The Fabric of Society

State intervention, artisan agency, and the performance of textile manufacturing in the medieval Middle East

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1. Introduction

In recent years much scholarly attention has been paid to the role of commercial institutions in the failure of the economies of the late medieval Middle East to keep up with Europe. In the first three centuries after the Arab conquests, the argument goes, international trade in the Islamic world was stimulated by the rise of a vast unified empire that removed trade barriers and by the favourable legal institutions that developed under Islamic law, in particular the arrangements for commercial partnerships and credit. However, in the late Middle Ages increasing political fragmentation was not, as in Europe, compensated for by 'bottom-up' institutions such as urban communes and merchant guilds.[1] In addition, the legal institutions that had been so useful before gradually came to be handicaps. Islamic law did not acknowledge partnerships with a legal standing of their own, able to outlive the individuals who constituted the partnership. In combination with an egalitarian inheritance law this created incentives for keeping partnerships small, which in turn dampened the need for organizational innovations. While commercial institutions in Europe adapted to changing needs, in the Middle East institutional sclerosis hindered further growth.[2]

That institutions may also have contributed to agricultural decline has been demonstrated for late medieval Egypt. Stuart Borsch has shown how landholding structures explain why the performance of Egypt's agrarian economy plummeted after the Black Death, whereas England, visited by the same deadly disease, succesfully recovered.[3] Much less attention, however, has been paid to the possible contribution of institutions in the manufacturing sector. This is actually quite surprising. According to Shatzmiller, early Islamic trade could only exist because it was fed by a productive, diversified, specialized, and market-oriented manufacturing sector.[4] If the early medieval manufacturing sector was as important a driver of growth as Shatzmiller claims, the search for an explanation for stagnation in the late Middle Ages should not be restricted to trade: we should also look at the role of industry. Was manufacturing, in the course of time, also plagued by a framework of unfavourable institutions frozen in place?

For theories that suggest that this is indeed what happened we have to return to a scholar from an earlier generation. According to Eliyahu Ashtor one the main assets of the economies

[1] Bosker, Buringh and Van Zanden, 'From Baghdad to London', 18, 26-27.
[2] Kuran, *Long Divergence*, esp. 63-71 and 88-92; Kuran, 'Why the Middle East', esp. 78-80.
[3] Borsch, *Black Death*.
[4] Shatzmiller, *Labour*, esp. 43-50, 170-172, 200-201; cf. Shatzmiller, 'Misconstrued Link'. Shatzmiller's claim that the manufacturing sector continued to flourish in the late Middle Ages will be discussed below.

of the early medieval Middle East was the freedom of entrepreneurs—merchants and manufacturers—who were not subjected to any kind of state control. This freedom, Ashtor claims, was curtailed under the military regimes that succeeded the Abbasid caliphs and even more so under the Mamluks in fourteenth- and fifteenth-century Egypt. Taxation, state monopolies, and privileges for state-owned production facilities weakened the private sector, which could no longer compete. Investments fell and technological innovation came to a halt; manufacturing could no longer keep up with the West.[5] Ashtor's explanation emphasizes the despotic and exploitative tendencies of Middle Eastern rulers at the expense of entrepreneurial freedom. In this sense it reflects a stereotype that deserves a critical approach. Can the mechanisms described in sweeping terms by Ashtor indeed be identified upon closer examination, or is his interpretation founded on conviction rather than on facts and do we have to look for other explanations?

If so, one likely option has already been mentioned in relation to trade: the absence of bottom-up associations with corporative status. Artisans employed in the large urban textile industries of late medieval Western Europe were usually organized in guilds. In the Middle East, on the other hand, craft guilds appear to have been non-existent until the very end of the Middle Ages, when they emerged in the cities of the Ottoman empire. In fact, until the 1960s the prevailing view, based on an hypothesis advanced by the eminent scholar of Islamic culture Louis Massignon, held that these later Islamic guilds dated back to the early Middle Ages.[6] But around 1970 a systematic review of the sources cited by Massignon led to a very different conclusion. Although there was little doubt that there were informal bonds between craftsmen who lived in the same neighbourhood or shared a common ethnic or religious background, it turned out that no hard proof could be found for the existence of Islamic guilds—in the sense of corporative bodies with a certain degree of autonomy—before the Ottoman era.[7]

The European guilds have long been seen as rigid, conservative institutions that discouraged innovation and hampered progress, but since the 1980s new research has given rise to a re-appraisal. It appears that guilds were not only more flexible than it was previously thought, but also fulfilled several important functions that helped create and maintain an

[5] Ashtor, *Social and Economic History,* 246-248, 308-309.
[6] Massignon, 'Les corps de métiers'; Massignon, 'La futuwwa'; Massignon, 'Islamic Guilds'; cf. Lewis, 'Islamic Guilds', who follows and clarifies Massignon's ideas.
[7] Cahen, 'Y a-t-il eu des corporations'; Stern, 'Constitution of the Islamic City', 36-47; Baer, 'Guilds in Middle Eastern History'. There is a growing body of literature on the Ottoman guilds of the early modern era. For a recent survey outlining themes and approaches, see Hanna, 'Guilds in Recent Historical Scholarship'. A collection of relevant contributions on the subject has been published by Faroqhi and Deguilhem, *Crafts and Craftsmen in the Middle East.*

environment stimulating economic growth. For one, guilds contributed to the development and diffusion of human capital through the regulation of apprenticeship; they also helped to reduce information asymmetries between producers and consumers by providing mechanisms for quality control.[8] It might thus be argued that whereas in Europe the guilds facilitated long-term growth of textile manufacturing, the absence of such institutions prevented the Middle Eastern industries from making similar progress.

