

**COURTAULD FAMILY**, English textile entrepreneurs. Samuel Courtauld (1793–1881) established the firm that became Samuel Courtauld & Co. in 1816. By 1850, it was the foremost British producer of black mourning crepe, a type of silk cloth that had become fashionable for middle- and upper-class Englishwomen to wear after the death of a relative. The firm's success in its production was the result of both innovation and good fortune: booming demand; the rural Essex location of the mills, which provided the firm with a cheap, abundant labor supply; development of a proprietary technology involving machinery specifically adapted to the needs of crepe production; and a sharp fall in raw silk prices after the late 1860s.

After Samuel's death in 1881, Courtaulds fell into a brief but sharp period of decline. In response, the directors in 1893 hired Henry G. Tetley (1851–1921), an outsider who was charged with reorganizing the manufacturing side of the business. Tetley, in turn, brought with him a new sales manager, Thomas Latham (1855–1931). Initially, the two moved the firm away from its strict focus on black crepe, broadening the product line to include more fashionable colored-silk fabrics. Although these changes put the firm out of its immediate danger, it soon became clear that they were not enough to completely revive its fortunes.

Thus, in 1904, Tetley and Latham convinced a majority of the Courtaulds board to purchase the British patent rights to the new viscose process for making "artificial silk," or rayon, a fiber produced by chemically treating and spinning wood pulp. This move transformed the firm into an industrial giant. Courtaulds became the largest rayon producer, responsible for 40 percent of world output by 1918. Success in the commercialization of rayon can be attributed to the fact that Courtaulds was the only competitor with any experience in textiles. The firm was able to exploit know-how in textile production to develop the only type of mass-producible rayon yarn suitable for cloth weaving and hosiery knitting, while leveraging its expertise in textile marketing to sell the new product to a potentially vast market of cloth manufacturers. Another factor was the patent, which allowed Latham to charge monopoly prices in Great Britain, and later in the United States, after the American patent rights were acquired in 1909.

Samuel Courtauld (1876–1947), a nephew of the firm's patriarch, assumed control of the firm in 1921 upon the retirement of Tetley. He presided over a period of stagnation in the firm's fortunes, punctuated by the forced sale of the highly profitable American subsidiary in 1941. Unlike his predecessors, his managerial style was cautious; he preferred cooperation and conciliation to aggressive competition, but his policies lacked dynamism. Although (or perhaps because) the firm was still profitable, not until the late 1930s did Samuel realize how far it had fallen behind in research and development, the extent to which middle

ranks of management were understaffed, or the degree of obsolescence and inefficiency of shop-floor organization. He failed to appreciate quickly enough the changes that were needed to overcome the limits to growth of what was still, essentially, a family-run enterprise. As a result, Courtaulds was slower than its competitors to improve existing production processes or to commercialize new products, such as cellophane.

After the mid-1950s, when profitability finally began to suffer so much that continued survival was in question, the firm diversified into paint manufacture and packaging; acquired rival firms, including its main domestic competitor, British Celanese; and developed the "Courtelle" acrylic fiber. During the 1960s, a new managerial regime took control of the company and implemented a strategy of vertical integration through acquisition of textile manufacturing and distribution companies. In the 1990s, the firm spun off its textile businesses into a new enterprise, Courtaulds Textiles, and subsequently the Dutch firm Akzo Nobel acquired the chemicals and other nontextile businesses. Thus, at the dawn of the twenty-first century the firm had returned to its nineteenth-century roots in textiles.

