7. THE DEVELOPMENT OF COMMERCE

In Chapter 6, we saw how commerce first organized itself during the Commercial Revolution to meet the challenges of mediating long-distance exchange. In this chapter, we will see how commerce, like production, continued to develop in ways that increased its productivity.

What drove this development was the pressure of competition. Both the Crisis of the Long Fourteenth Century and the subsequent expansion of the Long Sixteenth Century put pressure on the organization of commerce to increase efficiency and lower trading costs. During the Crisis, it was shrinking markets and the resulting intense competition among merchants for the remaining business.[1] In the expansion that followed, it was competition for the growing trade in price-sensitive mass-market goods.

The expansion in trade expanded the market for the services of commerce. This had the same effects on commerce as did market expansion on production. It induced reorganization, including an increasing division of labor. It stimulated technological progress, making profitable new forms of social technology—particularly, as we will see, in organized markets. It also justified extensive investment in infrastructure—of commerce itself and of transportation.

As commerce responded to the pressure of competition and to the opportunities presented by an expanding volume of trade, the direction of its development was shaped by the need to address its own internal problems. The organization of commerce that had emerged during the Commercial Revolution was rudimentary, and it suffered from a number of serious failings.

As commerce developed, all three components of its structure were transformed—the enterprise, the association, and the market. We begin with the market.

THE MARKET

We have seen that 'the market' in the organization of commerce consisted of a network of organized markets. In the centuries following the Commercial Revolution, the nature of organized markets was transformed by competition—competition among

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[1](de Roover 1971)

organized markets and competition between trading on organized markets and trading 'off-market'.

Private trading

We noted in Chapters 2 and 6 that markets are natural monopolies. However, when a market exploits its monopoly power, it raises the cost of its customers to use the market and makes it more attractive for them to trade elsewhere. This includes trading in other markets and trading privately—outside the framework of any organized market.

The shift to private trading began during the Commercial Revolution. There was private trading within market centers, when traders got together without the help of an official broker. We saw in Chapter 6, that unofficial brokers were common: innkeepers, in particular, often played this role. But merchants increasingly dispensed with a broker altogether and traded with one another directly. In Bruges, for example, English merchants commonly traded directly with their Italian counterparts.[2]

Dispensing with the services of a broker became easier with the increasing use of resident representatives. Their continued presence enabled them to discover trading opportunities on their own and to learn the reputations of other traders; it also enabled them to establish their own reputations. There was little, therefore, that a broker could do for them.

Private trading also took place away from market centers. This was frequently the result of the parties having first met at some organized market, where they had arranged to get together later elsewhere "unhampered by… formalities and tolls".[3] For example, Italian merchants, originally purchased woolen cloth from northern France and Flanders at the fairs of Champagne. But by the mid-thirteenth century they were routinely traveling to the towns where the cloth was made and purchasing directly from producers.[4]

They did this not only to avoid the costs of an organized market, but also to secure sources of supply in competition with other merchants. For example, in the thirteenth century, the Italians largely succeeded in capturing the lucrative trade in English wool

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[2] (Nicholas 1979)

[3] (Farmer 1991)

[4] (Bautier 1970)

from the Flemish merchants who had long dominated the trade by going into the English countryside and buying directly from large producers.[5] Similarly, the expansion of private trading in sixteenth century England was driven by competition among merchants to find supplies for the rapidly growing London market.[6]

While private trading avoided the cost of using an organized market, it also sacrificed some of the benefits—for example, the formal order the market provided.[7] One benefit traders did not have to sacrifice, however, was use of the market's facilities for settlement. Indeed, private transactions concluded elsewhere were often settled through the facilities of some organized market. For example, the Italian merchants who purchased cloth privately in Flanders typically arranged to have it delivered at the fairs of Champagne. There, they could take advantage of the Fair's excellent system of settlement and remittance to pay for the cloth.[8]

Of course, the growth of private trading meant a loss of business for organized markets and a loss of revenue for those who controlled them.[9] Individual cities and towns could do little about this, but some territorial rulers, for whom organized markets were an important source of revenue, tried to limit private trading. England, for example, passed a series of laws in the sixteenth and early seventeenth centuries to suppress private trading, especially in grain—but to little avail.[10] The volume of private trading in seventeenth century England is estimated to have equaled the volume of trading in official markets.[11]

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[5](Masschaele 1997)

[6](Everitt 1967)

[7](Bailey 1999)

[8](Bautier 1970) Today, in a similar fashion, the off-market trading in stocks is cleared and settled through the systems of organized stock exchanges. (Kohn 2003) Ch. 17.

[9](Farmer 1991) p 421

[10](Everitt 1967); (Overton 1996); (Nielsen 1998). The laws against private trading did succeed, however, in creating a great deal of resentment against the king. Merchants engaged in private trading were among the most enthusiastic supporters of the Great Rebellion, and one of the first acts of the Long Parliament was to repeal the laws against private trading.

[11](Muldrew 1998)

The emergence of bourse markets

The steady increase in private trading and the interruption of commerce by war during the long fourteenth century reduced the importance of the international fairs. The great fairs of England, for example, ceased to play any role in the country's foreign trade, and the fairs of Champagne disappeared entirely. Indeed, partly because of increased private trading, Champagne had already lost its importance as a trading center by the late thirteenth century, although it continued to function for several decades longer as a center for settlement and financing.

As the fairs of Champagne faded, Bruges replaced them as the center for trade between the two zones of Europe. And when that trade was interrupted by the wars of the long fourteenth century, Bruges continued to prosper, sustained by trade with the Baltic. By the end of the fifteenth century, however, the position of Bruges was being challenged by the rise of Antwerp.

Antwerp had long been one of the two host cities of the fairs of Brabant. As the volume of trade grew, trading increasingly extended beyond the official time of the fairs—much to the annoyance of Bruges.[12] By the 1530s, Antwerp had eclipsed Bruges to become the principal market center, not only for the northern zone, but for the whole of Europe and for much of rest of the world besides.[13] Its fair had become permanent.[14]

Antwerp's displacement of Bruges was partly due to its favorable location, but it was much more the result of its superior trading environment. The type of organized market that developed there—a 'bourse market'—was quite unlike the traditional organized markets of Bruges.[15]

In Antwerp, the market's potential monopoly power was left unexploited, both by its ruler and by the city's own merchants: tolls and taxes were low and trading was relatively

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[12](Van Houtte 1977)

[13](Braudel 1984)p 142

[14](Bindoff 1958); (Van der Wee 1963)

[15](Ehrenberg 1928) coined the term 'bourse center' for this type of market.

unrestricted.[16] Indeed, Antwerp was a highly cosmopolitan city where foreign merchants were made welcome and treated as equals.[17]

Antwerp's trading system was different too: rather than meeting in marketplaces and trading halls, merchants traded on exchanges (bourses) and in warehouses. And, as we will see in Chapter 8, Antwerp's arrangements for settlement were also new and different.

