants that obliged it to resort so often to force rather than to embargo.

predation on trade entirely. However, associations were able to negotiate levels and forms of predation that were mutually acceptable.<sup>54</sup>

# The rivalry for trade

Merchant associations also furthered their members' interests in the rivalry for trade. They did so by gaining access for them to particular trades and by limiting the access of their rivals.

Access to trade was generally controlled by governments. Since merchants did not forego profitable trading opportunities voluntarily, controlling access to a trade required the deployment of force. And the deployment of force was what governments did.

Some merchant associations were themselves governments—independent commercial cities such as Venice and Genoa and the members of the Hanseatic League. These were able to deploy force themselves to obtain preferential access for their members.<sup>55</sup>

More often, however, it was rulers who controlled access to trade. They did so to generate revenue—not by engaging in trade themselves, but rather by selling access to particular groups of merchants. For example, the rulers of England and Sicily restricted access to trade in their principal export commodities—wool and grain, respectively. They then sold the rights to export these commodities to the highest bidder—in both cases, the Italian supercompanies.

In acquiring trading rights from rulers, there were significant advantages of scale. The cost of negotiation was substantial and indivisible, and the necessary payment was generally large. There were also advantages of scale in defending rights once they were purchased: rulers had an unfortunate tendency to renege on their agreements.

The supercompanies were large enough to take on such a task themselves, but most merchant enterprises were not. So it was natural that the acquisition of trading rights should be a function of the merchant association. In many cases, negotiations for trading rights accompanied or closely followed negotiations for protection from predation. The

<sup>55</sup>On rise and fall of the Hansa, see (Dirmeyer 2006).

<sup>&</sup>lt;sup>54</sup>We will have more to say about this in Chapter 12.

colony of English merchants at Bruges, for example, obtained trading rights from the Count of Flanders in 1359 in the same charter that assured them safe conduct.<sup>56</sup>

The advantages of scale in acquiring and operating a trading monopoly actually gave rise to a new type of merchant association—one formed specifically for this purpose. The earliest example was the Company of the Staple, established in 1363 by a group of 26 English merchants. The Staplers, as they came to be known, took over the export monopoly of English wool after the Italian supercompanies who long held it were ruined by a financial crisis in Italy.<sup>57</sup>

#### **Commercial infrastructure and services**

Merchant associations played an important role in providing their members with commercial and transportation infrastructure and services. Such provision required joint action either because of indivisibilities or because the infrastructure or services in question were public goods.

Merchant associations, either being cities themselves or working with cities, developed the infrastructure of markets. This included the booths, halls, port facilities, and courts in the markets of their home cities and in the compounds and trading facilities of their colonies abroad.<sup>58</sup> Merchant associations invested too in improving the ports they used: for example, the *consulado* of Burgos, the merchant association of an inland city that dominated the export of Spanish wool, invested in the Cantabrian ports it used in its trade with the Low Countries.<sup>59</sup> Cities invested too in inland transportation. In Italy, they developed inter-urban roads, built bridges, and improved rivers. In the Low Countries, the cities were instrumental in building the canal system.

For communications, most merchants relied on the mail services provided by their associations. A number of Italian cities and merchant guilds organized regular mail services to the Fairs of Champagne. Pisa first organized one in the twelfth century, and

<sup>&</sup>lt;sup>56</sup>(Nicholas 1979)

<sup>&</sup>lt;sup>57</sup>(Power 1942)

<sup>&</sup>lt;sup>58</sup>(Greif, Milgrom et al. 1994).

<sup>&</sup>lt;sup>59</sup>(Grafe 2001)

the cloth merchants guild of Florence, the *Arte di Calimala*, was sending two messengers a day to the fairs by the thirteenth century.<sup>60</sup>

The education that was increasingly necessary for commerce was largely provided privately, and some was provided by the Church. But many Italian cities established or subsidized schools, especially at the primary level (grammar schools).<sup>61</sup> Some cities, for example Lucca in the fourteenth century, even provided secondary education.<sup>62</sup>

#### **ORGANIZED MARKETS**

We saw in Chapter 3 that 'the market'—in the form of commerce—played a vital coordinating role in the organization of production. In the organization of commerce itself, the same role was played by *the organized market*.

Organized markets were located in commercial cities or in regional or international fairs. Those in cities were sponsored and controlled by the cities themselves—which as we have seen were often dominated by their merchants. In contrast, regional and international fairs were sponsored and controlled by local lords or rulers.

It is important to distinguish an organized market from the simple markets of market towns. The latter were retail markets serving local producers and consumers. Trading in market towns was structured: traders came together at a set location and time. Trading, however, was not mediated: the parties traded with one another directly without assistance. In contrast, organized markets were wholesale markets that primarily served merchants. Trading was structured, but it was also mediated: specialized professionals made it easier for buyers and sellers to trade with one another.

In mediating trading, organized markets performed a number of necessary functions. They provided information: potential traders needed information both on trading opportunities—quantity, quality, and price—and on the reliability of possible trading partners. Organized markets matched buyers and sellers. Once deals were made, they provided facilities for closing the deal. When deals were executed, they provided facilities for settlement. And when deals went wrong, and they offered mechanisms for

<sup>&</sup>lt;sup>60</sup>(de Roover 1971); (Origo 1986) Some large companies had their own private mail services.

