

**HOW AND WHY ECONOMIES DEVELOP AND GROW: LESSONS
FROM PREINDUSTRIAL EUROPE AND CHINA**

CHAPTER 5

MERCHANTS AND CITIES

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ABSTRACT: Expansion of the market created opportunities for gain from the reorganization of production or from the adoption of better technology. It was merchants above all who seized those opportunities—who were the entrepreneurs. And it was in the cities that most of the opportunities occurred. Merchants and cities were not only the agents of commerce, they were more generally the agents of economic progress.

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Expansion of the market created opportunities for gain—from the reorganization of production or from the adoption of better technology. But someone had to seize those opportunities: someone had to be the entrepreneur. That someone was most often a merchant. Moreover, the opportunities did not appear just anywhere. They mostly appeared in and around cities. In Chapter 2 we saw that merchants and cities played a crucial role in the expansion of the market. In this chapter we will see that they also played a crucial a role in the *response* to the expansion of the market.¹

ENTREPRENEURSHIP

All three basic economic activities—commerce, production, and predation—offered opportunities for entrepreneurship.² In commerce, the entrepreneurs were mostly merchants; in predation, they were mostly predators; but in production, producers, predators, and merchants all played a role. To see why merchants were the most important, we must understand the limitations of producers and predators as entrepreneurs of production.

Producers as entrepreneurs

Entrepreneurship in production can take a variety of forms—the creation of a new type of organization, the adoption of a new process of production, or the introduction of a new good.³ In each case, the entrepreneur has to recognize the opportunity, has to possess the resources necessary to exploit it, and has to be willing and able to bear the risk of doing so. The typical producer was a small enterprise—a family farm or a family workshop—with no direct contact with distant markets. Consequently, producers themselves were rarely aware of new opportunities, and even when they were, they lacked the resources to exploit them.

In the subsistence-tribute economy at the opening of our period, peasant households lacked not only resources and information but also any inclination towards

¹We saw in Chapter 3 that merchants and cities were also a vital *part* of the new organization of production.

²Baumol and Schilling (2008) We will focus here on entrepreneurship in production; we will consider entrepreneurship in commerce in Chapters 6 and 7 and entrepreneurship in predation in Chapters 8 and 9.

³Schumpeter (1955 [1911])

entrepreneurship. The culture of subsistence is conservative: the risk of failure and starvation outweighs any chance of betterment; and the obligation of mutual assistance places a heavy tax on those who do succeed. We saw in Chapter 3 that the first response to the opportunities of the market came not from producers but from the predatory class, in the form of demesne agriculture and industry.

However, as markets developed, producers did respond. The origins of the open field system are obscure, but it is possible that it was village associations who took the initiative. And if individual producers could not be entrepreneurs in the large, they could be and were entrepreneurs in the small. Much of the consolidation of small plots into viable family farms was undertaken by enterprising peasants, and they were responsible for many of the small improvements in agricultural technique.⁴ In industry, the structure of the new manufacturing was probably created by individual artisans deciding to set up on their own to specialize in particular sub-processes. The initiative in mining came at first from individual prospectors and miners. Migration is a form of entrepreneurship: peasants were ready to move to new areas of settlement and colonization, and urban craftsmen were ready to carry their skills to wherever the returns were highest.

As producers accumulated more resources, they were better able to bear risk, and they became more entrepreneurial. In agriculture, large farmers led the way in the introduction of new techniques and crops.⁵ In industry, enterprises were larger and more profitable in industries in which proprietary knowledge was important—for example, in such ‘chemical’ industries as dyeing, glass, and metallurgy. As a result, producers in these industries had a greater capacity for entrepreneurship.

Since producers had to rely primarily on their own resources for funding, anything that increased their profits made it easier for them to be entrepreneurial. In agriculture, rising prices and falling rents both had this effect. Since rents were fixed in money terms a significant inflation could erode their real value, leaving farmers with greater profits. Inflations in late medieval northern Italy or in sixteenth-century England were both

⁴For example, smallholders led the way in using horses for plowing because they could only afford a single animal and horses were better than oxen for dual use in transportation. Langdon (1986)

⁵Clay (1984)

followed, therefore, by periods of unusually vigorous entrepreneurial activity on the part of farmers.⁶

Predators as entrepreneurs of production

Predators—lords and princes—derived their incomes from the territory they controlled. They therefore had a clear interest in increasing the yield from that territory.⁷ They also, in principle, commanded the resources necessary for entrepreneurship. However, their resources, while greater in total than those of merchants, were far less liquid and so harder to mobilize. For the predatory class there was also a stigma associated with production and commerce that stood in the way of entrepreneurship in either.⁸ The stigma was weaker for the ecclesiastical nobility, which may be why its members played a greater role as entrepreneurs of production. The stigma also varied considerably from place to place and over time. The nobilities of northern Italy and the Low Countries were more willing to engage in economic entrepreneurship than those of France or Spain. And the English nobility became increasingly willing to do so over the centuries.⁹ So predators did act as entrepreneurs of production. Not surprisingly, given their close association with the land, they did so mainly in agriculture and in land-related industries.