Antwerp was not the only city to develop a bourse market. The organized markets of Amsterdam and London—both initially satellites of Antwerp—evolved along similar lines. Lyons, another satellite, began as a fair but slowly became a permanent market like Antwerp and with similar structure.[18] Indeed, competition eventually forced even Bruges to imitate the arrangements at Antwerp.[19]

Samples and commission

The trading system of Antwerp and of other bourse markets came to differ from that of the typical medieval city because of changes taking place in commercial practice and in business organization. Apart from the increase in private trading, merchants increasingly sold by sample, and they increasingly used commission agents rather than representatives to trade for them. These changes both facilitated and necessitated changes in the trading system.

As we saw in Chapter 6, medieval commerce generally took the form of venturing: uncertainty about product quality meant that goods had to be brought to distant markets 'on spec'. However, as private trading became more common, greater trust between the parties made it possible to strike a deal on the basis of a sample and a down payment. Goods were then delivered at a convenient place, with full payment contingent on inspection. Sale by sample reduced market risk, because goods no longer had to be sent off to be sold at an uncertain price. It also minimized the unnecessary shipment of goods from place to place.

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[16](Ramsay 1975) (Cox 1959)

[17](de Roover 1956) p 105

[18](Van der Wee 1977)

[19](Bindoff 1958)

As early as the late thirteenth century, the Italian merchants who purchased cloth in Flanders for delivery at the Fairs, were doing so on the basis of samples.[20] By the sixteenth century, sale by sample was widespread. In England, for example, the agents of London merchants purchased cloth from clothiers in the provinces on the basis of samples or 'scantlings'. When the cloth was ready, it was sent directly to the merchant's warehouse for export or for sale at retail. By the end of the sixteenth century, London merchants were ordering textiles by mail on the basis of patterns the manufacturers sent them in the same way.[21] At Antwerp, wool, wine, grain, and wood all traded by sample and were delivered not to the city itself but to various ports that served the city.[22]

The use of commission agents rather than resident representatives was another practice that became increasingly common. Like a resident representative, a commission agent bought or sold for his principal and conducted financial transactions for him. But instead of receiving a salary or a share of the profits for doing so, he received a fixed percentage of the value of each transaction he undertook: typical commissions for sales and purchases were 2-3% and for financial transactions, 0.5-1%.[23] Working for a commission, he was able to serve not just a single principal but a number simultaneously.

Commission developed naturally out of brokering: brokers and innkeepers started to act as agents for their customers rather than simply as mediators who brought the parties together.[24] In London, clerks and porters at the cloth halls were able to supplement their incomes by acting as commission agents for provincial clothiers—selling their products and purchasing materials for them.[25] Foreign merchants resident in a market like Antwerp found it easy and natural to act as commission agents for merchants at home.[26] For

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[20](Reynolds 1952)

[21](Kerridge 1988)

[22](Van der Wee 1963)

[23](Boyer-Xambeu, Deleplace et al. 1994); (Lane 1944); (Edler 1938). (Westerfield 1915) reports, for a later period, that commission rates increased with distance, greater risk, less desirable living conditions for the agent, and lower trading volume.

[24]See (Gras 1915) on brokers; (Kiessling 1996) on innkeepers in Germany.

[25](Kerridge 1985) Ch. 15

[26](Van Houtte 1966); (Van Houtte 1977)

example, merchants in England often relied on compatriots living in Antwerp to act for them.[27]

As these examples suggest, commission was initially a subsidiary activity. For example, merchants who acted as commission agents also traded on their own account. However, as the commission business expanded, some merchants came to specialize in it.[28]

Warehouses and exchanges

Private trading, increasingly through commission agents, and sale by sample made obsolete the traditional trading systems of organized markets—open marketplaces and trading halls. Instead, trading took place increasingly in warehouses and on exchanges.

In traditional organized markets, goods were displayed for sale at stalls in open markets and in trading halls. Before displaying their goods in public, merchants or their representatives stored them at an inn or in a storehouse (sometimes brokers brought potential buyers there to show them the goods before they were shown in public). When traders left for their home cities, they would usually commit any unsold goods to the innkeeper, broker, or sales-hall clerk, to sell for them. It was only a small, incremental step to send the goods to the commission agent for sale. In this way, sales halls, storehouses and cellars evolved into warehouses—permanent trading places, principally for wholesale trade, but also for retail to the wealthy.

Warehouses facilitated trading among strangers. Their existence and continued presence made it easier for traders to find what they were looking for. Their continued presence also meant that they could establish a reputation for price and quality. The value of this reputation acted as a bond that provided buyers with some assurance they would be treated fairly.

While goods that had to be inspected before sale were traded in warehouses, goods that could be sold by sample or sight unseen were traded on bourses or exchanges.[29] In an exchange, traders came together at regular times, usually once or twice a day, to find and

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[27](Willan 1959) Ch. 1

[28](Edler 1938)

[29](Ehrenberg 1928)

close deals. Because the goods traded did not have to be present, and because payment was deferred, a large volume of trading could be concentrated at a single time and place, improving the quality of the market. The goods being traded could be sent directly to their final destination and payment made at a convenient time and location.

For such ‘pure’ trading to work, several conditions had to be met.[30] Obviously, the good in question had to be relatively homogeneous, so that it could be traded in its absence. Also, market participants had to be reasonably well informed about factors affecting the price. This allowed a market price to emerge, based on ‘market opinion’. Transactions could then be based on this market price, eliminating the need for lengthy individual bargaining.[31] Finally, there had to be a volume of trading large enough to support regular sessions of the market.

These conditions were met first for trading in financial instruments—specifically, in the markets for bills of exchange and inter-fair loans.[32] Organized markets for these instruments could be found in many commercial cities and fairs as early as the thirteenth century. In Bruges, the exchange market took place in the square outside the inn of van der Beurse—hence the name ‘bourse’. Of course, merchants coming together to buy and sell bills of exchange often took the opportunity to trade in other things, such as insurance, shares, and sometimes even commodities. However, exchange markets dealt primarily in exchange, and the traders were mostly the Italian merchant bankers who dominated the medieval money market. This pattern first changed in Antwerp, which established separate exchanges for securities and commodities, and where merchants of all nations participated in the market.