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**CRAFT GUILDS.** Although there is no direct evidence for the existence of associations of trader-craftsmen distinguished by occupation in ancient Mesopotamia and Egypt and in pre-Hellenistic Greece, they are well documented in the urban economies of medieval and early-modern China, Japan, India, Islamic countries, and Europe. Most drew on de facto or fictive bonds of kinship based on clan, caste, or religious belief, identified with specific towns or regions rather than occupations, and operated under strong political supervision. Although guilds outside Europe are poorly documented, their purpose appears to have been mainly social and religious rather than economic. The same applies to the ancient Greek and Roman guilds or clubs (*collegia*, *sodalitates*), attested during the Hellenistic and late Republican eras (third to first centuries BCE). Placed under state control during the early imperial era (first century BCE to first century CE), these guilds had turned a century later into closed, hereditary institutions, and had disappeared from the western empire by the late fourth century CE; but they survived in Byzantine Constantinople and persisted as Christian institutions under state supervision in the western part of the Ottoman Empire.

Guilds of manual craftsmen based in family-owned workshops reappeared around 1100 CE in the most urbanized regions of Italy, the Rhineland, and the Low Countries and spread quickly across western Europe. Medieval and early modern (premodern) European craft guilds differed profoundly from their Asian, Islamic, and classical namesakes, and were in many ways unique. Bonds of association were individualistic and voluntary, guild membership was optional rather than prescriptive, craft guilds from different cities were not allowed to amalgamate, and the majority of craft guilds were self-governed and politically independent. They were "bottom-up," autonomous associations that negotiated with the state for public recognition but never became mere tools of public authority. Crafts were associations of employers rather than of workers. Active membership was restricted to the shop-owning masters, but apprentices and salaried journeymen were subject to craft discipline and compelled to swear loyalty to the craft constitution.

Medieval European crafts emerged in response to resurgent trade and manufactures, and to growing demand for skilled workers within an increasingly receptive legal and political context. Improved access to public-law courts reduced the costs of contracting and hastened the growth of free labor markets in which employment could be rescinded at will; fragmented and competitive feudal power proved ideally suited to the development of free, individual associations based on a hybrid of Roman law and Germanic custom. Faced with medieval rulers' inability to assert full authority, craft guilds produced an independent corpus of legal thought to underpin claims to be quasi-autonomous, corporate bodies. They were most successful where public authority was more contested, as in northern Italy, German-speaking Europe, the Low Countries, and southern France; whereas they developed more slowly and tentatively in more politically centralized regions such as the Iberian Peninsula and southern Italy (which forbade craft guilds by law before the fifteenth century), Scandinavia, and England.

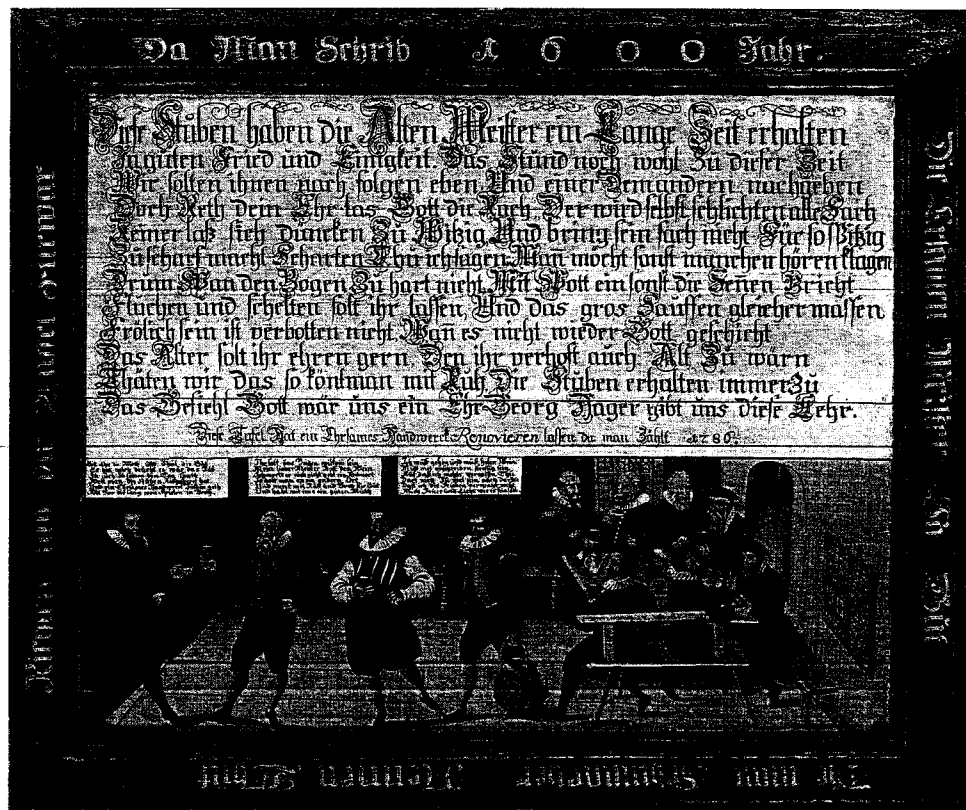
The historiography on guilds is divided into two phases. Nineteenth- and early-twentieth-century historians followed the eighteenth-century French Physiocrat Turgot and the Scottish political economist Adam Smith in portraying premodern crafts as archaic institutions that imposed irrational or self-serving fetters on competitive markets. This early hostility was reinforced with the adoption by the German National Socialist and Italian Fascist regimes of guild-inspired corporatist policies in the 1920s and 1930s. Whereas historians of this period relied on normative and prescriptive sources and emphasized the reasons for the guilds' decline, the social historians who rediscovered the guilds in the 1980s focused instead on the reasons for the craft guilds' extraordinary longevity, and