<sup>&</sup>lt;sup>61</sup>(Nicholas 1997); (Swetz 1987)

<sup>&</sup>lt;sup>62</sup>(Goldthwaite 1972)

resolving the resulting disputes. Organized markets also provided services ancillary to trading—in particular, financing, transportation and communications.

# **Trading systems**

Trading in a commercial city or at a fair, rather than being concentrated in a central marketplace, was dispersed. Merchants traded in public squares and streets and near the port or river. Inns, which provided accommodation and storage, were a particularly convenient place to trade. Since buyers needed to inspect merchandise before they purchased it, trading generally took place close to the cellars or storehouses where goods were kept.<sup>63</sup> Cloth and other valuable goods were often displayed in special halls so that they could be seen easily while protected from the elements.

Trading in particular products tended to concentrate in specific places. For example, an inn often specialized in a particular product or served merchants from a particular region or city.<sup>64</sup> Trading halls specialized too: in Bruges, for example, cloth was traded in the Waterhalle, drugs and spices were traded in the Cruudhalle, and wool was traded in the adjacent Rue aux Laines.<sup>65</sup>

Trading was facilitated by brokers, who brought buyers and sellers together for a commission. Brokers were also the principle source of information. They could provide information at lower cost, because once they acquired it, they could make it available to multiple clients; this was more efficient than each having to acquire the information individually himself.<sup>66</sup>

Brokers were generally licensed and regulated. Partly, this was to protect traders, but mainly it was to ensure that brokers served the authorities faithfully in collecting tolls and taxes and in enforcing market regulations. In most early organized markets, merchants were required to trade through a licensed broker. In Venice, for example, every visiting

<sup>&</sup>lt;sup>63</sup>(Letts 1924)

<sup>&</sup>lt;sup>64</sup> (Kümin 1999) p 163

<sup>&</sup>lt;sup>65</sup>(Letts 1924)

<sup>&</sup>lt;sup>66</sup>(Bernstein 1992)

merchant was assigned one by lot.<sup>67</sup> The broker assisted him in his trading, but he also kept track of every transaction to ensure the proper tolls and taxes were paid.

In many organized markets, there were also unofficial brokers—a role often played by innkeepers. Innkeepers were natural candidates: because of the large number of merchants passing through, inns were centers of information. Indeed, for similar reasons, organized markets were themselves the principal centers of information in preindustrial Europe—the best places to gather the latest commercial and political news.<sup>68</sup>

In some organized markets trading was highly structured.<sup>69</sup> In particular, the great Fairs of Champagne developed a system that was imitated by others. Champagne hosted six fairs a year, and trading at each was divided into discrete periods. The first week of a fair was reserved for the entry of goods—including payment of the required tolls. There were then ten days for the sale of cloth—six days for exhibition and four days for actual trading. This was followed by an eleven-day period for the sale of leather (cordovans). The final two weeks were devoted to the trading of spices, drugs, and other goods sold by weight.

Whatever the trading system, once merchants agreed on a deal, it had to be closed by the giving or exchanging of binding promises. Since the spot exchange of goods for cash was rare, most deals involved promises of future payment, of future delivery, or both. Sometimes a verbal promise was sufficient. Merchants trading at an inn might negotiate the terms over a meal and seal the bargain with a drink, with the innkeeper-broker acting as witness.<sup>70</sup>

Generally, however, especially when large sums were involved, it was customary to have a written record of the bargain. For this purpose, organized markets made available notaries or other officials to draw up and register debts, bills of sale, contracts, and other

<sup>&</sup>lt;sup>67</sup>(Hoffmann 1932)

<sup>&</sup>lt;sup>68</sup>"... the market was the closest institution early modern society had which offered some regularity for the exchange of public information." (Muldrew 1998) p 42. See too (Ehrenberg 1928).

<sup>&</sup>lt;sup>69</sup>(Face 1958); (Berlow 1971); (Abu-Lughod 1989)

<sup>&</sup>lt;sup>70</sup>In local exchange, promises were usually given orally before witnesses, typically with the payment of earnest money or 'God's penny'.

commercial and non-commercial agreements.<sup>71</sup> Among these were the contracts that created the various types of joint enterprise that we noted earlier. Merchant ships generally carried official scribes to record transactions and to keep accounts during the voyage.<sup>72</sup>

#### **Execution and settlement**

When a deal was closed, a date was set for its execution—when goods were to be delivered in return for payment in full. Often, however, there were problems. One party might perform, delivering the goods as promised, while the other did not, failing to pay for the goods: the risk of this happening is called principal risk. Or the first party might deliver and the second pay, but not on time—liquidity risk. A delay in payment could have a domino effect, with the creditor now unable to fulfill his own obligations to others.

Organized markets helped to mitigate both the principal risk and the liquidity risk of execution. A common protection against principle risk was a guarantee of execution. In Bruges, for example, innkeeper-brokers commonly guaranteed their guests' transactions with locals.<sup>73</sup> As protection against liquidity risk, organized markets provided credit facilities where a merchant, temporarily embarrassed by a delay in receipts, could borrow to carry him over until the funds arrived (more on this in Chapter 8).