In the trading system of the new bourse markets, the central player was the commission agent. He acted for his customers much as a stock broker does today. He received from his clients commissions to buy or sell, borrow or lend, and executed them

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[30](Ehrenberg 1928)

[31](Van der Wee 1963)

[32](Blockmans 1992). More on inter-fair loans, bills of exchange, and exchange markets in Chapter 8.

by whatever means offered the best terms. This might mean trading on the exchange, in his own warehouse, in some other warehouse, or engaging in private trading.[33]

Speculation

It was only natural that 'pure' trading on the exchange should expand beyond bargains for immediate delivery to bargains for delivery in the future—forward transactions. Indeed, for spices—one of the most important commodities traded at Antwerp—forward trading was almost a necessity.[34] Cargoes of spices due from the Indies were normally sold by the king of Portugal to merchant syndicates long before the spices actually arrived. Since prices were extremely volatile, the syndicates faced the considerable risk that prices would fall before they could sell the spices they had purchased. To hedge this risk, they sold the spices forward on the exchange, for delivery when the fleet arrived. There were forward transactions too in other commodities such as grain, timber, and salted herring.

Forward trading opened the way for various kinds of speculation.[35] Merchants hoping to profit from a rise in price could buy commodities forward with the intention of an offsetting sale before the date of delivery. Those hoping to profit from a fall, could sell short: that is, they could sell forward commodities they did not actually have, intending to cover with a forward purchase some time before the date of delivery. If the price did indeed fall, they would make a profit.

Initially, it was possible to profit from a rise or fall in the price of a commodity only by actually trading in it.[36] However, as the market developed, various types of derivative contract emerged that allowed traders to take a position in a commodity without having to trade in it. One, known as a 'premium transaction', was a conditional forward transaction that gave either the buyer or the seller the right to cancel the contract at the time of delivery on payment of a premium.[37] When the buyer had the right to cancel, it was

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[33](Edler 1938)

[34](Strieder 1931)

[35](Cox 1959) Ch. 14

[36](Ehrenberg 1928) p 241

[37](Van der Wee 1977)

equivalent to a modern call option; when the seller had the right to cancel, to a modern put option. Forward and premium transactions later spread to the exchange market and to the market in shares.[38]

There were also futures-like contracts—wagers on a future price. These were settled by the loser paying the winner the difference between the wager price and the actual price.[39] These contracts first appeared in the exchange market, with dealers entering into wagers on exchange rates, and later spread to the commodities market, with wagers on commodity prices.[40]

The development of speculation improved the functioning of the market. The presence of speculative buyers and sellers improved liquidity for other traders—that is, it became easier for them to find someone willing to buy or sell. And the ardent pursuit of information by speculators and their eagerness to trade on it helped ensure that market prices quickly reflected all the information available.

Instruments of speculation could also be used to hedge or reduce risk. Bourse markets, and the warehouse trade in particular, involved the holding of substantial inventories. The owners of these inventories were exposed to the risk of fluctuating market prices. By taking an offsetting position in one of the speculative instruments they could hedge that risk.

Specialized services

Bourse markets depended on an array of support services. Commission agents and their principals needed to be able to send one another goods, money, and information. And all traders needed settlement facilities and ready access to financing.

As we saw in Chapter 6, several of the necessary services had already split off from commerce proper during the Commercial Revolution, and they continued to develop in the new bourse markets. We will look at remittance and settlement in Chapter 8 and at financing in Chapter 9. We will examine transportation and communications presently.

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[38](Wilson 1941)

[39](Van der Wee 1977).

[40](Ehrenberg 1928)

But first, we will look at a new service that made its first appearance in the bourse markets—the provision of news and market information.

News and market information

Bourse markets, like all markets, were centers of information. When merchants met to trade—in public or in private, at an exchange or in a warehouse—they swapped news and gossip. Political news was no less important to traders than strictly commercial news. War and peace, royal marriage or succession—all of these affected market prices. Not surprisingly, therefore, market centers were the best places to pick up the latest news. Indeed, for much of the sixteenth century, governments across Europe relied on their agents in Antwerp to keep them informed.[41] A few enterprising individuals in Antwerp and Amsterdam recognized a profit opportunity and started to publish newspapers—weekly newssheets (*tijdingen*) that they sold by subscription.[42]

Exchanges began to make available information on market prices. One of the important advantages of trading on an exchange is price transparency: trading takes place at 'market prices', easily observed by all, rather than at prices negotiated individually. In order to attract business, exchanges began to publish regular 'price currents', which reported the prices at which commodities were trading. Price currents first emerged in sixteenth-century Antwerp and Amsterdam and in a few other market centers.[43]

The availability of price currents was a boon for the commission business. Commission agents could send price currents to their clients as proof they were obtaining for them the best available prices ('best execution').[44] The possibility of monitoring commission agents made it more attractive for merchants to employ them, and this attracted more business to the market.

Price currents were not, however, an unmitigated plus for the markets that published them, because they facilitated private trading away from the market. They did so by

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[41](Ehrenberg 1928); (Wilson 1925 [1572])

[42](Limberger 2001); (Tielhof 2002)

[43](McCusker and Gravesteijn 1991)

[44](McCusker and Gravesteijn 1991)

providing those engaged in private trading with a reference point for their bargaining.[45] One important reason for using a market is to find out the prevailing price: if this is available away from the market, there is less need to use the market.

The publication of price currents contributed to the emergence of specialized information services. Among the subscribers to the price currents were a number of information brokers, who specialized in supplying information to merchants in other cities. They would send them regular reports that included the latest price currents together with additional news and information of specific interest to the particular client.[46]

The new technology of printing was a great help in producing both newspapers and price currents: Antwerp, and later Amsterdam, were both major centers of printing and publishing.[47] However, printing was not the reason they emerged. That reason was the changing nature of commerce in general and of organized markets in particular that created profit opportunities in the publication of information.[48]

Transportation and communications

Sending goods by sea had traditionally required considerable effort on the part of the individual merchant. To do so, he had had to acquire a ship and outfit and man it. As we saw in Chapter 6, groups of merchants often did this together in a joint venture. Or, if space was available on someone else's ship, it had to be found and terms negotiated.