challenged the effectiveness of craft regulations by examining day-to-day practice. Similarly, economic historians now emphasize the craft guilds' competitive success rather than their weaknesses, although they generally persist in viewing the crafts as self-contained "firms" and pay less attention than social historians to the political, legal, and market context of craft actions.

Recent interpretations suggest that crafts responded to information asymmetries in thin markets with high transaction costs. Craft guilds mediated between members with market power and negotiated with powerful merchants; they supplied members with financial support and cheap credit; they enforced quality standards and fixed prices to reduce information asymmetries, particularly in foreign markets; and they protected members from exploitation by opportunistic urban elites. However, these explanations face two difficulties. First, they fail to consider that craft guilds did not offer the only or the most efficient solution to such problems. Price comparison was achieved by clustering craft shops; quality control was supervised by town authorities and merchant exporters; income volatility was reduced through a combination of religious associations, kinship networks, urban provisioning structures, and state "poor laws"; and credit was widely available through similar formal and informal sources. These and other benefits of membership also fail to explain why crafts enforced compulsory membership.

The second difficulty with these explanations is that none of the preceding features was present universally among premodern craft guilds. The only such feature that was both unique and universal was apprenticeship, whose main purpose was to transmit artisan skills and activities. Enforcement of apprenticeship rules explains most of the known features of craft guilds. Contracts were enforced to impede masters or apprentices from cheating (defaulting). Compulsory craft membership stopped nonmembers from free riding by sharing the benefits of skilled labor without incurring the training costs. Membership fees and fines for misbehavior (except for poaching of apprentices) were kept low, indicating that crafts were concerned with keeping members in rather than out. Quality enforcement, credit provision, welfare support, and other benefits were ways to attract membership and raise the opportunity costs of defection. This was necessary because opportunities for free riding were considerable (most guilds, particularly in larger cities, lacked the administrative and legal resources to police themselves effectively), and because guild jurisdiction did not extend over many church and feudal "freedoms" within the city walls and in the suburbs outside them.

The crafts' role as political and economic cartels is among their most controversial but least researched features. Guild political activities are hard to evaluate



CRAFT GUILD. Sign of the shoemakers' guild of Nuremberg, Germany, 1600. Restored in 1786. (Germanisches Nationalmuseum, Nuremberg, Germany/Scala/Art Resource, NY)

because they were affected by a variety of factors, including the status of independent guild members, the weight of the craft within a town, the competing pressures of merchants and rival guilds, and the balance of power between local and territorial authorities. Nonetheless, the more extreme criticisms appear overstated, for craft privileges were revocable, and few crafts achieved significant and lasting power. Before the eighteenth century, the correlation between craft density and industrial retardation is poor. Urban manufacture was underdeveloped in Castile and southern Italy, where craft guilds were weakest, and was most successful in northern Italy, central Europe, and the Low Countries, where crafts were most numerous and institutionally entrenched.