In agriculture, manorial lords responded to the market expansion of the eighth century by developing demesne agriculture.¹⁰ They saw an opportunity and understood that only they were in a position to exploit it. In later centuries, in similar circumstances, the lords of Sicily and Calabria established large plantations to grow sugar and silk, and those of

⁶On the former case, see Laven (1966) ch. 1; on the latter, see Kerridge (1967).

⁷We will have more to say about this in Chapter 9.

⁸See the Appendix on culture.

⁹Edward IV first made commerce respectable when he personally became involved in numerous trading ventures from the 1460s. Ross (1997) quoted in Baumol (2002).

¹⁰ See Chapter 3. Although demesne agriculture gradually gave way to the commercial family farm, it remained progressive—at least in England (Karakacili (2002)).

Andalusia and Portugal did so to grow sugar, fruit, wine, and oil.¹¹ As we will see, lords also cooperated with merchants to establish plantations in overseas colonies.

In industry, the predatory class were particularly active in mining and metallurgy, Mineral rights to precious metals belonged to the prince; those to base metals, to the local lord. The owner of the rights would grant miners permission to extract in exchange for royalties and would invest in smelting facilities both to encourage exploitation of the mineral resources on their land and to make sure of their cut of the proceeds. In late sixteenth century England, lords played a prominent role in the development of the iron and coal industries.¹² Lords also played an entrepreneurial role in milling, paper, and glass—all industries related to the land.

The predatory class did, therefore, play an important role as entrepreneurs of production. But the main outlet for their entrepreneurial energies was in predation. It was more natural for them—and more ‘noble’—to increase their income by adding to their territory rather than by raising the yield from the territory they already held.

Merchants as entrepreneurs of production

Merchants were entrepreneurs by profession—always on the lookout for profitable trading opportunities. To find such opportunities, they devoted much of their effort—through travel and correspondence—to the gathering of information. To be able to exploit such opportunities when they found them, they made sure they had ready access to liquid resources—whether their own or borrowed from others. Merchant culture was highly entrepreneurial: it valued initiative, enterprise, inventiveness, and (successful) risk-taking.¹³ Well informed, well financed, and predisposed towards entrepreneurship, merchants were ready to exploit whatever opportunities came their way. While their

¹¹See Epstein (1998) on the former and [Davis, 1973 #1691} on the latter.

¹²Palliser (1983) Ch. 8. “In the Elizabethan period the most active entrepreneur in the country was not some busy merchant or thrusting member of the new gentry, but a peer of ancient stock, George Talbot, 6th Earl of Shrewsbury.” p 258. Shrewsbury was one of the great ironmasters and also owned a steelworks, lead mines, coalmines, and glassworks.

¹³More on this in the Appendix on culture.

primary interest lay in trading, if they stumbled across a profitable opportunity in production—or, indeed, in predation—they were not averse to taking it.

Merchant entrepreneurship in agriculture

Merchants became involved in agriculture primarily through investment in land. They found land an attractive asset, because it promised them a steady, relatively safe stream of income in the form of rents. Its low risk relative to commerce made its ownership appealing as a form of diversification. Its relative ease of management made it an ideal for a merchant's retirement, for provision for widows and orphans, for a dowry, or for an endowment or bequest to a charitable or religious institution. And land was not an illiquid asset: a market for loans secured by land developed early, and much of its economic function was in allowing merchants to move their capital out of land by borrowing against it.¹⁴

The ownership of land, in sufficient quantity, also conferred important non-economic benefits—status and even noble rank. Merchants moved up the social ladder by marrying their daughters to the nobility and by setting up their sons with country estates. In sixteenth century England, some 30-40% of the land was in the hands of the 'gentry'—descendants of merchants who had quit commerce and derived their income exclusively from the ownership of land. Their holdings exceeded those of the crown, the church, and the old nobility combined.¹⁵

Merchants who acquired land, even if their motive was not strictly entrepreneurial, could not help being entrepreneurial in their management of it: habits of enterprise die hard. Merchants restructured their land into efficient family farms: when they purchased manors from lords or abbeys, they would break up the demesne and consolidate the smallholdings.¹⁶ To facilitate the leasing of the farms they created, they pioneered new

¹⁴Postan (1973)

¹⁵This situation came about partly because of the dissolution of the monasteries and the sale of their land and partly because of the sale of crown land to finance wars. Clarkson (1971).