The paper studies the development of one industrial sector, export-oriented textile production, in two countries, Iraq and in Egypt. It covers a very long period of time: from the early tenth to the late fifteenth century CE. The performance of this sector may have been affected by a variety of factors, both exogenous and endogenous. The lengthy period under study neutralizes, at least in part, the effects of exogenous shocks such as wars, epidemics and natural disasters. After all, calamities of this type struck medieval Europe as well as the Middle East, but paths of economic development diverged. The paper explores to which extent the organization of export-oriented textile manufacturing in the Middle East may have contributed to the failure of this sector to keep up with the West in the late Middle Ages. It investigates the explanatory value of both theories just mentioned: the contribution of an overbearing role of the state on the one hand and the absence of guilds on the other.

Textile manufacturing has been selected not only because it is a relatively well-documented industrial activity and an important one in terms of the size of the labour force, but also because in textile production state involvement was traditionally strong. If state policies did contribute to industrial decline, this is where we would expect it to be most visible. The focus on export-oriented industries makes it possible, in the absence of reliable quantitative output data, to use an alternative indicator to measure performance: success, or the lack of it, in a competitive international market. Iraq and Egypt have been chosen because together they cover the development of the Middle East from prosperity to stagnation between the tenth and fifteenth centuries quite well. Iraq was not a predominantly industrial country in general, but its textiles—mainly silks—were exported throughout the Islamic world in the eighth and ninth centuries; but from the early tenth century onward, if not earlier, Iraq's textile industries began to decline. Egypt was a very important textile producer: the Egyptian linen industry dominated Middle Eastern markets in the tenth to twelfth centuries. However, at the end of the Middle Ages these industries had lost almost all of their international fame.

[8] It is not possible to do justice to the 'revisionist' literature on the role of guilds in this paper. A seminal paper is Duplessis and Howell, 'Reconsidering the Early Modern Urban Economy'. The description of the three main functions of guilds is derived from Epstein and Prak, 'Introduction: Guilds', 4.

Section 2 first outlines the long-term trends in the performance of the textile export industries. Because of the scarcity of quantitative data, this is done by combining and interpreting qualitative information, with special attention to the shifting balance of the textile trade between East to West. The long-term trends thus reconstructed are then linked to the institutional factors mentioned above. Section 3 discusses the effects of state-managed production in the Middle East on performance, while section 4 explores the possible consequences of the absence of craft guilds.

Obviously this approach cannot answer all questions. The analysis is largely based on inference from indirect evidence: the co-incidence of institutional developments and trends in performance. The details of the mechanisms that linked the first to the second are not systematically researched. This would require an in-depth investigation of the functioning and efficiency of institutional arrangements, preferably in a comparative perspective. However, the available information for the Middle East on important issues such as, for instance, the transfer of skills is so much less detailed than for Europe that options for a meaningful comparison on this level are very much restricted. The paper points out possibilities and impossibilities, probabilities and improbabilities; it thus helps determine the direction of future research.

2. A shifting balance

In the first centuries after the Arab conquests textile industries in the Middle East flourished. Existing woollen and linen industries found new markets, while cotton and silk production, confined to only a few regions in the pre-Islamic era, spread rapidly.[9] Umayyad and Abbasid Iraq was mainly known for its important position in international trade, but the country also produced a variety of high-quality fabrics, mainly silks and cottons. Iraqi silks in particular had a certain fame, and at an early stage at that: literary texts from the late seventh or early eighth century CE refer to silk fabrics and garments from Iraq as desirable commodities. By the tenth century Iraq's three largest cities Baghdad, Basra and Kufa had developed into important centres of export production. Authors of the era praised the various silks manufactured there.[10]

[9] For an overview of the development of the 'old' woollen and linen manufactures and the 'new' cotton and silk industries Lombard, *Les textiles*, 21-104.
[10] Serjeant, 'Islamic Textiles' I, 81-82, 85, 89-91; Muqaddasi, *Best Divisions*, 117.

Notably, some of these authors also recorded the undeniable signs of general economic and demographic decay which by that time had set in. Muqaddasi and Ibn Hawqal for instance both drew attention to the depopulation of Baghdad.[11] But although this must have affected the production capacity of the city's textile industries, these industries were still impressive around the year 1000. In 985 the Buyid emir Simsam al-Dawla tried to introduce a new ten per cent tax on the manufacture of silks and cottons in Baghdad, which was estimated to render about one million dirhams. The total value of the annual production of these fabrics in the city can thus be estimated at the very substantial sum of ten million dirham or about 600,000 dinar.[12]

In the eleventh, twelfth and thirteenth centuries the general economic situation deteriorated rapidly. Invasions, political turmoil and natural disasters took their toll. The urban population of Baghdad and other towns contracted significantly.[13] Textile manufacturing also declined, but the process was gradual. Around 1200 Baghdad still seems to have been an important manufacturing centre, producing large amounts of high-quality textiles for the court.[14] Even in the second half of the fourteenth century merchants from Baghdad and Basra visited Egypt in order to sell textiles made in Iraq.[15] Nonetheless, by the end of the Middle Ages little was left of the former international reputation of Iraq's textile industries.