In the sixteenth century, specialized intermediaries emerged offering to arrange shipping for merchants. Amsterdam in particular developed a well organized market in shipping services. Specialized charter houses bought up shipping capacity and then resold it to merchants. Shipowners could charter their ships in advance to these middlemen, who bore the risk of uncertain business and fluctuating freight rates. Merchants could reduce

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[45](Muldrew 1998)

[46](Christiensen 1941) p219; quoted by (Tielhof 2002). These information brokers performed much the same function as today's 'quote vendors' in financial markets, taking published market information and 'adding value'.

[47](Limberger 2001)

[48](McCusker and Gravesteijn 1991) (Smith 1984)

their shipping costs by relying on these specialists rather than having to seek out ships themselves. The charter houses relied on networks of agents overseas to supervise the unloading of cargo, to find back cargo, and to supply the home office with information.[49]

Overland transportation developed in much the same way. Inns continued to play a central role, and their number continued to increase. For example, St. Albans, a small town on the route between London and the northwest, boasted 27 of them in 1577.[50] In a major center such as London, different inns specialized in different destinations: for example, merchants knew that carriers from, say, Norwich could always be found at a particular establishment.[51]

On the busier routes, specialized carriers became increasingly important.[52] By the 1540s, overland transportation between Antwerp and Italy and Germany was dominated by about a half dozen firms. The largest of these was Taxis of Milan, with other firms headquartered in Genoa, Germany, and Lorraine.[53] England, by the late sixteenth century, boasted an extensive network of professional carriers providing weekly or fortnightly service between London and all major towns.[54]

The main service these long-distance carriers provided was in relieving merchants of the necessity to make arrangements themselves with innkeepers along the way. The transportation companies took on this responsibility, quoting merchants inclusive rates for the whole journey, payable in a single sum.[55]

Communications improved too. Common carriers often carried letters as well as freight. Taxis, for example, provided a regular service between Antwerp and Italy that

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[49](Gelderblom 2003) (Christiensen 1941); (Unger 1998 [1979]) #2031}

[50][Clay, 1984 #1953] p 180.

[51](Willan 1976)

[52](Ball 1977) Ch. 8. We saw in Chapter 6 that specialized carriers had already emerged in the Commercial Revolution to serve the route between northern Italy and the Fairs of Champagne.

[53](Laven 1966)

[54](Postan 1987); (Clay 1984)

[55](Ball 1977) Ch. 8. When necessary, they also organized armed caravans, for example when crossing the Ligurian mountains or the Neapolitan Apennines ((Laven 1966), p 87).

carried both small packages and letters.[56] States began to establish postal services. In England, for example, Henry VIII appointed a Master of Posts to set up a mail service throughout the kingdom: innkeepers, under contract, provided horses and riders and acted as local postmasters, delivering mail and packages locally.[57]

Inland water transportation, too, became more professionalized. Most notably, in the sixteenth and seventeenth centuries, the Netherlands developed an extensive and well-organized system of barge transportation. Pairs of towns set up regularly scheduled services between them—the *beurtveren*—to carry freight, parcels, and passengers.[58]

The growing importance of informal order

Market expansion during the Commercial Revolution meant a substantial increase in trading between strangers. Much of the commercial development of the period was devoted to facilitating this by reinforcing trust: merchant associations provided guarantees; organized markets and governments provided formal order. These mechanisms helped, but as we saw in Chapter 6, they also suffered from significant problems of their own.

In subsequent centuries, commercial development took a different tack. Rather than attempting to reinforce trust between strangers, commercial development increasingly eliminated the need for it. It did so by making it unnecessary for strangers to trade with one another directly. What made this possible was the expansion of private trading and the growing use of commission agents.

As private trading expanded, rather than trading with strangers at a fair, a merchant could purchase directly from producers and develop continuing relationships with them. With the relationship itself serving as a bond, the producer could sell on credit with some expectation of being paid, and the merchant could have reasonable confidence in the quality of the product he purchased.

Commission too reduced the need for strangers to trade with one another directly. In a medieval organized market, merchants came from afar to trade with a large and shifting

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[56](Edler 1938)

[57](Kerridge 1988)

[58](de Vries 1981); (de Vries and van der Woude 1997) Ch. 5; (Lesger 2006)

population of strangers. In a bourse market, while many merchants still traveled to the market or kept representatives there, many others sent goods and orders to commission agents who traded for them. Much of the trading, therefore, took place among a relatively small and stable group of professional traders, who knew one another well and had a strong interest in maintaining their reputations.

While third-party enforcers and guarantors bolster trust between the parties, third-party intermediaries offer a substitute for such trust. The intermediary does this by interposing itself between the parties, so that they each transact with the intermediary rather than with one another.[59] To play this role, the intermediary must be more trustworthy than the parties themselves: that is, the parties must prefer the intermediary's promises to each other's. For this to be true, the intermediary's capacity to keep its promises must be greater and its interest in doing so, stronger.

With the growth of private trading and commission, informal order once again came into its own. Informal order can work only within a community. Because the expansion of long-distance commerce initially required trading outside one's community, it had to rely to a great extent on formal order. However, as commerce continued to develop, it created new kinds of community—communities of those who traded with one another on a regular basis. Within such a 'community of the market' an informal order once more became possible.[60]

In the new bourse markets of Antwerp and Amsterdam, merchants therefore relied increasingly on arbitration and mediation to settle their disputes rather than on litigation.[61] That is not to say, of course, that the courts were idle: on the contrary, the volume of litigation continued to grow.[62] However, the relative importance of informal order in long-distance trade increased steadily.

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[59](Casson 1997)

[60](Van der Wee 1963), (Dahl 1998), (Gelderblom 2008).

[61](Gelderblom 2010) and (Gelderblom 2013) provide details.

[62]See (Everitt 1967) on sixteenth century England.

THE ENTERPRISE

Changes in the market component of commercial organization induced changes in the enterprise component. In particular, size became less of an advantage.

Small enterprises

We saw in Chapter 6 that there were significant advantages of scale in trading. Moreover, more so than in production, such advantages were captured within the individual enterprise. Commercial enterprises tended, therefore, to be larger than those typical in production. We saw too that as commercial enterprises grew larger they suffered increasingly from organizational disadvantages of scale stemming from problems of reliance.

Now, with the emergence of bourse markets, commercial enterprises were able to capture many of the advantages of scale in trading externally rather than internally. This gave the edge to smaller enterprises that could avoid the organizational disadvantages of scale.