Actual settlement in cash was difficult: coin was of poor quality and there was not enough of it. Counting out and examining individual coins was a time-consuming and painstaking process, and it was often hard to marshal coin in the quantities required for large payments. Organized markets helped to alleviate these problems by providing

<sup>&</sup>lt;sup>71</sup>(de Roover 1971); (Reyerson 2002) Chs. 3 and 6. Notaries also acted as informal brokers, particularly between those seeking financing and those with funds to invest. (Kedar 1977)

<sup>&</sup>lt;sup>72</sup>(Byrne 1930) Ch. VIII; (de Roover 1971). The major maritime cities required their ships to carry official scribes: Venice and Barcelona required two for each vessel.

<sup>&</sup>lt;sup>73</sup>As we have seen, inns often specialized in hosting merchants from a particular city, and the innkeeper himself often hailed from there. This put him in a good position to assess the credit of his guests and to turn to the home city's courts if necessary ((Blockmans 1992); (de Roover 1971)). Innkeepers often provided their guests with additional commercial services, such as banking, accounting, and debt-collection services.

moneychangers to process coins and mints to produce them. As we will see in Chapter 8, they also developed ways to reduce the need for actual cash settlement through the use of banks and instruments of remittance.

# **Resolving disputes**

When performance by one or both parties is deferred, disputes are inevitable. Goods may not be of the quality promised or not delivered on time; money may not be paid as promised, or not paid at all. Disputes are particularly likely to arise in transactions between strangers. Organized markets provided ways to resolve disputes—both informal and formal.

As we have seen, merchants preferred to resolve disputes informally whenever they could, thereby avoiding the cost and uncertainty of litigation. Organized markets facilitated such informal resolution. The same market professionals who helped merchants find and close a deal—brokers, innkeepers, and notaries—also helped them resolve any dispute that subsequently arose. There were other parties, too, who offered informal mediation. In the cities of thirteenth century Flanders, for example, the cloth halls where cloths were displayed for sale appointed 'hall lords' to resolve disputes. Some commercial cities appointed specialized arbitrators.<sup>74</sup>

When merchants did go to court, they usually had a choice of venue. There were courts established by different merchant associations—by guilds, towns, and merchant colonies. And there were non-mercantile courts—the seigniorial court of the local lord, the court of the territorial ruler, and the ecclesiastical court. Generally, merchants preferred the mercantile courts, but they did use non-mercantile courts as well. They did so when they had no choice, or to appeal the decision of a mercantile court, or simply in the hope of a more favorable outcome.

In adjudicating commercial disputes, all of these courts tended to rely on the norms and customs of merchant practice. These norms and customs were fairly similar throughout Europe. This was partly a result of borrowing and imitation and partly of

-

<sup>&</sup>lt;sup>74</sup>(Nicholas 1992) p135

similar problems giving rise to similar solutions. This spontaneously-formed body of commercial law came to be known as the Law Merchant.<sup>75</sup>

The Law Merchant evolved to regulate various types of commercial transaction such as sale, debt, and insurance. It also developed forms and procedures for the basic commercial relationships of representation and financing. A substantial part of the Law Merchant crystallized in the standard documents and contracts that merchants used—bills of sale, bills of exchange, insurance contracts, partnership agreements, and so on.

All the courts that served organized markets, mercantile and non-mercantile alike, adopted procedures that met merchant needs. Most important, justice was expeditious. For example, in one case in Colchester in 1458, the plaintiff filed suit for recovery of debt at eight in the morning; when the defendant failed to answer the court's summons at nine, ten, and eleven, the court, at noon, ordered his goods seized and valued; the appraiser reported back at four, and the court immediately delivered the goods to the plaintiff.<sup>76</sup>

To prevent delay and to keep costs low, there was often no right of appeal, and courts that served merchants tended to dispense with formalities.<sup>77</sup> In particular, they recognized account books or handwritten IOUs as evidence of debt and did not require registration with an official notary. Such courts also tended to frown on legalism: they excluded professional lawyers and discouraged technical legal argumentation.<sup>78</sup>

The principal sanction of organized markets, as of families and associations, was exclusion. For a merchant, exclusion from an important market represented a major loss, because it limited his opportunities to trade. Exclusion sometimes extended to a merchant's association as well as to the merchant himself. For example, 'nations' at the fairs of Champagne were held responsible collectively for the debts of their members. In case of default, the entire nation was excluded from the fair until the debt was paid.<sup>79</sup> Thus, enforcement by organized markets exploited the implicit guarantee of the

<sup>&</sup>lt;sup>75</sup>(Benson 2012), (Kadens 2004-2005)

<sup>&</sup>lt;sup>76</sup>(Farmer 1991)

<sup>&</sup>lt;sup>77</sup>(Mitchell 1904)

<sup>&</sup>lt;sup>78</sup>(Berman 1983) Ch. 11

<sup>&</sup>lt;sup>79</sup>(Bautier 1970); (Bautier 1971)

association—just as enforcement by the association exploited the implicit guarantee of the family.

# Transportation and communications

Given the nature of commerce—buying goods in one place and selling them in another—financing and transportation are integral to the activity. Initially, individual merchants saw to their own needs for financing and transportation. However, as the volume of trade expanded, in the normal process of increasing division of labor, financing and transportation split off from commerce as specialized services. Both were most readily available in the organized markets of commercial cities and fairs, since that was where the demand for these services was concentrated. We will discuss financing in some detail in Chapter 9. Here, we will focus on transportation.

Initially, merchants built and operated their own ships—as we have seen, entering into share partnerships to do so. But, as trade expanded, the ownership and operation of ships became a separate business. As a result of this, merchants were able to send goods unaccompanied, in the care of ships' masters.<sup>80</sup> This became increasingly important as merchants began to rely more on resident representatives.