Egypt was without a doubt a much more important textile producer than Iraq. The cultivation of flax and the manufacturing of linen had a long history in Egypt, a tradition that was continued after the Arab conquest. From the late ninth century onward both flax cultivation and linen production appear to have expanded markedly. During the reign of the Fatimids (tenth to twelfth centuries) Egypt was the main linen producer and exporter of the Muslim world. In the Nile delta in particular linen fabrics of every kind were manufactured in large quantities. The two main production centres were Tinnis and Damietta, but a host of smaller settlements in the region also engaged in textile manufacturing. Linen cloth was also produced in Alexandria, in the Fayyum district, and in a few towns in Upper Egypt.[16]

Tinnis and Damietta, strategically situated in the eastern part of the Nile delta, were destroyed in the early thirteenth century during the Crusader wars. Apparently the linen

[11] Muqaddasi, *Best Divisions*, 109; Ibn Hawqal, *Configuration de la terre* I, 234.
[12] Ashtor, *Social and Economic History*, 151; Serjeant, 'Islamic Textiles' I, 82.
[13] Ashtor, *Social and Economic History*, 217-222, 249-254; for estimates of population decline Adams, *Land behind Baghdad*, 115-116.
[14] Allsen, *Commodity and Exchange*, 33.
[15] Ashtor, *Social and Economic History*, 275.
[16] Serjeant, 'Islamic Textiles' IV, 91-100, 106-109; Lombard, *Les textiles,* 47-50; Wheatley, *Places Where Men Pray Together*, 194-196.

industry in the Tinnis-Damietta district did not recover from the blow: later authors describe the manufactures of not only these two towns, but also of some of the smaller textile centres in the area as a thing of the past. However, the textile industry in Alexandria, at the western tip of the delta, did not suffer the same fate; Alexandria still exported fine linens in the early fourteenth century.[17]

While the Egyptian economy did well enough during the first century of Mamluk rule, the plague epidemics of the second half of the fourteenth century heralded an era of economic decline. In the Alexandria textile industry signs of contraction were clearly visible. According to contemporary Egyptian historians the city harboured 14,000 looms in the late fourteenth century, while in 1434 only 800 were left. Even if the figures as such are open to doubts, they strongly suggest absolute (and not just relative) decline.[18] Alexandrian linen manufacturing was not completely wiped out, as is shown by references to linens made in Alexandria in late fifteenth-century documents, but its prime was over.[19]

To this impressionist picture of the decline of textile industries in the Middle East two more tangible indicators can be added. The first is based on Maya Shatzmiller's collection of occupational terms assembled from a total of 26 medieval sources and modern works from two long periods, the eighth to eleventh and the twelfth to fifteenth centuries. Shatzmiller claims that in the later Middle Ages textile manufacturing in the Islamic world displayed not only stability and continuity, but even growth and an increasing division of labour.[20] While this is no doubt true for some regions, such as Ottoman Anatolia or parts of North Africa, close examination of her figures, however, suggests a rather different conclusion for the Middle East in general.

Shatzmiller's assertion that the textile industry continued to do well rests on the assumption that the greater number of references to occupations in textile manufacturing in the second period (145 against 128 in the first period) indicates a greater share of textile manufacturing in the labour force, while the greater number of unique occupations (90 against 80 in the first period) signals a higher degree of specialization. Both assumptions can be questioned.[21] The fact that Shatzmiller's sources reflect the purpose for which the documents were made rather than actual economic practice in itself does not pose an insurmountable

[17] Serjeant, 'Islamic Textiles' IV, 97-102.
[18] Bosworth, *Historic Cities*, 18; Ashtor, 'Lainages', 671.
[19] Serjeant, 'Islamic Textiles' IV, 103-104.
[20] Shatzmiller, *Labour*, 240; cf. Shatzmiller, 'Misconstrued Link'.
[21] For a critique of Shatzmiller's method see the review by Conrad, 'Review'.

problem: it would still be possible to draw conclusions about an increase of the share of textile manufacturing or the degree of specialization, if the sources for the early period were similar in nature to those for the second period.

But this is not the case. For the later period almost half of all references to occupations in textile manufacturing (71 out of 145) are derived from *hisba* manuals: the manuals for the *muhtasib*, the urban inspector of industry and trade, which naturally pay a great deal of attention to crafts. For the early period only very few of these manuals have been preserved: it is therefore not surprising that the few that have, render only 23 references to textile-related occupations. Shatzmiller's most important source of occupational terms for the early period is the modern study of Hayyim Cohen on the economic background of religious scholars.[22] Even though most scholars came from mercantile families and only a minority were artisans or sons of artisans, this study still provides a total of 51 references to occupations in textile manufacturing. The closest comparison that Shatzmiller uses for the later period is Carl Petry's work on the elite in fifteenth-century Cairo, which is also largely based on biographical information of religious scholars.[23] But although Petry's study contributes a large number of occupational cases to Shatzmiller's database, only eleven of these occupations are related to the textile industry. If anything, this suggests a decline of textile manufacturing in the late Middle Ages rather than growth or even continuity.

A second indicator is the changing position of Islamic textiles on international markets. Luxury textiles from the East had always been valued in Europe. Even in the early Middle Ages, small quantities of precious fabrics, mainly silks, imported from the Middle East, had found their way to a select group of buyers who could afford such luxuries: kings, wealthy noblemen, and high-ranking members of the clergy.[24] Textile imports from the Middle East probably increased in the tenth and eleventh centuries, when Italian merchants, following up on tentative beginnings made in the eighth and ninth centuries, built up an extensive trading network in the Mediterranean. By 1100 merchants from Genoa, Pisa and Venice, frequented the main ports of the Levant, where they purchased a wide range of luxury commodities; high-quality silks, cottons and linens were among them.[25] The conquests of the Crusaders in the Levant provided an additional stimulus. Cottons and silks made by indigenous artisans in occupied territory, or brought in from neighbouring Muslim regions, were transported to

[22] Cohen, 'Economic Background'.
[23] Petry, *Civilian Elite.*
[24] Sabbe, 'L'Importation des tissus orientaux'; McCormick, *Origins*, 719-728.
[25] Lopez, *Commercial revolution*, 63-65; Goldthwaite, *Economy of Renaissance Florence,* 3-5.