¹⁶See, for example, Jones (1968) on northern Italy during the Commercial Revolution, Hoffmann (1977) on medieval central Europe, and Thrupp (1948) on fifteenth century England.

forms of contract.¹⁷ Merchant landowners led the way in the adoption and diffusion of new techniques and crops: they were the best informed about practices elsewhere and the most willing and able to bear the risks of innovation.

Of course, non-merchant landowners were no fools: they noticed the success of their merchant neighbors in increasing the income from their estates, and they imitated their methods. In some cases, lords even brought in merchant contractors to restructure their land for them. Like today's investment banks, called in to advise on mergers and acquisitions, these contractors provided expertise and arranged the necessary financing.¹⁸

Merchant contractors played a similar role in developing new land. In twelfth century Picardy and Flanders, the Counts granted coastal territories to nobles and religious houses on condition they reclaim land from the sea. The grantees generally engaged contractors to do the work, to recruit settlers, and to obtain the necessary financing.¹⁹ The story was similar with the German expansion into eastern Europe.²⁰ A merchant contractor would be brought in to establish the new villages—dividing the land into family farms and constructing the necessary infrastructure. The contractor would also recruit settlers—mainly Germans, but also Flemish and Dutch—paying for their transportation and supporting them until their first harvest. Of course, all of this required considerable financing, which the contractor would raise in urban financial markets.

In the northern zone, predators—kings, nobles, and religious orders—generally took the initiative in the development of new land, acquiring new territory and calling in merchant contractors to develop it. In the Mediterranean zone, however, it was the merchants who took the initiative, either conquering new territory themselves or working with princes to do so.

Colonization in the South was closely related to the spread of plantation agriculture.²¹ Europeans had originally imported cotton, sugar and malmsey (a sweet fortified wine)

¹⁷Jones (1968)

¹⁸Jones (1966) p 418

¹⁹Nicholas (1992); Ganshof and Verhulst (1966).

²⁰The following draws on Aubin (1966), Carsten (1954), and Powelson (1988).

²¹The following draws on Laven (1966), Epstein (1991), Scammell (1981), and Verlinden (1970).

from the Levant. The high price of these commodities made import substitution attractive, but most of Europe was unsuited to their cultivation. So when the Crusaders conquered Palestine, Venetian merchants were quick to take over and expand the sugar and cotton plantations they found there. And when the Venetians themselves later conquered Crete and Cyprus, they established sugar and cotton plantations there too; the Genoese similarly set up plantations on Chios to produce malmsey. From the eastern Mediterranean, the cultivation of sugar, cotton, and malmsey spread westwards. In the fifteenth century, Pisan merchants were instrumental in bringing these crops to Sicily, setting up sugar mills and refineries there. Genoese merchants played a similar role in Andalusia, the Algarve, and North Africa. And when the Spanish and Portuguese colonized the Atlantic Islands and then the Americas, Genoese developers worked closely with them, bringing the cultivation of sugar, cotton, and malmsey to the new territories. By 1600, the Portuguese colonies in the Atlantic and Brazil were supplying Europe with large quantities of sugar, with the trade firmly in the hands of Genoese and Florentine merchants.²²

To work their plantations in Crete, the Venetians initially recruited settlers from Armenia. However, when the supply proved insufficient, they turned instead to importing slaves. From then on, slave labor spread westwards together with plantation agriculture. Genoese and Venetian merchants were the main suppliers of slaves, initially from the Balkans and then from the Black Sea. The Genoese later played a major role in developing the African slave trade that supplied the plantations of the Atlantic islands and the Americas.²³

Merchant entrepreneurs were involved in land development in other ways too. As agricultural land in the Netherlands rose in value during the sixteenth century, merchants there started to take an interest in reclamation. As we have seen, reclamation projects had

²²Davis (1973) Ch. 1

²³ Chapter 3 argued that the most efficient form of enterprise in agriculture was the family farm. Plantation agriculture probably arose in the southern colonization for the same reason that demesne agriculture arose in the earliest phase of the European expansion—urgency. Huge profits were to be had, especially from the cultivation of sugar, and efficiency was less important than speed. Plantations could be established far more quickly than an agriculture of family farms.