Similar doubts apply to craft monopolies in product markets. Evidence here is largely restricted to guilds producing for local markets in the twelfth and thirteenth centuries when "official" prices were posted. However, these postings were probably a solution to high price volatility caused by thin markets with few and irregular transactions, and disappeared during the later Middle Ages when product markets became better integrated. Craft monopolies are also more likely to have been exerted over local rather than imported inputs, which were normally

controlled by large-scale merchants, and by supply trades (especially of foodstuffs) rather than by manufacturing ones; but once more there is little hard evidence of such practices. From the fourteenth century on, urban governments became increasingly hostile toward forms of price collusion that might penalize consumers; and after 1500 most public comment on the matter died away, indicating that it was no longer viewed as a significant political issue. Cartel-like actions were in greater evidence in reducing capacity during trade recessions than during prosperity, but restrictions were generally ineffective in the more export-led and dynamic industries.

Evidence that guilds deliberately and systematically stifled innovation is equally ambiguous. The craft master was at the same time an employer, foreman, and skilled workman, a buyer of raw materials and intermediate goods, and a seller of finished products; he thus faced competition across different markets toward which no consistent strategy applied. Masters were limited in the number of apprentices they could employ, but these restrictions were often flaunted, and limits to the number of waged journeymen were far looser than limits on apprentices; such flexibility produced significant differences in firm size and artisan wealth. Craft regulations enforced by

official "searches" were aimed at upholding quality standards by forbidding night work and the use of inferior materials, and left the production process unregulated. The existence of guilds—masons, stonecutters, goldsmiths, woodcutters, and painters—in Renaissance Italy, Germany, and the Low Countries suggests that the guild system did not stifle individual initiative or have a leveling effect on originality.

It is often unclear whether craft opposition to technological innovation was motivated by rent seeking or by a rational assessment of the innovation's value. Late-thirteenth-century cloth makers refused to adopt fulling mills because the early machines damaged better-quality fabrics, but opposition melted away once the mills were improved. As Reinhold Reith has demonstrated, other oft-cited evidence of craft Luddism in early modern central Europe is based on a misreading of the sources. In principle, crafts opposed capital-intensive innovations that devalued investments in current skills and reduced incentives to invest in new ones; in practice, technical choices were dictated as much by political as by economic criteria. Craft guilds generally lacked the authority to stop innovations completely, in part because members pursued conflicting agendas. Opposition to labor-saving innovations was greater among poorer craftsmen than among wealthier artisans, who stood to gain from capital-intensive change. Innovation thus depended on the balance of forces between these groups and on support from the political authorities; although the latter normally sided with the wealthier and more innovative masters, they backed the smaller craftsmen when labor-saving innovations coincided with a major economic downturn. From the seventeenth century on, however, continental European states increasingly allied themselves with merchant exporters, who tended to be technologically conservative in order to protect established foreign markets. In England, by contrast, political support for craft guilds and craft-based production waned after the Civil War (1640–1648), making restrictive legislation more difficult to enforce.

The overall technological contribution of craft guilds appears to have been largely positive. One kind of innovation came from the clustering of artisan shops in towns and "industrial districts," which produced positive organizational and technological externalities. Another came from technological cross-fertilization caused by temporary and permanent migration. Increasingly, after the Protestant Reformation, military and economic competition between states fostered technological diffusion. Artisans from the most technologically advanced cities were attracted by financial and legal inducements, and, if necessary, protection from guild obstruction, although most migrants found themselves in guilds where they could impart their techniques to other skilled workers. Traveling journeymen also were im-

portant carriers of technical innovation although they were less likely to cross major linguistic and cultural boundaries than emigrant artisans. The third and least analyzed source of innovation was the protection (equivalent to a patent) that crafts offered members who invented a technical "secret," in the expectation that other masters would sooner or later pick up any significant breakthroughs.