Europe from the Frankish ports along the Levantine coast.[26] Nor did the Muslim re-conquest at the end of the thirteenth century put an end to this line of trade. Amidst long lists of spices and raw cotton, the late fourteenth-century Datini documents mention modest quantities of boucassins (cottons), camlets (a rich fabric made of goat's wool and silk) and silks being transported from Syria to ports in Italy, southern France and Catalonia.[27]

In other words, exports of modest quantities of valuable fabrics from the Middle East to Europe were a constant factor. Change came from another quarter: from the twelfth century onwards Europe began to export large quantities of affordable European textiles to the Middle East. Ashtor, while acknowledging that some European cloth was exported to the Middle East even at the time of the Crusades, claims that a dramatic increase took place in the early fifteenth century, when woollens from various European countries, but especially from Italy, were 'dumped' in large quantities and at favourable prices in the markets of Alexandria, Damascus and other cities in the Levant. In addition, linens and luxury fabrics such as silks and velvet were also transported to the east. The indigenous industries, already weakened by the absence of technological innovation, could not compete and dwindled.[28]

But Ashtor's interpretation has been criticized. Objections have largely focused on what happened in the fifteenth century. It has been pointed out, for instance, that prices of European cloth on the Middle Eastern markets were not lower than in Europe and that therefore dumping in the sense of deliberately reducing prices in order to eliminate competition of indigenous industries did not take place.[29] A closer look at the preceding period raises additional doubts. Research in the notarial archives of Genoa has shown that even in the second half of the twelfth century light woollens from northern France and Flanders were shipped from the Italian port town to Sicily, Syria, Alexandria and northern Africa. Although the notarial deeds provide no detailed quantitative information on volumes, they do make it clear that these shipments were not incidental: even at that stage this was a regular and substantial line of trade.[30]

The Genoa records also show that there was one other type of European textile frequently included in these overseas shipments: fustians (cloth with a cotton weft and a linen warp) from Lombardy. This is all the more striking when it is remembered that cotton

[26] Jacoby, 'Economic Function', 174-175, 182.
[27] Ashtor, 'Volume of Levantine Trade', 587-588.
[28] Ashtor, *Social and Economic History*, 307-309; Ashtor, 'Lainages', esp. 667, 671, 673-676, 680-686; Ashtor, 'L'exportation', esp. 305-309, 369-375; cf. Munro, 'South German Silver', 928, who argues that thanks to the voluminous export of textiles Europe's balance of trade deficit in the Levantine trade was relatively modest.
[29] Munro, 'South German Silver', 939.
[30] Krueger, 'Genoese Exportation'; cf. Munro, 'South German Silver', 912-913.

manufacturing was at this stage relatively new in northern Italy and that raw cotton had to be imported. Part of this cotton came from the Middle East; thus a pattern was established that combined westward transports of raw materials with eastward shipments of manufactures.[31] A similar pattern emerged for silk in the fourteenth century, with the development of the Italian silk industry. By the end of that century Italy had become a net exporter of silk fabrics, buying raw silk in the Middle East and offering tissues in return.[32]

Egyptian custom regulations dating from around 1180 confirm the impression. Raw flax and cotton figure prominently on the list of products exported by Italian and other Christian merchants. Luxury textiles are on that list as well; but at the same time Europeans apparently also imported silken, linen and woollen fabrics.[33] It seems, then, that the foundations for Europe's superior performance in textile manufacturing were laid as early as the twelfth century, while in the fourteenth century European textiles already held a prominent place in Middle Eastern markets. Problems in fifteenth-century Egypt no doubt pushed the process even further, but by that time it already had a long history.

3. State domination?

According to Ashtor, in the later Middle Ages state involvement in textile manufacturing became so overbearing that it stifled the private entrepreneurship on which the earlier efflorescence of textile manufacturing had been based. State-owned textile factories or *tiraz* had always been very important, even under the Abbasids and Fatimids. Then, under the military regimes that succeeded them, state monopolies were established and heavy taxes were imposed on private workshops. Subsequently, in Mamluk Egypt, the *tiraz* came to completely dominate the market. They enjoyed privileges, such as access to an abundant supply of raw materials against low prices, which virtually outruled competition by private enterprises. Ultimately, the *tiraz* themselves were ruined by corruption and mismanagement.[34] This section investigates the evidence for this hypothesis by looking critically at the development of two indicators derived from Ashtor's thesis: the share of state workshops in textile manufacturing and the monopolies and taxes that in Ashtor's view were instrumental in repressing the private sector.

[31] Mazzaoui, *Italian Cotton Industry*, 61-64, 87.
[32] Balard, 'Relations économiques', 216-217.
[33] Cahen, 'Douanes et commerce', 227-231.
[34] Ashtor, *Social and Economic History*, 150, 247-248, 308-309.