a long history in the Low Countries. However, they grew substantially in scale when, beginning in the 1560s, the merchants of Antwerp and later Amsterdam took a hand. Large group of merchants formed partnerships to reclaim substantial areas ‘on spec’ — hoping to divide into farms that they could lease at a profit. The total investment in such projects was enormous: between 1590 and 1650, Amsterdam investors sank over ten million gulden into projects in one area of Holland alone—an amount rivaling the total capital of the Dutch East India and West India Companies combined. The specialized contractors and technical experts who undertook these projects later went on to apply their skills in reclamation projects in the English Fens and in France, Italy, and Mexico; in many cases, Dutch merchant investors provided the financing.²⁴

There were other opportunities for merchant entrepreneurship in agriculture—as a result, for example, of major interruptions in supply. Producers themselves, of course, responded to the rise in prices. However, a higher level of entrepreneurship was sometimes called for, and then merchants took the initiative. For example, when the Hundred Years war interrupted the supply of English wool to northern Italy, Genoese importers found an alternative source of fine wool in North Africa. However, this source proved unreliable, so they brought North African (merino) sheep to Spain to improve the quality of the wool produced there. The experiment was so successful that by the fifteenth century merino wool had become the backbone of the Spanish economy and a major source of profit for Genoese and Spanish merchants.²⁵

The Elizabethan ‘projectors’ offer another example of merchants taking the initiative in response to interruptions in supply. When war and the devaluation of the pound raised the cost of various imported agricultural commodities—for instance, woad, a dye vital to the woolen industry—these entrepreneurs organized production at home, thereby bringing to England a number of new crops.²⁶

²⁴de Vries and van der Woude (1997); de Vries (1974); Slicher van Bath (1977)

²⁵Vicens Vives (1969) Ch 20, quoting Lopez (1953).

²⁶Thirsk (1978)

Yet another example is the rise of the Dutch herring industry.²⁷ For centuries, the main source of fish for western Europe had been the Baltic—the trade in fish being second in importance only to the trade in grain. However, in the fifteenth century, the Baltic fishery declined precipitously. The Dutch brokers who mediated this trade were quick to fill the gap with local production. To increase the catch of the modest Dutch fishery, they developed a new type of large boat, the herring buss, suitable for fishing the deep waters of the North Sea. The brokers also provided on-land processing and packaging and obtained the large quantities of salt needed to preserve the fish. Indeed, by employing the busses in the off-season to bring salt from the Bay of Biscay, they boosted their profits considerably.

Merchant entrepreneurship in industry

Merchants were reluctant to become directly involved in industrial production. They did not wish to tie up their capital in illiquid assets or to be distracted from their primary activity of trading. However, the potential gains were sometimes large enough to overcome their reluctance.

For example, market expansion might create the potential for a whole new industry, but producers themselves might lack the ability to bring it into being. It was for this reason that merchants were responsible for establishing the ‘new manufacturing’ in twelfth-century Flanders.²⁸ Market expansion created a growing demand for Flemish woolens in northern Italy, but Flemish merchants were unable to satisfy it—in quantity or in quality—by relying on their traditional rural suppliers. So they set up workshops in the towns, directly employing craftsmen whom they recruited from the country.²⁹ By the late thirteenth century, the industry had evolved the characteristic structure of the new manufacturing—a host of small, specialized independent producers coordinated by middlemen (weaver-drapers) and supervised by guilds. Merchants could now meet their needs for cloth by purchasing it in the urban trading halls, and they therefore withdrew from direct involvement in production.

²⁷de Vries and van der Woude (1997) Ch. 7; Michell (1977); Unger (1996)

²⁸Munro (1998); Nicholas (1992); Murray (1990)

²⁹Van Werweke (1954)

Merchant entrepreneurs were similarly responsible for establishing the fustian industry in South Germany. During the Commercial Revolution, northern Italy had become a major producer of cottons. But labor costs rose sharply there in the fourteenth century as a result of the Black Death, and merchants saw an opportunity to produce cottons more cheaply across the Alps in South Germany. There already existed there a rural linen industry that could be converted relatively easily to fustian—a cotton-linen mix. Merchants like the Fuggers of Augsburg purchased the necessary cotton yarn in northern Italy, commissioned local weavers in Germany to produce the cloth, and marketed the output in Venice and, later, Antwerp; they also, of course, provided the financing.³⁰

When merchants arrived in a distant market to trade, they sometimes discovered a local product that could, with some modification, be profitably exported. For example, when Genoese galleys arrived in England at the end of the thirteenth century carrying alum for the English and Flemish woolen industries, Genoese merchants saw a potential for importing woolen cloth from England. To obtain the kind of cloth they needed, they organized production themselves in the area around Southampton, employing local craftsmen to full, dye, and finish cloths to their specification.