The document that spelled out the terms of the agreement between merchant and ship's master was the bill of lading. It noted the value of the goods, to whom they were to be delivered, and the terms of payment for the shipping—usually half in advance and half on delivery. In some cases, the ship's master guaranteed delivery; in others, the merchant bore the risk. As we saw in Chapter 4, there developed a market for marine insurance, and we will have more to say about this in Chapter 9. The notaries who drew up the bills of lading became shipping brokers—finding ships for merchants and finding cargo for ship-owners.

Innkeepers played a similar role in overland transportation. In addition to providing food and lodging for travelers, they acted as transportation brokers—finding carriers for merchants; they often bonded the carrier's performance.<sup>81</sup> They also dealt with local officials when necessary and provided financing for shipping costs. Over longer

<sup>80(</sup>Origo 1986)

<sup>&</sup>lt;sup>81</sup>(Reyerson 2002) Ch. 6; (Hunt and Murray 1999) Ch. 2.

distances, merchants needed to use a chain of carriers, with their goods passing from one to another, and they made arrangements with innkeepers en route to transfer their goods from one carrier to the next.<sup>82</sup>

On the busiest routes, there emerged specialized carriers that transported goods all the way to their final destination. For example, as the roads between northern Italy and Champagne became safer in the thirteenth century, Italian merchants increasingly relied on companies of *vectuarii*, mainly from Genoa and Asti, to carry their goods to and from the Fairs—a journey that took about five weeks each way.<sup>83</sup> The *vectuarii* offered weekly departures, and they had in interest in developing a reputation for reliability.

In an age in which the movement of information required someone to carry written or oral messages from place to place, communications was closely related to transportation. Initially, travelling merchants carried messages for one another. But as with transportation, specialized services began to emerge connecting organized markets. For example, as we have seen, the merchant associations of the Italians trading at Champagne organized mail services between Italy and the Fairs. And the *vectuarii* carried letters and documents as well as goods.

# **Exploiting the monopoly power of organized markets**

Because markets are natural monopolies, those who controlled access to an organized market could exploit the resulting monopoly power to their own advantage. Markets are natural monopolies, because, other things equal, trading costs are lowest when all trading is concentrated in a single market. 84 Of course, other things are not equal, and the quality of a market must be weighed against the cost of reaching it. Consequently, as we saw in Chapter 2, preindustrial Europe was served by a hierarchy of markets. However, within this hierarchy, because of the benefits of concentration, each market enjoyed some degree of monopoly power. Those who controlled access to it could extract a considerable 'monopoly rent' from traders before the latter would forfeit its advantages and go elsewhere.

<sup>82(</sup>Hunt and Murray 1999) Ch. 2. citing (Pegolotti 1936); (Reyerson 2002)

<sup>83(</sup>de Roover 1971) p 72; (Abu-Lughod 1989) Ch. 2.; (Reynolds 1930)

<sup>&</sup>lt;sup>84</sup>See Chapter 2

Access to markets was controlled by governments—both territorial rulers and city governments. The two differed in how they exploited the market's monopoly power. Territorial rulers were mainly interested in revenue.<sup>85</sup> We have seen that they used force both to prey on trade and to restrict it in order to sell trading rights. For them, markets were convenient 'choke points' through which trade had to pass. This facilitated both predation and the restriction of trade. Moreover, the markets themselves were highly profitable, and rulers found ways to appropriate a share of this profit. The simplest way was to demand protection money from those who organized the market by requiring them to pay for the 'right' or 'privilege' of doing so.<sup>86</sup>

City governments, as we have seen, were often *de facto* merchant associations. Therefore, they generally exploited their power over the market to rig it in favor of their own members. Independent cities could do so at will. Venice was perhaps the most extreme example, strictly controlling the trading of foreigners in the city and allowing them to trade only with Venetians.<sup>87</sup> A city subject to a territorial ruler, if it wished to restrict access to its market in favor of its own merchants, typically had to purchase the right to do so from the ruler. This was just another way for the ruler to share in the monopoly rents.

However, rulers understood that restrictions on foreigners would discourage them from coming to the market, thereby reducing the rulers' predation revenue. Indeed, rulers sometimes found it more profitable to sell foreigners an exemption from city-imposed restrictions. For example, the kings of England in the fourteenth century freed foreign merchants from all restrictions imposed on them by English cities—in return, of course, for cash payment and concessionary lending.<sup>88</sup>

The city politics of restricting trade could itself, however, become complicated. While local merchants wanted to discriminate against foreign traders, market professionals who

<sup>&</sup>lt;sup>85</sup>We will see in Chapter 12 that rulers had other interests in trade and in markets, but revenue was usually their primary concern.

<sup>&</sup>lt;sup>86</sup>Rulers did this with simple local markets as well as with large organized markets: (Bridbury 1986).