At first glance, the *tiraz* do indeed appear to be a distinguishing characteristic of the Islamic Middle East: institutions like this were unknown in late medieval Europe. The *tiraz* were not an Arab invention. The Byzantine and Sasanian rulers of the pre-Islamic era had levied part of the taxes owed by the textile-producing provinces of their realm in cloth produced in state-dominated workshops. It seems that the Umayyads adopted this system and gradually extended it. By the late eighth century the *tiraz* system was fully operational: state workshops supplying the court with large quantities of valuable textiles existed in all textile-producing regions in the empire. After the disintegration of the Abbasid empire the *tiraz*-system was adopted by the rulers of the successor states.[35]

A suitable starting point for an assessment of the development of the role of the *tiraz* over time is their position in Iraq during the heyday of the Abbasid caliphate and in Egypt during the prime of Fatimid rule. The impression arising from Ashtor's work is that in these two eras of efflorescence state workshops had a considerable share in textile manufacturing in terms of output and employment, but did not yet completely dominate the scene, as they came to do in Mamluk Egypt. Shatzmiller has shed doubt on this assumption by pointing out that the admiration of contemporary authors for the voluminous stocks of beautiful fabrics in the royal store rooms cannot be taken as a reflection of the contribution of state workshops to total textile production. However, she has not ventured a quantitative assessment.[36] Because of the scarcity of data this is indeed a difficult task, but for Abbasid Baghdad we have a few snippets of information that suggest at least an order of magnitude.

Because later generations saw the government of caliph al-Mu'tadid (892-902) as exemplary, the eleventh-century historian Hilal al-Sabi included a copy of the expenditure budget of the court of al-Mu'tadid in his *Book of Vizirs.* It shows that about 3,000 dinar per month was spent on the maintenance of the craftsmen employed in the royal store rooms and workshops in Baghdad. These included artisans in professions not related to textiles, such as goldsmiths, carpenters, perfume makers, cobblers, and armourers, but also tailors, fullers, menders, furriers, embroiderers, upholsterers and makers of trimmings.[37] Notably, weavers are not mentioned; the palace workshop seems to have focused on finishing, tailoring, decorating and repairing garments and furnishings. The textiles themselves were probably commanded from *tiraz* in other parts of the empire or purchased from private producers in

[35] Serjeant, 'Islamic Textiles' I, 62-63, 69.
[36] Shatzmiller, *Labour*, 244.
[37] Busse, 'Hofbudget', 11-12, 24 (item 13); cf. Serjeant, 'Islamic Textiles' I, 73.

Iraq: another post in the budget mentions the expenses for the store rooms of clothing and tapestry, which include the costs of linen for tents, brocades and curtains.[38]

The budget mentions that the artisans in the royal workshop were paid every 50 days. The term of payment was an indication of rank: the highest court functionaries were paid every 30 days, the humblest every 120 days. With their 50-day payment term the artisans at the workshop ranked at the same level as another group mentioned in the budget: the newly arrived Turkish *ghilman*, who were to be trained as military men. These *ghilman* received an initial monthly allowance of 5 dinar for the young and 10 dinar for the more experienced. If the artisans in the workshops received the same allowance, the monthly budget of 3,000 dinar paid for the services of 600 workers at most.[39] Admittedly, this level of remuneration is high in comparison to the average wage of two dinar per month for craftsmen at this time, but the workers in the royal workshops were no doubt highly qualified specialists and may well have been rewarded accordingly.[40] Even if they should have been paid at standard artisan wage levels, the budget would have covered the wages of no more than about 1500 artisans. Considering the wide range of crafts represented in the workshop, there can hardly have been more than a few hundred of them employed in textiles.

The total number of people engaged in textile manufacturing in Baghdad was certainly much larger. According to Claude Cahen there were thousands of textile workers in the city in the late tenth century.[41] Cahen's statement is probably based on the tax data mentioned earlier, which indicate that at that time the value of the silks and cottons annually produced in Baghdad was about 600,000 dinar. Even if we assume that no more than 25% of this sum was spent on labour costs and that all workers were paid at rates customary for skilled craftsmen, there would have been at least 4,000 people employed in silk and cotton manufacturing in Baghdad at the end of the tenth century.[42] Around 900, when the population of Baghdad was at its peak, the number must have been larger still.

In short, both the focus on finishing and embellishing instead of weaving and the scarce information on the number of artisans employed suggest that the palace workshop in Baghdad constituted only a small part of total textile manufacturing in that city. In terms of

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[38] Busse, 'Hofbudget', 22-23 (item 10).
[39] Busse, 'Hofbudget', 24 (item 12), 31-32; on the *ghilman* of al-Mu'tadid, cf. Kennedy, *Armies of the Caliphs,* 151-152, 156-159. I am grateful to Maaike van Berkel for her help with the interpretation of al-Sabi's text.
[40] For the average monthly wage for skilled craftsmen in early tenth-century Iraq: Ashtor, *Social and Economic History,* 154.
[41] Cahen, *Der Islam*, 168.
[42] The estimate of 25% is based on an estimate for silk production in Florence around 1500 (Dini, 'L'industria serica', 113). For cotton the share was probably higher because the raw material was cheaper. The average wage for skilled craftsmen in early eleventh-century Iraq was about 3 dinar (Ashtor, *Histoire des prix*, 112-113).

employment and output volume the private sector must have been far more important. Moreover, with the possible exception of Samarra during the years when this town was the location of the Abbasid court, there seem to have been no state workshops elsewhere in Iraq.[43]

This in itself is not enough to reject Ashtor's thesis, which after all focuses mainly on the supposed strenghtening of state domination under the military regimes that succeeded the Abbasids. However, there is very little evidence that state-owned production actually increased, or, for that matter, that state monopolies were established. Admittedly, the Buyid emir Adud al-Dawla (d. 983) is reported to have founded a town in Fars (south-western Iran) and to have "transferred to the city the woolworkers, the silkmakers, the brocade manufacturers, so that all *barrakan* [a fine cloth] is made there today". But this was apparently not a great success: in 985 the town was already in ruins.[44] In fact, Ashtor himself states that in the late tenth century the private industry in Fars expanded at the expense of the state sector: some of the earlier state workshops had been farmed out or sold to wealthy businessmen.[45] In Seljuq Iraq the production of luxury textiles such as silks was still a free enterprise.[46]