Merchants were instrumental in the diffusion of new processes and new goods. For example, it was presumably the merchants who organized the new manufacturing who were responsible for bringing the horizontal loom from northern Italy to Flanders. And the ‘projectors’ of Elizabethan England were active in industry as well as in agriculture.³¹ In industry, too, projects were often aimed at import substitution. Merchant entrepreneurs—some of them refugees from the Low Countries—established a number of new industries, importing the necessary technology, coordinating production, marketing output, and providing financing. The new goods they introduced ranged from stockings to tobacco-pipes.

Merchants sometimes found it necessary to become directly involved in production in order to ensure for themselves a steady supply of product. It was for this reason that

³⁰Mazzaoui (1981)

³¹Thirsk (1978)

metal traders became involved in smelting.³² While smelting facilities were usually built by landowners and princes, metal traders often leased and operated them.³³ Moreover, as the scale of mining increased, landowners and princes had to borrow to finance the necessary investment, and it was only natural that they turn to the same metal traders for their loans. Since default was common, the assets securing the loans often fell into the hands of the metal traders. That was how the Fuggers—who, as we have seen, made their money in fustians—came into possession of many of the silver and copper mines of Central Europe.

It was metal traders who were responsible for the diffusion of mining and metallurgical technology. Merchants with proprietary knowledge of new techniques maximized their returns by applying those techniques as widely as possible. For example, the Venetians and Nürnbergers who had developed the *Saigerprozess* acquired mines in all the principal producing regions of Central Europe. The Augsburg-Hungarian partnership of Fugger and Thurzo, which had developed the cementation process for extracting gold from auriferous silver, extended its application through acquisitions and partnerships in all the major regions of production—including Cuba and Mexico.³⁴ The Augsburg house of Haug, Langnauer and Company was instrumental in establishing in England the Society of the Mines Royal and the Company of Mineral and Battery Works.³⁵ Dutch-Liègeois arms and metals merchants—particularly the de Geer and Trip families—played a leading role in developing iron and copper industries in Sweden in the early seventeenth century, bringing in the necessary experts, marketing the output, and providing the financing.³⁶

Merchants and predators became entrepreneurs of production because of the limited capacity of producers themselves to play that role. Both depended for their living on

³²Much of the following is based on Nef (1987) and Glamann (1977)

³³ “In the sixteenth century, merchants took a notable part in the smelting of copper from the ore... A copper dealer not involved in the refining of the ore was an exception...” Glamann (1977)

³⁴Blanchard, et al. (1992)

³⁵Rees (1968)

³⁶Israel (1995) pp 274-5; Müller (2005)

production, but neither really wished to become directly involved in it. However, sometimes the only way to get something done is to do it yourself. When major opportunities presented themselves, and producers were unable to exploit them unaided, predators and merchants took the initiative. But they became involved only to the minimum degree necessary. Of the two, merchants found such involvement less distasteful. They were also better informed and so more likely to identify new opportunities. Most important, merchants had the money. So, even when the initiative came from predators, merchants frequently provided the financing.

CITIES

Merchants, therefore, were the people who made things happen; cities, generally, were where they happened. Cities were both catalysts of growth and generators of growth.

Cities as catalysts of growth

Cities were catalysts of growth, because they represented large concentrations of demand and because of their low trading costs.

The demand of a large population concentrated in a small area created local scarcity and raised local prices. High prices were instrumental in raising the productivity of agriculture. As we have seen, the two crucial changes in agriculture were restructuring into family farms and intensification. Restructuring was driven by the high price of labor in and around cities. Agriculture had to offer farmers a return competitive with employment in the city, so farms had to be large enough to provide the farmer with a sufficiently high income.³⁷ Similarly, intensification was driven by the high price of land near cities—despite the simultaneously high price of labor. Indeed, intensification occurred not where labor was cheap—far from cities—but where it was dear—close to

³⁷Allen (1998) cites the importance of high labor costs for the development of agriculture. Kislev and Peterson (1982) develops the connection between the opportunity cost of the farmer and farm size. This connection is nicely illustrated in early modern Holland, where dairy farms near cities milked 15-25 cows, while those far from cities milked only a few. Moreover, as the level of income rose, the size of dairy farms increased and they employed more capital (another way of boosting the farmer's income). (de Vries (1974)).

cities. And it was the high price of output—together with the comparatively stable prices offered by large urban markets—that made both of these changes worthwhile.³⁸ We have seen that it was merchant landowners who led the way in making these changes, and merchants preferred to buy land close to the cities where they lived. So the supply of agricultural entrepreneurship was also greatest near cities.