<sup>&</sup>lt;sup>87</sup>(Lane 1973) (Favier 1998) (Hoffmann 1932)

<sup>88(</sup>Mitchell 1904)

earned their living from mediating the trading of others wanted to attract as many foreigners as possible to the city to trade. Bruges, for example, initially restricted the trading of foreigners. However, as its elite increasingly made its living from mediating trading—as brokers, inn-keepers, and bankers—rather than from actually trading themselves, Bruges gradually eased many of its restrictions.<sup>89</sup>

In the case of fairs, there was no such conflict. Fairs were established by rulers and local lords to generate revenue. Although some fairs were held in commercial cities, most were held in relatively small towns, where there were few local merchants to worry about. Fairs consequently did all they could to attract foreign merchants. Indeed, the absence of restrictions on foreigners was one of their main attractions. Fairs constituted a sort of medieval 'offshore market'—a place where merchants could trade in the greatest possible freedom.

The ability of those who controlled access to markets to exploit their power—whether to bias trade or to tax it—was ultimately limited. Both actions drove business away, reducing trading volume. This made the market less attractive, leading to a further loss of business—the economics of concentration in reverse. Just how much business was lost depended, of course, on the availability of substitutes. Were alternative markets available at reasonable cost? How difficult was it for people to trade 'off market'?<sup>92</sup>

Territorial rulers could increase the monopoly power of a market by suppressing substitutes. For example, when a town purchased the right to hold a market, it was understood that no other town nearby would be sold a similar right. In some cases, rulers designated a certain market as a 'staple' for a particular trade—with exclusive rights to mediate that trade. Most notably, in the fourteenth century, the English crown designated Calais, then an English possession, as the staple for the export of English wool.<sup>93</sup>

<sup>89(</sup>Letts 1924)

<sup>&</sup>lt;sup>90</sup>The first major fairs in northwest Europe, the Lendit fairs, were established by the abbey of St. Denis in the eighth century.

<sup>&</sup>lt;sup>91</sup>Freedom went beyond the commercial, with the entertainment including gambling, theatre, prostitution, and plenty of drink. (Everitt 1967) p536; (Pirenne 1937)

<sup>&</sup>lt;sup>92</sup>We will look at 'off-market' trading in Chapter 7.

<sup>&</sup>lt;sup>93</sup>(Gross 1890)

Exclusive rights increased the value of the market and so, of course, the potential take of the ruler. And a staple offered the additional benefit of making it easier to monitor and to tax the trade in question.

We have seen that cities, acting as associations of their merchants, invested in commercial and transportation infrastructure. When they hosted an organized market and benefit from its monopoly power, they had an additional reason to do so. Rulers had a similar interest in investing in infrastructure to attract more business to fairs they established. For example, when the Counts of Champagne instituted the cycle of fairs in 1191, they persuaded the ecclesiastical authorities to invest in constructing the accommodation merchants would require. And in the late thirteenth century, they invested themselves in improving the navigability of the upper reaches of the Seine for better access to Troyes and Provins, two of the towns where the fairs were held.<sup>94</sup>

#### **CONCLUSION**

Commerce, as an economic activity, differs from production in fundamental ways, and these differences have some important implications.

# How the technology of commerce differs

While production deals primarily with the physical world, commerce deals primarily with the social world—with people. Of course, production involves dealing with people too. However, as we have seen, in preindustrial Europe, the more difficult parts of this were handled for producers by commerce. Similarly, commerce does involve dealing with the physical world—particularly in transportation. But much more so than production, its efforts are focused on dealing with people.

Because production and commerce differ in this way, they rely on different types of technology. While the technology of production involves manipulation of the physical world, that of commerce involves manipulation of the social world—managing the behavior of people. This 'social technology' includes forms of organization—types of enterprise, association, and organized market. It also includes information technology—such as methods of accounting and calculation (in preindustrial Europe, the latter meant

<sup>94[</sup>Bautier, 1970 #2205] [Verlinden, 1971 #839]

Arabic numerals and the abacus). Technological progress in commerce consists largely of improvements in social technology.<sup>95</sup>

# The self-organization of commerce

Perhaps because the use and improvement of social technology was at its core, commerce in preindustrial Europe proved more than capable of organizing itself to address the challenges it faced. The contrast with production in this respect is striking. As we have seen, the organization of production depended on commerce and could not have functioned without it. But commerce proved quite capable of organizing and reorganizing itself with no outside assistance.

This self-organization depended critically on joint action. For some forms of joint action, particularly with respect to reliance, a group or community was sufficient, without any formal organization. When formal organization was required, merchants were able to organize themselves into various forms of association and joint enterprise.

Joint action in commerce was facilitated by its urban nature. Living in close proximity in their own cities or in the cities where they traded made it much easier for merchants to create the necessary frameworks. And the governments of the cities, which merchants largely controlled, were themselves a natural and important vehicle of joint action.

Indeed, cities were at the core of the organization of commerce. In particular, we have seen that there was a close connection between merchant associations and the associational governments of commercial cities. And we have seen that commercial cities were responsible for creating and operating organized markets.

#### The role of power in commerce

Because commerce was largely about dealing with people, power was a natural part of its technology. The exercise of power was essential in enforcing promises, in protecting against predation, and in controlling trade. We have seen that the exercise of power could take the form of the threat or use of force or of the threat or use of economic sanctions.

<sup>&</sup>lt;sup>95</sup>(Arthur 2009) defines technology as 'practical knowledge applied to economic activity' and makes the distinction between physical and social technology.

We have seen too that the exercise of power exhibits advantages of scale. In the use of force, a larger body will generally prevail against a smaller one. But there are advantages of scale too in the use of economic sanctions: the loss of future transactions or benefits is more costly when it is imposed by a larger entity or group. The advantages of scale in the exercise of power were a major reason for joint action through the formation of associations and large enterprises.