Craft guilds remained the main manufacturing organization in premodern Europe up to the eighteenth century. They were never seriously challenged by rival industrial organizations such as rural putting-out and centralized factories, and they influenced informal craft associations such as the French *confréries* and the Iberian *hermandades* profoundly. The crafts' final demise occurred by political decrees, in France (1791, after a failed attempt in 1768), Rome (1807), England (1835), Spain (1840), Austria (1859), Italy (1864) and Germany (1869). Whereas legal abolition in England occurred long after the craft guilds' de facto decline, abolition in continental Europe was part of a wider attack by national states on jurisdictional particularism. Couched by reformers as a struggle between modern economic efficiency and premodern communitarian justice, the process established the terms of historical debate up to this day. The question of whether industrial capitalism would have brought about the craft guilds' natural demise or abolition was a politically motivated attack against premodern corporatist separatism has still to be answered satisfactorily; but the fact that the most central element of the premodern craft guild, apprenticeship, has remained an important feature of most modern European societies suggests that the crafts did not die simply of functional obsolescence.

[See also Apprenticeship; Corporatism; Journeymen; and Merchant Guilds.]

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**CREDIT COOPERATIVES.** Credit cooperatives (or cooperative banks) are mutual organizations that provide banking services to their members and others. First formed in the mid-nineteenth century in Europe, cooperatives have spread to most of the world. In some countries very large cooperatives comprise important parts of the financial system. This article pays particular attention to the

origins and development of cooperative credit in Germany because the modern movement arose there, and most of the main issues in cooperative organization are evident in the German system.

Most modern credit cooperatives owe their inspiration to two Germans, Hermann Schulze-Delitzsch (1808–1883) and Friedrich Wilhelm Raiffeisen (1818–1888). In Germany, as elsewhere, credit cooperatives were part of a larger cooperative movement that included consumer cooperatives and purchasing and marketing cooperatives. Schulze-Delitzsch's cooperatives were primarily urban and focused on artisans, handworkers, and small shopkeepers. Raiffeisen's cooperatives were primarily rural and included farmers, farm laborers, and others who lived in small towns and villages. Schulze-Delitzsch saw his movement as serving to develop a middle class, whereas Raiffeisen stressed assistance to the poor; and the membership of their cooperatives reflects this difference. Schulze-Delitzsch and Raiffeisen differed on many details of organizational design such as liability structure, payment of staff, and size of the institution. Over time these organizational differences became less pronounced, and the national organizations merged in the early twentieth century.

Credit cooperatives typically have a structure that allows democratic control over major policy decisions and the selection of leadership. Some cooperatives adhere to a strict policy of one member, one vote; others allow those who have made a greater capital contribution a larger voice. Beyond this basic definition, however, organizational details of cooperatives differ considerably across time and place. Some have restricted their loans to members, but today many do not. Most fund their loans both with shares purchased by members and with deposits from members and nonmembers, but the source of capital varies across institutions. In some places credit cooperatives stress service to particular occupations (such as farmers); in others they strive to serve entire communities. In some countries cooperatives are taxed; others, such as those in the United States, do not pay taxes but in return are limited in their membership and activities.

**Reasons for Credit Cooperatives.** Credit cooperatives have thrived in many economic and social contexts, including some (such as nineteenth-century Germany) that have had highly developed formal banking systems. Just how small institutions such as credit cooperatives can compete with large banks is the implicit question underlying much recent research, on credit markets generally and on credit cooperatives in particular. Most scholars argue that cooperatives are not competing with banks, but are serving a market that for-profit financial intermediaries either ignore or serve only partially. Recent research on the economics of information and contracts in credit markets has shown why cooperatives can thrive while lending to