Evidence for a devastating effect of taxes on production is equally slight. Significantly, the attempt of Adud al-Dawla's successor Simsam al-Dawla to introduce a new tax on the manufacture of silks and cottons in Baghdad triggered fierce protests. People gathered at the great mosque and disturbed Friday worshipping. Under the threat of a popular rising the plans were withdraw; temporarily, as it turned out, for thirteen years later they were re-introduced. New riots broke out, but although this led to a modification—the tax was to be levied on silks only—remaining protests were crushed and an organization to collect the tax was set up. However, the measure was not long-lived; it was revoked afterwards.[47]

There is another reason why it is doubtful if the Buyids or Seljuqs can at all be held accountable for the demise of Iraq's textile industries. In Iraq demographic and economic contraction had already set in by the early tenth century, when the Abbasids were still reigning. In fact, diminishing returns of the land tax indicate that the first signs of a general decline were already present in the ninth and possibly even the eighth century. Problems

[43] Serjeant, 'Islamic Textiles' I, 72-73.
[44] Muqaddasi, *Best Divisions,* 381-382.
[45] Ashtor, *Social and Economic History,* 151; however, the French translation of Ibn Hawqal's work does not support this conclusion: it refers to the state workshops in Fars in the present tense (Ibn Hawqal, *Configuration de la terre* II, 293).
[46] Shatzmiller, *Labour*, 244.
[47] Amedroz and Margoliouth, *Eclipse* VI, 119-120, 361-362; Ben Abdallah, *De l'iqta,* 166-167; Serjeant, 'Islamic Textiles' I, 82; Cahen, 'Y a-t-il eu des corporations', 57.

probably began in the countryside and did not affect the cities until later.[48] The roots of the problems in rural Iraq and their ultimate effect on the economy at large need not be discussed in detail here. It suffices to conclude that the resulting general economic and demographic contraction provides a more logical explanation for the ultimate decline of Iraq's textile industries than the organization of these industries.

It might be argued that Iraq is not the best of examples: it was after all not a major textile producer. Egypt, on the other hand, most certainly was. Here state workshops probably did have a more prominent role than in Iraq. Many of the Egyptian *tiraz* seem to have produced both for the court and for the market. A description of the *tiraz* system by the early thirteenth-century historian and government functionary Ibn Mammati illustrates how the two were combined. Ibn Mammati described the *tiraz* not as a production facility, but as a government service with an inspector, an overseer, a controller and two accountants. When the court was in need of a certain type of fabric, an order was sent to one of the state workshops, together with the money and the gold thread required for the production. When the cloth was finished, it was delivered to the palace, where the officials checked it against the orders.[49] It is easy to see how this procedure left room for production for the market: when a workshop was not working on a commission from the court, orders from others could be taken on.

This, however, was not a new situation; it probably already existed in the tenth century. This can be concluded from a comment by the geographer Ibn Hawqal. According to Ibn Hawqal the managers of the workshops in the Fayyum were state employees, but besides orders from the sultan and his functionaries they also received commissions from merchants from "all corners of the earth".[50]

Nevertheless, there also appear to have been workshops that mainly or exclusively produced for the court. The Egyptian historian al-Maqrizi mentions several state-managed production facilities in Fatimid Cairo: a 'house of brocades' where brocades and silks were woven, a 'wardrobe of robes' where garments were made for distribution among the servants and dependants of the caliph, an upholstery and furnishing store where the caliph sometimes visited to watch the progress of the work, and a tent store where at a certain time 150 craftsmen were at work on a luxurious and very large tent for the caliph. Notably, although al-Maqrizi wrote in the early fifteenth century, he described the situation in the twelfth century,

[48] Van Bavel, Campopiano and Dijkman, 'Land, Lease and Labour in Iraq'.
[49] Serjeant, 'Islamic Textiles' IV, 104 (quoting al-Mammati, *Kitab Qawanin al-Dawanin*).
[50] Ibn Hawqal, *Configuration de la terre* I, 157.

making use of twelfth-century reports. Apparently the state workshops in Cairo he described already existed at that stage. Al-Maqrizi also noted that the budget spent by the Fatimids on gold (probably gold thread) for the *tiraz* doubled from 31,000 to 62,000 dinar annually in the last decades of the eleventh and the first decades of the twelfth centuries, which suggests that at that stage an expansion of state-controlled production took place.[51]

However, there is nothing that signals a further increase of the role of the state in the Ayyubid or Mamluk eras; in fact a reduction is much more likely. The *tiraz* in the Tinnis and Damietta district had probably ceased to exist with the destruction of the two towns in the early thirteenth century.[52] The *tiraz* in Alexandria was still in existence around 1370: there is a report of a visit by the sultan, who was intrigued and amused by the intricacies of the weaving process.[53] However, according to Ibn Khaldun the system of state workshops had at this stage all but disappeared; even in Egypt the court relied on the services of independent craftsmen. This is moreover in keeping with a remark by al-Maqrizi, who mentioned that in his own time the court bought large amounts of clothing at a busy market in Cairo.[54]