Since power is a natural part of the technology of commerce, and since the deployment of force is the primary business of government, government has a potential place in the organization of commerce.

While predatory governments deployed force primarily for the purpose of predation—including predation on commerce—they could also use force to generate revenue in other ways. The most important of these was to restrict access to trade in their territories and then sell preferential access to particular groups of merchants. Another way of employing their command of force to generate revenue was by offering the services of their courts to enforce commercial contracts—something that many rulers began to do during the Commercial Revolution. They did so partly for the fee income, but more to facilitate trade and thereby increase their revenue from predation on it.

Rulers also provided protection to merchants from predation by others. For example, the Counts of Champagne were quite active in suppressing banditry along access routes to the Fairs; they also pressured rulers of territories between Italy and Champagne to desist from imposing tolls on merchant en route to or from the Fairs. <sup>96</sup> The Counts even paid compensation to merchants who nonetheless suffered losses. <sup>97</sup> They charged explicitly for this service ('safe conduct'), but they also gained from the increase in toll revenue that the Fairs generated.

The associational governments of cities performed many of the same functions for commerce as did rulers, but their motives were different. Like predatory governments, they used force to restrict access to trade. But they did so, not to sell access to others, but rather to monopolize trade for their own merchants. They also created courts for the

<sup>&</sup>lt;sup>96</sup>(Verlinden 1971); (Cox 1959) Ch. XIV; (Bautier 1970).

<sup>&</sup>lt;sup>97</sup>(Moore 1985) p 285

enforcement of commercial contracts to make their markets more attractive. But their motive in this was not to increased predation revenue, but rather to increase the trading volume from which their citizens made a living.

We will see in subsequent chapters that the connection between commerce and government affected the evolution of both.

#### REFERENCES

- Abu-Lughod, J. L. (1989). <u>Before European hegemony: the world system A.D. 1250-1350</u>/. New York:, Oxford University Press,.
- Arthur, W. B. (2009). The nature of technology: what it is and how it evolves. New York, Free Press.
- Ball, J. N. (1977). Merchants and Merchandise: The Expansion of Trade in Europe 1500-1630. New York, St. Martin's Press.
- Barzel, Y. (2001). A Theory of Organizations To Supersede the Theory of the Firm. University of Washington, September.
- Barzel, Y. (2002). <u>A Theory Of The State: Economic Rights, Legal Rights and The Scope</u> Of The State. New York, Cambridge University Press.
- Bautier, R.-H. (1970). The Fairs of Champagne. <u>Essays in French economic history</u>. R. Cameron. Homewood, Ill, Published for the American Economic Association by R. D. Irwin: 64-90.
- Bautier, R. H. (1971). <u>The economic development of medieval Europe</u>. London,, Thames and Hudson.
- Benson, B. (2012). The Law Merchants story: how romantic is it? <u>Law, Economics and Evolutionary Theory</u>. G. Calliess and P. Zumbansen. London, Edward Elgar.
- Berlow, R. K. (1971). The development of business techniques used at the fairs of Champaigne from the end of the twelth century to the middle of the thirteenth century. <u>Studies in Medieval and Renaissance History: Volume VIII</u>. H. L. Adelson. Lincoln, Nebraska, University of Nebraska Press: 3-31.
- Berman, H. J. (1983). <u>Law and revolution: the formation of the Western legal tradition</u>. Cambridge, Mass.:, Harvard University Press,.
- Bernstein, L. (1992). "Opting out of the legal system: extralegal contractual arrangements in the diamond industr." <u>Journal of legal studies</u> **v21**(January): pp 115-157.
- Blockmans, W. (1992). Bruges, a European trading center. <u>Bruges and Europe</u>. V. Vermeersch. Antwerp, Fonds Mercator.
- Bridbury, A. R. (1986). Markets and freedom in the Middle Ages. <u>The Market in History</u>. B. L. Anderson and A. J. H. Latham. London, Croom Helm.
- Byrne, E. H. (1916). "Commercial Contracts of the Genoese in the Syrian Trade of the Twelfth Century." <u>The Quarterly Journal of Economics</u> **Vol. 31, No. 1.**(Nov.): 128-170.
- Byrne, E. H. (1930). Genoese shipping in the twelfth and thirteenth centuries. Cambridge, Mass., The Mediaeval Academy of America..
- Cheyette, F. L. (1970). "The sovereign and the pirates, 1332." <u>Speculum</u> **45** (1)(Jan.): 40-68.
- Coornaert, E. L. J. (1967). European economic institutions and the New World; the Chartered Companies. <u>The Economy of Expanding Europe in the Sixteenth and Seventeenth Centuries</u>. E. E. Rich and C. H. Wilson. Cambridge, Cambridge University Press: 223-275.
- Cox, O. C. (1959). The foundations of capitalism. New York, Philosophical Library.
- de Roover, R. (1948). <u>Money, Banking and Credit in Mediaeval Bruges</u>. Cambridge, Mass., The Mediaeval Academy of America.