Bourse markets enabled commercial enterprises to 'outsource' many of the functions that previously had been integral to their operation. Information and transportation services could now be purchased. As we will see in Chapters 8 and 9, remittance and financing were readily available. Perhaps most important, however, was the emergence of the specialized commission agent as an alternative to using traveling or resident representatives.[63]

The cost of a representative was largely fixed and indivisible: it depended little on the volume of business he transacted. He was retained for a given period of time and paid a regular salary or received a share of the profits. In contrast, a commission agent was paid as needed, by the transaction. Moreover, unlike the representative who served a single principal, a commission agent could serve many—dividing the fixed cost of representation among them in proportion to their use of his services.

Because the use of commission agents was relatively inexpensive, it made it possible for even comparatively small firms to trade with multiple distant markets. They could

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[63](Lane 1944); (Luzzatto 1953); (Van der Wee 1963); (Origo 1986); (Price 1991); (Alonso 2001); (Harreld 2007)

thereby achieve a degree of diversification that had previously been available only to firms that were much larger. In addition, since commission agents could be retained or not as needed, their use offered much greater flexibility than the employment of dedicated representatives.

The use of a commission agent also entailed less of a reliance problem, because the relationship was more arm's-length than with a representative. A representative acted in the name of his firm; his employers or partners, were therefore legally liable for his actions (we saw in Chapter 6 that this was essential for his credit). A commission agent, in contrast, acted in his own name. So the potential loss to his clients was limited to the value of the goods or money they committed to him: that is, their liability was, *de facto,* limited.

However, the problem of reliance, while lessened, was not eliminated entirely. Consequently, in earlier times, when merchants had entered into relationships of mutual commission with other merchants, they had preferred to deal with relatives or with those who shared with them a place of origin or religious affiliation[64] Now, because specialized commission agents had a greater incentive to serve their clients faithfully, there was less need for such ties. A commission agent's business—both repeat business and referrals—depended on his reputation for undertaking his commissions faithfully and reliably. Also the emergence of price currents made it easier to monitor the commission agent's performance.

Large enterprises

While the small family firm came increasingly to dominate commerce, there was an important exception in the area of finance. For enterprises such as merchant banks, whose business was predominantly financial, there remained substantial advantages of scale. Financial intermediaries borrowed to relend to others: being larger enabled them to borrow more easily, because larger firms are in general more trustworthy. Larger firms have a greater incentive to pay, because the reputational cost of default is greater. They also have a greater ability to pay, because their larger size allows them greater diversification and, through the pooling of liabilities, better liquidity.

[64] (Price 1991).

There was also another group of commercial enterprises that experienced financial advantages of scale—enterprises that purchased monopoly trading rights from rulers. The creation and sale of these rights became increasingly common from the middle of the fifteenth century. Some rulers—especially those of Spain and England—depended on this practice for a significant part of their revenue.[65] In Spain, the crown sold trading monopolies to *consulados* (merchant associations): in particular, it sold the monopoly of trade with the Low Countries to the *consulado* of Burgos and the monopoly of trade with the Americas to the *consulado* of Seville.[66] In England, the crown sold monopolies both to merchant associations and to large enterprises, and by the end of the sixteenth century almost all of England's foreign trade had been carved up into monopolies.

Regulated companies

As we saw in Chapter 6 the English wool monopoly was sold to the Company of the Staple in the fourteenth century. Despite its name, this was not an enterprise but an association. However, it was not an existing merchant association of a particular city, but rather one created *ad hoc* to purchase the wool monopoly.[67] Several other such 'regulated companies' were formed in the sixteenth century, purchasing monopolies of trade with the Low Countries, with France, with the Baltic, and with Spain.[68]

Members of a regulated company, while subject to the rules of the association, traded on their own account—either singly or in small partnerships. Sometimes, a group might purchase goods together 'in joint stock' (stock meaning inventory), presumably to avoid

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[65]We will see why in Chapter 11.

[66](Parry 1967); (Grafe 2001)

[67]Indeed, the Company of the Staple numbered among its members merchants from a number of English cities and even some foreigners.

[68]By far the most important of the regulated companies was the Company of Merchant Adventurers, an association of merchants exporting woolen cloth to the Low Countries. It was incorporated in 1407 and purchased the monopoly of the trade in 1560. By 1600, it accounting for some 75% of the export of woolen cloth (England's principal export). It had some 3,500 members, of which perhaps 200 were active, with the largest 30 accounting for over half the total trade. ((Clarkson 1971))

competing with one another and thereby driving up prices. The goods purchased in this way were then divided up for each member to trade individually.[69]

It was but a small step to extend the idea of trading 'in joint stock' from the purchase of goods to their sale. When this was done, the participants became shareholders in a joint venture rather than individual traders.

Joint stock companies

The first association set up specifically to trade in this manner was the Muscovy or Russia Company.[70] This was formed in 1553 to finance an expedition in search of a northeast passage to the Indies. Although it found no such passage, it did find a new northerly route to Russia, and in 1555 it purchased from the Crown a monopoly of the new trade it had opened up. The charter of the Russia Company served as a model for all subsequent 'joint stock companies'. These included the Levant Company, the Africa Company, and—most famous of all—the East India Company.

The advantages of the joint stock company—a large enterprise—over the regulated company—a merchant association—were primarily financial. Because shareholders in a joint stock company were not themselves required to trade, participation was open to a much larger public of potential investors. For example, in the case of the Russia Company, some 200 Londoners, mostly merchants, purchased shares. This facilitated the spreading of risk, which was in this case considerable: of the three ships sent on the initial expedition, two were lost.[71]

A second financial advantage of enterprise over association was the greater ease with which an enterprise could borrow. As we saw in Chapter 6 with the Italian supercompanies, a large enterprise could exploit this advantage to finance substantial lending to rulers. Because rulers were typically desperate for liquidity, this gave the enterprise the edge in the rivalry for trading privileges. The English joint stock companies

[69] (Scott 1912)

[70] (Willan 1956)

[71] It was clearly risk rather than the size of investment that was the issue: the initial amount raised was only £6,000: the Merchant Adventurers annually traded ten times that sum.

did not initially engage in this sort of financial intermediation, but by the end of the seventeenth century it had become significant.

Offsetting the financial advantages of a large enterprise were the organizational disadvantages—the usual problems of representation and governance. The main problem with representation was that the representatives often traded on their own account, undermining the monopoly of their employer. This was already a problem for the Russia Company, and was to remain a problem for later joint stock companies, most notoriously for the East India Company.[72] As to governance, the joint stock company inherited its mechanisms of governance from the regulated company from which it had evolved. However, the power of its officers were greatly enlarged because of their control over trading. Not surprisingly, they ran things for their own benefit and at the expense of the purely financial investors.