Consequently, it was the regions close to cities that boasted the most productive agriculture.³⁹ Comparing productivity across countries, as is frequently done, is therefore misleading. Before 1500, for example, productivity was higher in the Low Countries than it was in England and France.⁴⁰ However, some regions of the Low Countries that were isolated from urban markets were relatively backward, while some regions of France and England with good access to the markets of Paris and London were quite advanced.⁴¹ Productivity was higher overall in the Low Countries, because a larger proportion of the population lived in areas close to urban markets. It should be no surprise then that the urbanized central regions of the two zones—the Low Countries in the North and northern Italy in the South—were leaders in agriculture, just as they were in industry.

Low trading costs were another reason why cities were catalysts of growth. Their internal trading costs were low because of proximity; their external trading costs were low because of investment in transportation and commercial infrastructure—justified by the size of the market. The low trading costs of cities shaped the reorganization of production. Their low internal trading costs made possible the new manufacturing. Their low external trading costs, together with their concentrated demand, molded the geographical reorganization of agriculture.

Low trading costs—internal and external—were also a necessary condition for cities to become generators of growth.

³⁸Grantham (2007)

³⁹Hohenberg and Lees (1995)

⁴⁰Allen (1998)

⁴¹See Britnell (1989) on England, Hoffman (1996) on France.

Cities as generators of growth

Cities generate growth by creating new kinds of work. In her classic *The Economy of Cities*, Jane Jacobs explains how this happens. New work emerges from the interaction in cities between commerce and production and between different types of production in close proximity to one another. The mechanisms Jacobs describes were very much in evidence in preindustrial Europe.⁴²

Commerce created new work directly through its demand for producer goods such as ships, wagons, and containers. For example, the expansion of Dutch trade with the Baltic created a growing demand for ships. This stimulated the development of a vigorous shipbuilding industry, which eventually came to sell ships to commercial fleets and navies all over Europe. Similarly, the demand of Dutch shipping for maps and instruments helped to make the Netherlands the leading producer and exporter of both.⁴³

Entrepôt trade created new work in processing commodities that passed through. Antwerp, and later Amsterdam, refined imported sugar and metals, cut and wrapped imported tobacco, and processed and blended imported wines. Transportation costs provided an additional incentive for processing, because processed products generally had a higher ratio of value to bulk than raw materials. For example, at a time that shipping grain from the Baltic to the Low Countries was uneconomic, the cities of the Hansa turned the cheap local grain into beer and shipped that instead; similarly, their timber exports were initially ‘embodied’ in ships and wood products.

Trade brought all sorts of new goods to a city. High price would initially put them out of reach of all but the wealthiest. However, the city’s craftsmen would soon begin to produce cheap imitations for the local market—yet another kind of new work. As the quality of these imitations improved, they would be added to the city’s exports and their production would further expand. Import of the original good would be replaced in the city’s trade by import of the raw materials necessary for its local manufacture.

The cities of northern Italy provide numerous examples of this pattern. Northern Italy initially imported fine silk and cotton textiles from the Levant for its own consumption

⁴²Jacobs (1969)

⁴³Glamann (1972)

and for re-export to the North. Local manufacturers began to produce poorer quality imitations for the local market, importing the raw silk and cotton.⁴⁴ As the Italian silk and cotton industries developed and their products improved, they began to export them to markets in northern Europe and the Mediterranean—even to the places from which they had originally imported these same goods.⁴⁵

The story was similar with other goods initially imported from the East—paper, glass, ceramics, soap, and porcelain—and with fine woolens initially imported from northern Europe. The story was similar too in other places. The cities of the Low Countries, for example, initially imported cotton textiles, paper, and porcelain from Northern Italy. They then began to produce cheap local substitutes and eventually became exporters of all these goods themselves.

The richest source of new goods that were potential candidates for imitation was trade between the zones—between the two zones of Europe, between the southern zone and the Muslim world, and in the seventeenth century, directly between Asia and Europe.⁴⁶ However, trade within each zone provided some candidates too, although usually of a humbler kind. For instance, the Low Countries initially imported beer from the Baltic, but in the fourteenth century the cities of Holland began to imitate the northern brew, and by the end of the fifteenth century beer was their second most important export.⁴⁷

This process of trade generating production and production generating trade was reinforced by a second process that might be described as ‘one thing leading to another’.⁴⁸ The early industrial development of the northern Netherlands provides some good examples. The high local price of grain drove Dutch merchants to seek out foreign sources of supply. Since shipping costs accounted for a large part of the delivered price, they had a strong incentive to develop a shipping industry that would lower those costs. Shipping led to shipbuilding and to the manufacture of containers (barrels, sacks, and

⁴⁴ Such imports became economical as trading costs fell.