Information on taxes is inconclusive. Al-Maqrizi mentions the introduction of a stamp-tax (called this way because the tax collector stamped the finished products with a seal) on fine linen and brocades by Saladin, the founder of the Ayyubid dynasty.[55] However, he also gives a list of similar taxes during the Fatimid reign, when virtually all industrial activities were taxed. According to Goitein these taxes must have been moderate, because few references to them were found in letters or contracts; [56] but this goes for the Ayyubid era as well. The Ayyubids certainly levied customs on the export of many commodities, including luxury textiles, but again this was not new: the customs regulations from the early years Saladin's reign that provide this information largely go back to the Fatimid era.[57] During the Mamluk era there were clearly episodes marked by requisitioning and arbitrary confiscations, which also hit the manufacturing of and trade in textiles[58] (186-193). But this too was not news: as early as the tenth century Ibn Hawqal reported that the linen industry of Tinnis suffered from the "vexatious impositions, exactions and continued severity of the workers" of vizir Abu 'l-Faradj ibn Killis.[59]

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[51] Serjeant, 'Islamic Textiles' IV, 104-105, 110-113 (quoting al-Maqrizi, *Khitat*).
[52] Ashtor, *Social and Economic History*, 246.
[53] Hassan and Hill, *Islamic Technology,* 188-189 (quoting al-Nuwairi).
[54] Ibh Khaldun, *Livre des exemples*, 583-584.
[55] Serjeant, 'Islamic Textiles' IV, 97 (quoting al-Maqrizi, *Khitat)*
[56] Goitein, *Mediterranean Society I*, 116.
[57] Cahen, 'Douanes et commerce', esp. 220, 227.
[58] Labib, *Handelsgeschichte Ägyptens*, 186-193.
[59] Serjeant, 'Islamic Textiles' IV, 94.

With regard to monopolies: there was certainly no state monopoly on the ubiquitous flax on which the Egyptian linen industry was based. Around 1200 the Egyptian state did have monopolies on two minerals won in Egypt: natron, used in bleaching, and alum, for the fixation of dyes. However the alum monopoly was not late medieval: it had been introduced at the end of the ninth century. The origins of the natron monopoly are not clear, but we do know that in the time of al-Maqrizi it had fallen into disuse.[60]

In summary, while Ashtor is right that in late medieval Egypt the role of the state in textile production was important, his dating is inaccurate: state control was already prominent in the Fatimid era, usually regarded as the prime of Egyptian linen production. Notably, it was at the end of the Fatimid era that trade exports from Europe to the Middle East began their rapid expansion. However, in the Ayyubid and Mamluk eras the role of state workshops seems to have declined rather than increased and monopolies were abandoned. That suggests that the demise of Egypt's textile industries in the late Middle Ages cannot be attributed to state domination alone. In the next section an alternative, or at least additional, explanatory factor is explored: the absence of an equivalent to the European artisan guilds.

4. Skills transfer and quality control

Between the tenth and thirteenth centuries, exactly at the time when the region began its ascent to economic prominence, Western Europe witnessed a proliferation of bottom-up, self-governing bodies for collective action with a considerable degree of autonomy. Among them were the craft guilds that according to recent research contributed to a climate inducive to industrial innovation and economic growth in a number of ways. Amongst others, guilds had an important task in the transfer of skills from one generation to the next through the regulation of apprenticeship. Secondly, their involvement in setting and maintaining quality standards reduced information asymmetries between producers and consumers. This section investigates how, in the absence of guilds, the transfer of skills and quality control were organized in the textile industries of the Middle East and explores the possible consequences of this difference between East and West for the diverging performance of the textile industries in the two regions.

[60] Serjeant, 'Islamic Textiles' IV, 115-117 (quoting al-Mammati, *Kitab Qawanin al-Dawanin*).

In the literature the term 'factory' is frequently employed to describe the textile manufactories—both state and private—in the medieval Middle East. Serjeant and Ashtor use it consistently, and they are certainly not the only ones.[61] The term evokes the image of a large-scale production facility, gathering many weavers, dyers, embroiderers and other textile workers under one roof. This image is misleading. Putting-out systems were probably common. As Shatzmiller has shown, spinning, for instance, was often carried out by women working in their own homes. Sometimes the spinners were commissioned by a merchant or a tax farmer to deliver a certain quantity of yarn.[62] In other cases they seem to have worked for their own account, buying raw materials themselves and selling their yarn in an open market.[63]

Ashtor discusses putting-out as a feature of textile production in just a few regions: Egypt, Khuzistan and Fars.[64] However, it was probably also common practice in Iraq. In the tenth century commercial textile manufacturing had apparently spread out from the urban production centres into the surrounding districts.[65] Putting-out was not restricted to the countryside: it must also have been common in the cities of Iraq. The protests against the new tax on the manufacture of silks and cottons in Baghdad introduced in the late tenth century were initiated by the people of the Attabiya quarter. This quarter was a centre of silk production: it was where the Attabi silks, one of Baghdad's primary export product, were made. The fact that the people of this quarter took the lead in the protests shows that small producers were involved in the manufacture of a commodity traded by international merchants.[66]

For Egypt more detailed information is available. A tenth- or eleventh-century tax record from the town Bahnasa for instance gives a list of persons in possession of a weaving loom. Most of the thirteen weavers on the list had only one loom, some had two or three. The list thus demonstrates that the weavers worked alone or with their family and that they owned their own equipment.[67] A collection of papyri of the Banu 'Abd al-Mu'min, a family of merchants in the Fayyum district in the ninth century, show that the family regularly commissioned textiles from a number of local weavers, which were then marketed through