The advantages and disadvantages of scale must have been closely balanced, because companies went back and forth in structure between enterprise and association.[73] The East India Company, for example, switched from one form to the other several times before it became a joint stock company permanently in the late seventeenth century. By then, the financial advantages had become sufficient to outweigh decisively the organizational disadvantages.

Large share companies in the Netherlands

In the Netherlands, there evolved an enterprise structure similar to that of the English joint stock company, although by a very different route.[74]

When Spain cut off the access of its rebellious Dutch subjects to the Asian spice trade through Lisbon, the Dutch responded by sending their own ships to Asia.[75] These ventures were so successful that their number rapidly increased, and competition among them began to threaten their profitability. As a result, the Dutch Republic moved in 1602

[72](Willan 1956); (Baskin 1988)

[73](Braudel 1982), (Harris 2000)

[74]More on this in Chapter 9.

[75](Çizakça 1996) based on (van Dillen 1970)

to monopolize the trade and place it in the hands of the Joint East India Company, which absorbed the many independent enterprises already engaged in the trade.[76]

Large enterprises versus small

The large enterprise—in both its Dutch and English forms—continued to develop in subsequent centuries. However, it never overcame the internal problems that were evident already in the sixteenth century. Large enterprises succeeded despite these problems only when the advantages of scale were sufficient to outweigh the disadvantages. For the great trading companies, the advantages were in obtaining and managing trading monopolies and in intermediating public loans.[77]

It is a mistake, therefore, to think of large enterprises as being more 'advanced' than small. Commerce in general was dominated by the small enterprise: the great trading companies accounted for a very small proportion of total trade.[78] The development of commercial organization did in general produce increasingly complex and more differentiated structures. However, these did not necessarily involve larger individual enterprises.

ASSOCIATIONS

Changes in the nature of two of the components of the organization of commerce—the market and the enterprise—steadily eroded the role played by the third—associations. While associations had their benefits, they also had their costs. Apart from the obligatory contributions of time and money, members had to sacrifice trading opportunities as a result of embargoes and to endure losses from the system of reprisal. There were also problems of governance within the association, which allowed some members to benefit at the expense of others.

Because of the costs of membership, an association was able to retain its members' loyalty, and to impose on them the necessary discipline, only if the benefits were

[76](Riemersma 1950). Although the government received no direct payment for this monopoly, it did obtain the aid of the new company in the war against Spain ((Steensgaard 1982)).

[77](Jones and Ville 1996)

[78](Grassby 2001); (Price 1991).

sufficiently great. However, the benefits of membership steadily declined as substitutes developed for many of the functions that merchant associations performed.

Merchant associations had addressed the problem of reliance by maintaining an internal order, both formal and informal, and by providing external guarantees. As we have seen, new types of informal order developed in private trading and in bourse markets, and city governments and organized markets increasingly provided an effective formal order.

The growing power of states reduced the need for protection against non-government predation. For example, in the sixteenth century, the emergent Danish and Swedish states eliminated piracy in the Baltic—thereby depriving the Hansa of much of its purpose.[79] In addition, with the development of naval cannon, particularly of cheap iron cannon in the sixteenth century, it became easier for individual ships to protect themselves.[80]

The fair and equal treatment of foreigners by bourse markets obviated the need for merchant colonies and for bargaining by associations to obtain special privileges for their members. There was no need, for example, for foreign merchants to demand their own courts; they were able to rely instead on impartial commercial courts set up by the host cities.[81]

Merchant associations played less of role in the rivalry for trade as they became less effective in enforcing their monopolies. The Hansa, for example, proved incapable of preventing encroachment on its Baltic monopoly by the more efficient Dutch.[82] And when governments created and sold monopolies, they increasingly did so to large enterprises rather than to merchant associations, because large enterprises were more effective in intermediating government borrowing.[83]

Some merchant associations, like the Hansa, simply faded away. Others were subsumed in associational governments: in particular, the territorial government of the

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[79](Glete 1999) Ch. 7

[80]See Chapter 4.

[81](Gelderblom 2010)

[82](Dirmeyer 2006)

[83]See Chapter 9.

Dutch Republic came to act as a grand association of merchants much as had the Republic of Venice. And some associations, like the regulated companies of England, transformed themselves into large enterprises.

Merchant associations had been important during the Commercial Revolution largely because there had been no other way to exploit advantages of scale, address externalities, and provide public goods. However, as associational governments, organized markets, and large enterprises came increasingly to take on these functions, the need for merchant associations disappeared.

CONCLUSION

In this and the previous chapter we have seen how expansion of the market and the resulting increasing volume of trade induced a continuing, productivity-enhancing transformation of commerce. By the early seventeenth century, the medieval pattern of traveling merchants, merchant guilds, and highly regulated organized markets had been replaced by something recognizably more modern.

The bourse market that developed in Antwerp during the sixteenth century would mature in the seventeenth and eighteenth centuries in Amsterdam and London and would remain the model for organized markets well into the twentieth century. The joint stock company would continue to evolve until it became, in the nineteenth century, the basis for the modern industrial corporation.[84]

The nature of the transformation

The core change in this transformation was in the arrangements that facilitated interaction among commercial enterprises—in the 'market' component of the structure of commercial organization. As intermediaries developed and became increasingly important, there was less need to deal directly with strangers. As substitutes for trust developed, there was less need for the reinforcement of trust.

Organized markets were, therefore, at the center of the transformation. Specifically, they provided an increasingly effective formal and informal order to address the problems of transactions between strangers. And it was also to serve the customers of organized

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[84](Chandler 1977) In this case, it was advantages of scale in the technology of production that were sufficient to offset the organizational disadvantages.

markets that the services of transportation, communications, payments, and financing developed.

The transformation of organized markets led to the transformation of the enterprise and of the association. Enterprises were now able to purchase the services they had earlier performed for themselves. As a result, they no longer needed to be as large, which enabled them to avoid the organizational disadvantages of scale. Merchant associations, with many of their earlier functions now taken over by organized markets, generally declined in importance. The great exception, of course, was the associational government of the commercial city—the home of the organized market—one form of merchant association that only increased in importance.

Overall, the change in the organization of commerce could be characterized as a shift towards external, market-mediated relationships between specialized enterprises in place of internal relationships within enterprises and associations. Market-mediated relationships are more narrowly defined and more readily policed by formal and informal order. They are therefore less subject to problems of representation and governance, and this, of course, reduces transactions costs.