- de Roover, R. (1956). The development of accounting prior to Luca Pacioli according to the account books of medieval merchants. <u>Studies in the History of Accounting</u>. A. C. Littleton and B. S. Yamey. London, Sweet and Maxwell: 114-174.
- de Roover, R. (1971). The organization of trade. <u>Economic organization and policies in</u> the middle ages. M. M. Postan, E. E. Rich and E. Miller. Cambridge, Cambridge University Press.
- Dirmeyer, J. (2006). Competition and Institutions: The Dutch Conquest of the Baltic Sea Trade, George Mason University.
- Ehrenberg, R. (1928). <u>Capital and Finance in the Age of the Renaissance: A Study of the Fuggers and Their Connections</u>. London, Jonathan Cape.
- Everitt, A. (1967). The marketing of agricultural produce. <u>The Agrarian history of England and Wales: Vol IV, 1500-1640</u>. J. Thirsk. London, Cambridge U.P.
- Face, R. D. (1958). "Techniques of business in the trade between the fairs of Champagne and the south of Europe in the twelfth and thirteenth centuries." <u>Economic History</u> Review **2nd series 10 (3)**: 427-438.
- Farmer, D. (1991). Marketing the produce of the countryside, 1200-1500. <u>The Agrarian history of England and Wales: Vol. III 1348-1500</u>. E. Miller. London, Cambridge U.P.
- Favier, J. (1998). Gold & spices: the rise of commerce in the Middle Ages. New York, Holmes & Meier.
- Glete, J. (2005). Cities, state formation and the protection of trade in northern Europe, 1200-1700. The Dynamics of economic culture in the North Sea- and Baltic
- Region (ca. 1250-1700), vol. 1. H. Brand, P. Holm and L. Muller. Groningen, Studies of the Groningen Hansa Research Center.
- Goldthwaite, R. (1987). "The Medici Bank and the world of Florentine capitalism." <u>Past</u> and Present **No. 114**(February): 3-31.
- Goldthwaite, R. A. (1972). "Schools and teachers of commercial arithmetic in Renaissance Florence." The journal of European economic history 1: 418-433.
- Grafe, R. (2001). Northern Spain between the Iberian and Atlantic worlds: Trade and regional specialization, 1550-1650 Ph.D., London School of Economics and Political Science.
- Granovetter, M. (1973). "The strength of weak ties." <u>American Journal of Sociology</u> **78**: 1360-1380.
- Greif, A. (1989). "Reputation and coalitions in medieval trade: Evidence on the Maghribi traders." Journal of Economic History **49(4)**(Dec.): 857-882.
- Greif, A. (1993). "Contract enforceability and economic institutions in early trade: The Maghribi traders' coalition." <u>American Economic Review</u> **83** (3)(June): 525-548.
- Greif, A. (1997). On the interrelations and economic implications of economic, social, political, and normative factors: reflections from two Late Medieval societies. The Frontiers of the New Institutional Economics. J. N. Drobak and J. V. C. Nye. New York, Academic Press: 57-94.
- Greif, A. (2001). Impersonal exchange and the origins of markets: from the community responsibility system to individual legal responsibility in pre-modern Europe.

  <u>Communities and markets in economic development</u>. M. Aoki and Y. Hayami. Oxford, Oxford University Press.

- Greif, A. (2001). On the history of the institutional foundations of impersonal exchange: from communal to individual responsibility in pre-modern Europe. Department of Economics, Stanford University.
- Greif, A., P. Milgrom, et al. (1994). "Coordination, commitment, and enforcement: The case of the merchant guild." <u>Journal of Political Economy</u> **102** (**4**): 745-776.
- Gross, C. (1890). The gild merchant; a contribution to British municipal history. Oxford, Clarendon Press.
- Hoffmann, J. W. (1932). "The Fondaco Dei Tedeschi: The Medium of Venetian-German Trade." The Journal of Political Economy **Vol. 40, No. 2**(Apr): 244-252.
- Hunt, E. S. (1994). <u>The Medieval Super-Companies: A Study of the Peruzzi Company of Florence</u>. Cambridge, Cambridge University Press.
- Hunt, E. S. and J. M. Murray (1999). <u>A History of Business in Medieval Europe</u>, 1200-1550. New York, Cambridge University Press.
- Kadens, E. (2004-2005). "Order within Law, Variety within Custom: The Character of the Medieval Merchant Law." Chi. J. Int'l L. **5**: 39.
- Kedar, B. Z. (1976). Merchants in Crisis: Genoese and Venetian Men of Affairs and the Fourteenth-Century Depression. New Haven, Yale University Press.
- Kedar, B. Z. (1977). The Genoese notaries of 1382: The anatomy of an urban occupational group. <u>The Medieval City</u>. H. A. Miskimin, D. Herlihy and A. L. Udovitch. New Haven, Yale University Press.
- Kümin, B. (1999). "Useful to have, but impossible to govern. Inns and taverns in early modern Bern and Vaud." <u>Journal of Early Modern History</u> **3**: 153-175.
- Lane, F. C. (1934). <u>Venetian ships and shipbuilders of the Renaissance</u>. Baltimore, The Johns Hopkins press.
- Lane, F. C. (1941). National wealth and protection costs. War as a social institution: the <u>historian's perspective</u>. J. D. Clarkson and T. C. Cochran. New York, Columbia University Press.
- Lane, F. C. (1944). <u>Andrea Barbarigo, Merchant of Venice</u>, 1418-1449. Baltimore, The John Hopkins Press.
- Lane, F. C. (1973). <u>Venice, a maritime republic</u>. Baltimore, Johns Hopkins University Press.
- Letts, M. (1924). Bruges and its past. Bruges and London.
- Levi, M. (2000). When good defenses make good neighbors: a transactions cost approach to trust, the absence of trust and distrust. <u>Institutions, Contracts and</u> Organizations. C. Ménard. Cheltenham, UK, Edward Elgar: 137-157.
- Lopez, R. S. (1976). <u>The Commercial Revolution of the Middle Ages, 950-1350</u>. Cambridge, Cambridge University Press.
- Luzzatto, G. (1953). Small and great merchants in the Italian cities of the Renaissance.