⁴⁵{Mazzaoui, 1981 #1983 Ch. 3

⁴⁶See Chapter 2.

⁴⁷{Unger, 1989 #2036}

⁴⁸This second process, too, was first described by Jacobs (1969).

packing). These in turn led to the importation of lumber and to sawing (for residential construction as well as for shipbuilding and cooperage). Low shipping costs lowered the price of grain to the point that it became worthwhile to produce beer from imported grain rather than importing beer from the Baltic. Competition from cheap grain pushed Dutch farmers into horticulture and dairying: cheese, butter, fruits, vegetables and flowers all became important exports.⁴⁹ Low-cost shipping also enabled the Dutch to take over much of the trade with the Baltic. When the supply of herring, one of the pillars of the Baltic trade, began to dry up, they developed their own herring fishery in the North Sea (their shipbuilding skills enabling them to produce a new kind of ship to meet the needs of this kind of fishing). The growth of the herring fishery drew the Dutch into the salt trade and into salt refining. Each of these steps generated new work. Beer, ships, planks and barrels, dairy products and fresh produce, herring, and refined salt—each eventually became an export.⁵⁰

The enormous range of goods that cities produced, and the division of labor in the production of each, created a rich mixture of activities and skills. For example cities in northern Italy during the Commercial Revolution frequently recognized over a hundred different trades.⁵¹ Moreover, the pool of specialized, skilled labor was constantly being augmented by immigration. The resulting rich mix of skills could easily be recombined in new ways or adapted to new tasks.⁵²

Cities, consequently, provided a particularly hospitable environment for ‘startups’. The story of printing illustrates this rather well.⁵³ Printing began in Europe around 1450 in the Rhineland. However, two of the first printers soon decided to move to Venice. Venice attracted them, not only because of its large local market, but also because its

⁴⁹de Vries (1974) Ch. 4

⁵⁰de Vries and van der Woude (1997)

⁵¹Jones (1997) p 161

⁵²“The greater the sheer number and varieties of divisions of labor already achieved in an economy, the greater the economy’s inherent capacity for adding still more kinds of goods and services.” Jacobs (1969) p 59

⁵³Lane (1973)

commercial infrastructure provided ready access to markets as far away as Portugal and Poland. With respect to inputs, while no paper was actually produced there, the excellent paper of Fabriano was marketed through the city and so was readily available. And, of course, skilled labor and financing were abundant. It is hardly surprising, then, that by the end of the fifteenth century, Venice had become the largest center of printing and publishing in Europe and a major exporter of books.

The rich mixture of activities and skills to be found in cities also made them centers of invention. Although major inventions often seem to come out of nowhere, they are almost always adaptations or combinations of existing technology.⁵⁴ By bringing different activities into close contact with one another, cities provided an ideal environment for such adaptations and combinations to take place.

Sometimes a ‘new’ invention is just the adoption by one industry, with suitable changes, of a technology long in use in another. For example, the horizontal loom and the spinning wheel, both important advances for the woolen industry, were adaptations of technology used in the production of cotton cloth. When the cities of northern Italy started to produce cheap local imitations of imported cottons, merchant entrepreneurs imported the necessary technology from the Levant. But northern Italy already had a woolen industry. Someone presumably saw the potential for adapting the newly introduced cotton technology to woolen production, and local craftsmen possessed the necessary skill to make the required modifications.⁵⁵ Flemish merchant entrepreneurs, visiting Genoa to sell their cloth, discovered this ‘new’ technology and carried it north.

Cities increased the supply of invention, but they also increased the demand. The specialization and division of labor that were characteristic of cities threw up well-defined technical problems that stimulated a search for solutions. Some of the resulting inventions solved the problems to which they were addressed. Others failed to do so, but proved valuable nonetheless in some other, unrelated and often unanticipated use. The

⁵⁴Mokyr (1990) sees a major invention as being “...a radical new idea, without clear precedent, [that] emerges more or less ab nihilo.” p13. Jacobs (1969) and Duggan (2007) see it otherwise: they stress the importance of adaptations and combinations of existing technology.