As with production, the reorganization of commerce stimulated technological progress. In commerce, this mainly meant improvement in social technology rather than in physical technology—although, as we saw in Chapter 4, there were major improvements in ship design. The improvements in social technology included new forms of organization, legal innovations, and new techniques for managing and distributing information. Many of the most important improvements were in payments and finance, which we will examine in Chapters 8 and 9.

Because social technology was so vital to commerce, commerce was a pioneer in its development. We will see that some improvements in social technology pioneered by commerce were later taken up by government—which also relied heavily on social technology. And even later, as the organization of production continued to develop, production too made use of the social technology earlier created by commerce—most notably, the joint stock company.

In Chapter 5, we saw that the productivity-increasing transformation of production took place primarily in and near cities: the transformation of commerce was even more an urban phenomenon. Already during the Commercial Revolution, the city had played an important role as a form of merchant associations and as a host of market centers. Subsequently, the importance of cities grew as other forms of merchant association and of market center declined or disappeared. We will see that the systems of payments and of financing also developed in the cities.

The importance of competition

Expansion in the market for the services of commerce—in the volume of trade it mediated—created the opportunity for a productivity-increasing transformation. But the impetus to exploit that opportunity came from the pressure of competition—from the rivalry for trade. However, we saw in Chapter 6, that the rivalry for trade need not result in active competition: it may just as well result in attempts at monopolization.

These different strategies have very different consequences for the development of commerce and so for its contribution to economic progress. It is useful to think of this difference in terms of the impact of the two strategies on the price differential—on the gap between the prices purchasers pay in the destination market and the prices sellers receive in the source market. The price differential is the sum of two amounts—the trading cost per unit and the profit per unit.

Competition among merchants lowers the profit per unit: merchants accept a lower profit per unit in order to capture more trade and so increase their total profit. Moreover, a lower profit per unit exerts pressure on them to lower trading costs. When they succeed, this increases their profit per unit or, alternatively, makes it easier for them to undercut their competitors. The overall effect of competition, therefore, is to reduce price differentials.

In contrast, monopolization, tends to increase price differentials. Without the threat of being undercut by others, merchants can ask a higher price of buyers and offer a lower price to sellers. This both increases their profit per unit and weakens their incentive to try to reduce trading costs.[85]

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[85]Of course, monopolization reduces the volume of trade. There is, therefore, a point at which further increasing the price differential is not in their interest. Moreover, the greater the price differential, the greater the incentive for merchants excluded from the trade to find ways of defeating the monopoly.

If price differentials fell overall in preindustrial Europe, it was because efforts by some merchants to monopolize trade were generally frustrated by the efforts of others to break their monopolies or to circumvent them. Commerce on its own generally lacked the power to enforce monopolies effectively. Only when merchants were able to enlist the power of governments did they have much success in enforcing monopolies.[86] We will have more to say about this in Chapter 12.

And even when governments created and enforced monopolies, the development of commerce and the consequent fall in trading costs made it easier for the many small merchant enterprises to undermine those monopolies. Indeed, official trading monopolies were plagued by interlopers—small enterprises encroaching on their trade 'illegally' to undercut them.

And in most branches of trade, particularly in the important trade in mass-market goods, there were no official monopolies. In those branches of trade, competition stimulated commercial development and lowered trading costs, so that price differentials steadily declined.

The impact on economic progress

The expansion of trade induced a productivity-enhancing transformation of commerce that lowered trading costs. Competition among merchants passed on these lower trading costs to purchasers and producers—simultaneously lowering the prices paid and raising the prices received. This increased both the demand for goods and the supply, resulting in a further expansion of trade. Also, lower trading costs made new types of trade worthwhile that previously had been unprofitable, adding to the expansion. This self-perpetuating process is what we called in Chapter 2 the trading-cost multiplier.

As a result of this process, the boundaries of commerce—of exchange mediated by merchants—expanded both inwards and outwards. They expanded inwards as mediated

[86]There is a debate among economic historians over the role of merchant guilds that parallels the debate over artisan guilds mentioned in Chapter 3. These who see merchant guilds as benign emphasize their role in lowering trading costs—for example, (Greif, Milgrom et al. 1994). Those who see them as malign emphasize their pursuit of monopoly profits—for example, (Dessí 2005). There is, of course, truth in both positions. The net effect depended on how successful merchant guilds were, in fact, in monopolizing trade.

exchange reached deeper into the country, bringing a larger part of the population into the market economy. They expanded outwards as trading zones grew larger and merged with one another.

The impact on the inner boundary of commerce

Increasingly, rural producers, rather than selling directly to consumers in town markets, sold to merchant intermediaries. We saw in Chapter 3 that, during the long sixteenth century, there was a major expansion of rural manufacturing. Most of the resulting output was sold through private transactions with urban merchants.[87] This made sense. Rural producers, unsupervised by any guild, turned out inexpensive goods of uncertain quality. Buying such goods from anonymous producers in an open market would have been risky. However, when a merchant had a continuing relationship with a producer and came to know his work, the producer had an incentive to maintain quality.[88] Similarly, the merchant, with a continuing relationships with his own customers, had an incentive to provide them with satisfactory products.

At the same time, rural consumers, rather than purchasing directly from local producers in town markets, increasingly purchased from retail intermediaries. Shops had first emerged in the bustling commercial cities of the Mediterranean as early as the twelfth century.[89] By the sixteenth, they were common even in the smallest towns of the northern zone.[90] Shops offered a number of advantages. While markets were held only once or twice a week, shops provided continuous and easy access to a wide selection of goods.[91] Shopkeepers also provided their regular customers with credit, payment by installment, and sometimes even cash loans.[92] And for those too distant from a shop or

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[87](Moore 1985)

[88]As we saw in Chapter 3, the merchant intermediary also typically supplied raw materials and financing.

[89](Lopez 1987)

[90](Muldrew 1998)

[91]In the jargon of markets, shops offered immediacy and liquidity.

[92](Marshall 1999)

too poor to patronize one, a growing number of peddlers and chapmen made the rounds of the villages, selling cheap wares door to door.[93]

The steady expansion of mediated trade in the country ate into the business of markets and fairs. Consequently, many ceased to be profitable and disappeared.[94] In England, for example, the number of town markets declined by about two thirds between the thirteenth and sixteenth centuries.[95]

The consequence for economic progress

The penetration of commerce into the country meant increasing commercialization—an increase in the share of output produced for exchange. Instead of producing basic foods for their own consumption, people in the country, particularly those in England and the Netherlands, increasingly engaged in domestic manufacturing and in the cultivation of industrial and horticultural crops for the market. They used the proceeds to purchase a widening range of non-local consumer goods.[96]

The shift from subsistence to production for exchange increased household income, both by channeling effort into more remunerative activities and by eliciting greater effort ("an industrious revolution").[97] The increase in income "made all the difference between a precarious existence and a modicum of comfort."[98]

The development of metropolitan markets

The penetration of commerce into the country also meant an expansion of long-distance trade. Rather than country people producing for themselves or buying locally, they increasingly purchased the products of distant producers—often country folk in other regions.