  <u>Enterprise and Secular Change: Readings in Economic History</u>. F. C. Lane and J. C. Riemersma. Homewood, Ill., Richard D. Irwin: 41-52.
- Mauro, F. (1990). Merchant communities, 1350-1750. <u>The Rise of Merchant Empires:</u>
  <u>Long-Distance Trade in the Early Modern World, 1350-1750</u>. J. D. Tracy.
  Cambridge, University of Cambridge Press: 224-254.
- Mitchell, W. (1904). <u>Essay on the Early History of the Law Merchant</u>. New York, Burt Franklin.

- Moore, E. W. (1985). <u>The Fairs of Medieval England: An Introductory Study</u>. Toronto, Pontifical Institute of Mediaeval Studies.
- Muldrew, C. (1998). The economy of obligation: the culture of credit and social relations in early modern England. New York, St. Martin's press.
- Nicholas, D. (1979). "The English trade at Bruges in the last years of Edward III." Journal of medieval history **5**: 23-61.
- Nicholas, D. (1992). Medieval Flanders. London, Longman.
- Nicholas, D. (1997). The growth of the medieval city: from late antiquity to the early fourteenth century. London; New York, Longman.
- Nicholas, D. (1997). The later medieval city, 1300-1500. London; New York, Longman.
- Origo, I. (1986). The merchant of Prato, Francesco di Marco Datini, 1335-1410. Boston, D.R. Godine.
- Parker, G. (1977). The emergence of modern finance in Europe 1500-1730. <u>The Fontana Economic History of Europe</u>. Volume 2: <u>The Sixteenth and Seventeenth</u> Centuries. C. M. Cipolla. New York, Harvester Press: 527-594.
- Pegolotti, F. (1936). <u>La pratica della mercatura</u>, edited by Allen Evans. Cambridge, Mass., The Mediaeval Academy of America.
- Pirenne, H. (1937). <u>Economic and Social History of Medieval Europe</u>. New York, Harcourt Brace.
- Pospisil, L. J. (1971). <u>Anthropology of law: a comparative theory</u>. New York,, Harper & Row.
- Postan, M. M. (1973 [1930]). Private financial instruments in medieval England. Medieval Trade and Finance. Cambridge, Cambridge University Press: 28-64.
- Powell, W. W. (1990). "Neither market nor hierarchy: network forms of organization." Research in Organizational Behavior 12: 295-336.
- Power, E. E. (1942). The wool trade in English medieval history, being the Ford lectures. [London, New York, etc.], Oxford University Press.
- Reyerson, K. (2002). The art of the deal: intermediaries of trade in medieval Montpellier. Leiden, Netherlands; Boston, Brill.
- Reynolds, R. L. (1930). "Merchant of Arras and the overland trade with Genoa in the twelfth century." Revue belge de philologie et d'histoire **v9**: 495-533.
- Reynolds, R. L. (1945). "In Search of a Business Class in Thirteenth-Century Genoa."

  Journal of Economic History Vol. 5, Supplement: The Tasks of Economic History(Dec): 1-19.
- Reynolds, R. L. (1952). "Origins of modern business enterprise: Medieval Italy." <u>Journal of Economic History</u> **12**: 350-365.
- Reynolds, S. (1997). <u>Kingdoms and communities in Western Europe</u>, 900-1300, 2nd ed. Oxford, Clarendon Press.
- Scammell, G. V. (1972). "Shipowning in the economy and politics of early modern England." The Historical Journal **15**: 385-407.
- Schlicht, E. (1993). "On Custom." <u>Journal of Institutional and Theoretical Economics</u> **v149 n1**(March): 178-203.
- Sella, D. (1977). European Industries 1500-1700. <u>The Sixteenth and Seventeenth Centuries</u>. C. M. Cipolla. NY, Harper & Row: 354-426.
- Spufford, P. (1988). <u>Money and Its Uses in Medieval Europe</u>. Cambridge, Cambridge University Press.

- Swetz, F. (1987). <u>Capitalism and arithmetic: the new math of the 15th century, including the full text of the Treviso arithmetic of 1478, translated by David Eugene Smith /</u>. La Salle, Ill.:, Open Court Pub. Co.,.
- Unger, R. W. (1998 [1979]). Shipping in the Northern Netherlands 1490-1580. Ships and Shipping in the North Sea and Atlantic, 1400-1800. R. W. Unger. Aldershot, Ashgate Variorum.
- Verlinden, C. (1971). Markets and fairs. <u>Economic organization and policies in the middle ages</u>. M. M. Postan, E. E. Rich and E. Miller. Cambridge, Cambridge University Press.
- Willan, T. S. (1959). <u>Studies in Elizabethan foreign trade</u>. Manchester [Eng.], University Press.
- Yamey, B. S. (1949). "Scientific bookkeeping and the rise of capitalism." <u>Economic History Review</u> 1 (Second Series): 99-113.