⁵⁵Invention, in that it involves perceiving a potential—in this case for adapting or combining technologies—has much in common with entrepreneurship.

wide range of activities in the city increased the chance that any given invention would find some useful application.⁵⁶

Competition

It was not only the carrot of opportunity that made cities generators of growth, but also the stick of competition.⁵⁷ Producers in cities were subject to intense competition: those producing for the home market faced competition from imports; those producing for foreign markets faced competition there from the exports of other cities. This competition was a result of the low trading costs that made the city part of a larger inter-regional, inter-zone or internal market. Competition was also a consequence of the cycle of import, imitate, and export: each city's exports were imitated by others, which then themselves became exporters and so competitors.

Competition came not only from producers of the same good, but also from producers of other goods.⁵⁸ For example, cottons, silks, linens and woolens all competed with one another in a general market for textiles. Moreover, technological progress was constantly opening up new interfaces of competition: improvements in glass technology, for example, brought glassmakers into competition with makers of wooden cups, eventually driving the latter out of business.

The unit of competition was not the individual producer but the group of producers making a particular good in a given city. Such a group would find itself competing with similar groups in other cities and with other groups producing different goods in its own city. The group was usually organized as an association or guild. We saw in Chapters 3 and 4 that in many ways the preindustrial equivalent of today's corporation was the guild rather than the individual producer: the guild was the repository of proprietary knowledge, and the guild was owner of the brand name.

One dimension of competition was price: this was particularly important for relatively inexpensive, mass-market goods. The pressure to lower cost drove production from areas

⁵⁶Jacobs (1969) emphasizes the serendipitous and unintended nature of invention. One of her examples is the post-it note—an ingenious application of an adhesive that was insufficiently sticky.

⁵⁷Lewis (2004) shows that the key to productivity growth today is product market competition.

⁵⁸Hirshler (1954)

of expensive labor to those of cheaper labor—particularly from city to country. Cities had enormous advantages in starting a new industry. However, as production became routinized, any remaining advantage was outweighed by the high cost of operating in the city: space was dear, labor was expensive (because of the cost of living), and taxes were high. So merchant entrepreneurs sought alternative, less expensive places of production in other cities, in smaller towns, and in the country.⁵⁹ For example, during the Commercial Revolution, rising costs caused the center of woolen production to shift from Artois to Flanders and then to Brabant and Holland.⁶⁰

A second dimension of competition was product innovation. Indeed, competition was the principle driver of product innovation, just as it is today.⁶¹ For example, the Italian cities that dominated the silk industry during the long sixteenth century—Genoa, Milan, Venice, Bologna, Florence, Lucca and Naples—competed with one another aggressively in the international market, turning out a steady flow of new products and new techniques. One city would gain a temporary advantage with some innovation, but it would be quickly imitated by the others—aided by the migration of craftsmen and of merchant-entrepreneurs from one city to another.⁶²

The process of inter-city competition was one of ‘creative destruction’: cities gained new industries only to lose them later to lower-cost or more innovative competitors.⁶³ However, healthy urban economies were able to replace the old work they lost with new work. Antwerp provides a good example.⁶⁴ When its principal industry, woolens, was threatened by lower-cost competition from England in the late fourteenth century, it reoriented itself to finishing English cloth. In the fifteenth century it supplemented

⁵⁹Jacobs (1969) suggests that even agriculture originally went through this cycle, being invented originally in trading centers and only later ‘outsourced’ to the country.

⁶⁰Van der Wee (1993) Ch. 11; Nicholas (1992). We saw earlier that cotton (fustian) production moved for similar reasons from the cities of northern Italy to rural southern Germany.

⁶¹Baumol (2002)

⁶²Mola (2000)

⁶³Schumpeter (1942).

⁶⁴Van der Wee (1993)

textiles with a number of luxury manufactures—printing, diamond-cutting, glass and mirrors, majolica tiles. All of these products began as imitations of Italian imports produced for the local market (mainly the Burgundian court), but they each later became important exports. In the sixteenth century, Antwerp added sugar refining (it was the main destination of sugar imports from the Atlantic islands), silk textiles, gold- and silversmithing, furs, and painting.

CONCLUSION

Merchants and cities were the agents of economic progress. They were responsible for market expansion, and they also played a critical role in the response to market expansion. Merchants and cities were also largely responsible for the self-perpetuating and cumulative nature of economic progress. By exploiting opportunities for profit, merchants created new opportunities. By adding new work, cities made possible more new work.

Our focus here has been on the role that merchants and cities played in the development of production. However, they played no less important a role in the development of commerce and in the development of government (predation and its control). It is to these other areas that we now turn.

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