Consumers became connected to producers via a chain of increasingly specialized intermediaries. Some of these intermediaries specialized in gathering up output in the

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[93](Thirsk 1978) Ch. 5. Chapmen also purchased rural manufactures.

[94](Bailey 1999) (Dyer 2005) Ch. 5

[95](Everitt 1967); (Britnell 1996); (Dyer 1989)

[96](Thirsk 1978)

[97](De Vries 2008)

[98](Thirsk 1978) p8. See also (de Vries 1993).

producing regions and selling it to other intermediaries in the regional centers. These, in turn, sent the output for sale to the bourse markets of Antwerp, Amsterdam, and London.[99]

Some goods were consumed in the metropolis itself or exported overseas, but an increasing proportion went out again to other regions served by the metropolis: as Daniel Defoe later wrote, "Norwich buys Exeter serges, Exeter buys Norwich stuffs, all at London."[100] The goods that traded between regions in this way, like the serges and stuffs, were relatively inexpensive—mostly simple manufactures and agricultural commodities.

The regions connected to one another via the bourse market of the metropolis constituted a single large 'metropolitan market': the sixteenth century saw the emergence of several such in northwest Europe.[101] Metropolitan markets were much larger than merely regional markets. The metropolitan market centered on London, for example, encompassed much of England and Wales.[102]

Despite their size, prices within a metropolitan market, tended to move together, differing from place to place mainly by the cost of transportation.[103] A uniform price, together with the size of the market, induced considerable regional specialization within it, and this further raised productivity.

It was the development of a large, integrated metropolitan market for inexpensive goods in England—more than anything else—that laid the foundation for the Industrial Revolution.[104]

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[99](Westerfield 1915) describes in rich detail the organization of English commerce a little later, in the period 1660-1760.

[100](Defoe 1869 [1725-7]) #1432}, writing of the early eighteenth century, and quoted in (Kerridge 1985) p 215.

[101]See (Van der Wee 1963) on Antwerp, (de Vries and van der Woude 1997) on Amsterdam, and (Kerridge 1985) on London.

[102](Gras 1915); (Kerridge 1988)

[103](Kerridge 1985)

[104](Szostak 1991)

The impact on inter-regional trade within the zone

Inter-regional trade within the northern zone of Europe underwent a similar sort of centralization. Here, the 'metropolis' was not a single city, but the urbanized central region of the zone. The leading city within this region changed over time. Initially, it was Antwerp, with Amsterdam playing a satellite role as Antwerp's gateway to the Baltic. When Antwerp was destroyed by Spanish troops in 1585, Amsterdam took over the leading role, and in the eighteenth century Amsterdam was itself displaced by London.

The Low Countries had, of course, always been at the center of trade in the northern zone. However, with falling transportation costs and the development of bourse markets, trade became even more focused on the center. As with the development of metropolitan markets, the result was greater economic integration and increasing regional specialization.

Stabilization of grain prices

Centralization of trade had the important effect of reducing market risk. This was most notable in the grain trade. Regional grain prices were volatile, because local supply fluctuated widely and demand was inelastic. A local shortage would raise prices, causing merchants in other regions to ship grain there in the hope of a profit. Their uncoordinated efforts could, however, swamp the market, causing prices to plummet and leaving them all facing a loss. Fear of this—of market risk—would cause merchants to hold back from responding to a reported shortage.[105]

The increasing centralization of the grain trade in Amsterdam eliminated this problem by providing the necessary coordination. The concentration of trading averaged out the regional fluctuations and kept the price in Amsterdam relatively stable.[106] There was, in addition, some speculative warehousing of grain in Amsterdam, which further helped stabilize prices there. As a result, regions with a surplus preferred to sell in Amsterdam rather than taking the chance of finding a better price elsewhere. Similarly, regions with a shortage could be sure of finding grain at a good price in Amsterdam.

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[105](de Roover 1948)

[106](Unger 1983)

Note that it was the concentration of *trading*—not the concentration of the grain itself—that was responsible for the stabilization and reduction in risk. Indeed, grain that was traded in Amsterdam was often sent directly from its source to its ultimate destination, without physically passing through the city.[107]

The impact on transoceanic trade

Later, centralization of trading in the bourse market of Amsterdam transformed transoceanic trade in much the same way. The initial opening of transoceanic trade by the Portuguese in the early sixteenth century had had remarkably little impact on the European spice market: the traditional trade via the Levant and Venice remained competitive, and although total imports of spices increased somewhat, prices fell only a little.

When the conflict with Spain cut off Dutch access to Asian spices in Lisbon, the Dutch, as we have seen, began to send their own ships to Asia. As a result, Amsterdam soon became the center of the spice trade and transformed it much as it had transformed the trade in grain. Concentrated trading on an exchange, warehousing, and speculation all served to stabilize prices and reduce market risk. The reduction in risk and falling trading costs greatly increased the volume of trade, bringing prices down significantly. The Venetian spice trade, unable to compete, withered.[108,109]

The merging of the two zones of trade in Europe

Falling trading costs led to an increasing volume of trade within the northern zone and eventually to the merging of the two zones of European trade. This again is illustrated by the grain trade. From the middle of the sixteenth century, Baltic grain started to find its way to Iberia. By the end of the century, Spain was so dependent on Baltic grain that it allowed Dutch and English grain ships into Lisbon and Seville despite its wartime embargo on these enemy nations. In the 1590s, a general shortage of grain in the Mediterranean brought northern grain ships to Italy.[110] And by the early seventeenth

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[107](Tielhof 2002; Lesger 2006)

[108](Parry 1967); (Musgrave 1981)

[109]In much the same fashion, Amsterdam became the center of the world trade in bullion.

[110](Ball 1977) Ch. 6 food

century, there was a growing English and Dutch maritime trade with Italy and the Levant—effectively merging the two zones of European trade.

In describing the evolution of commerce and its contribution to market expansion and economic progress, we have mentioned, but not elaborated on, two services crucial to its development—payments and finance. We take up the details of the evolution of payments in Chapter 8 and of the evolution of finance in Chapter 9.

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