[61] E.g. Liu, *Silk and Religion*, 141-153; Wheatley, *Places Where Men Pray Together*, 142-143, 147-149, 194-196.
[62] Ashtor, *Social and Economic History*, 150; Shatzmiller, *Labour*, 357-359.
[63] Ben Abdallah, *De l'iqta*, 78.
[64] Ashtor, *Social and Economic History*, 150.
[65] Serjeant, 'Islamic Textiles' I, 86.
[66] Amedroz and Margoliouth, *Eclipse* VI 119-120, 361-362; Ben Abdallah, *De l'iqta*, *L'iqta,* 166-167; Serjeant, 'Islamic Textiles' I, 82; Cahen, 'Y a-t-il eu des corporations', 57.
[67] Grohmann, *Arabic Papyri VI*, nr. 387.

the family's agent in Fustat. Contracts of the family with the weavers take the shape of obligations: each contract states that the weaver has received payment for a future delivery of a certain number of linen cloths, specifying the time of delivery (often one piece per week) and the type and dimensions of the cloth to be produced. The contracts do not mention a transfer of raw materials from merchant to weaver.[68] The weavers probably either grew flax themselves or they obtained it at the local market. This means that here we are looking at a 'buying-up system': producers acquired their own raw materials, but for the sale of their products they depended on merchants.

Putting-out and buying-up systems dominated by merchant-entrepreneurs were also common in late medieval Europe.[69] Unskilled and semi-skilled labour, especially in the countryside, was often organized in this way. Linen manufacturing in late fourteenth and fifteenth-century Flanders, for instance was largely based on a buying-up system. Spinning and weaving was done in the countryside by peasant families who either grew their own flax or purchased it. The fabrics they made were bought by merchants, who had the linens bleached in town and subsequently channelled them to markets at home and abroad. Because these merchants, supported by trade privileges, completely controlled the finishing and marketing stages, the result was a system of 'exploitation through trade'.[70]

The role of the guilds was largely limited to skilled, urban labour. This does not mean that in the cities putting-out was absent or that exploitation of skilled artisans did not occur. In Italy textile guilds existed in every town, but nevertheless textile manufacturing was usually dominated by entrepreneurs. The Florentine wool industry presents a striking example. The wool guild, the *Arte della Lana,* was not an association of workers: it united the *lanaioli*, the wealthy and powerful drapers who organized and financed the production process, employing weavers and fullers through a system of putting-out. These weavers and fullers could not join the guild, nor were they allowed to install guilds of their own. The *Arte della Lana* set their wages and issued the regulations they were to follow; it also saw to the enforcement of these regulations.[71] In the late medieval woollen industries of the towns in the southern Low Countries skilled artisans had a stronger position. All were guild members; but there were still clear distinctions within the guild. The leading functions in the guild were fulfilled by the

[68] Ragib, *Marchands d'étoffes*, 6-29.
[69] For a survey, see Holbach, *Frühformen von Verlag*, 47 ff.
[70] Sabbe, *Belgische vlasnijverheid,* 199-203, 212-213, 230-243; Van Bavel, 'Early proto-industrialization', 1145-1147.
[71] Goldthwaite, *Economy of Renaissance Florence*, 298-299, 326-327.

most successful and affluent master artisans. These men often acted as entrepreneurs, delegating tasks to smaller masters through a system of subcontracting.[72] Moreover, the unskilled labour involved in the preparatory stages—carding, combing, spinning—usually took place in the countryside through a putting-out system.

Both in the southern Low Countries and in northern Italy guild structures thus co-existed with putting-out and buying-up systems. Although the relationship between the two differed in significant ways, in both cases guild involvement was most intense in the phases of production where skills and quality standards mattered most. Guilds organized training through a system of apprenticeship; and they helped reduce information asymmetries between producers and consumers through systems of branding and quality control. Hamdani refers to the first of these two issues in his plea to take the role of informal workers's associations in the Islamic world in consideration. He argues that the crafts must have known some sort of organizational principle, "if only for training and the continuity of craftsmanship".[73] This is indeed a intriguing issue: surprisingly little is known about the transfer of artisan skills in the Islamic world.[74] The assumption that sons were often taught by their fathers or other family members is no doubt valid, but does not answer all questions.

In Europe training in the family was supplemented by two other, complementary mechanisms. The first of these two was the apprenticeship contract.[75] Sources from the Roman era demonstrate that before the arrival of Islam apprenticeship contracts were common in Egypt as well.[76] For the Islamic era, however, extant contracts are very scarce. The Geniza collection renders a few examples, one of which concerns a boy who is apprenticed by his father to a weaver in order to learn the craft.[77] However, the Geniza documents bear on to the Jewish community in Cairo; and although it is generally assumed that on most issues this community did not differ much from its Islamic neighbours, the apparent absence of references to Islamic apprenticeship contracts suggests that the transfer of skills may have been an exception.

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[72] Lis and Soly, 'Subcontracting', esp. 84-88, 100-101; Holbach, *Frühformen von Verlag*, 60-68; Van Bavel, 'Early proto-industrialization', 1147.
[73] Hamdani, 'Rasa'il Ikhwan al-Safa' and the Controversy', 167.
[74] Shatzmiller, *Labour*, 66.
[75] Epstein, *Wage Labor*, 66-67, 103-111.
[76] E.g. Forselv, 'Registration of an apprentice', and the literature cited there; more examples can be found in APIS (Advanced Papyrological Information System, http://www.columbia.edu/cu/lweb/projects/digital/apis/). Apprenticeship contracts also existed in the Neo-Babylonian and Achaemenid empires (San Nicolò, *Der neubabylonische Lehrvertrag*; Weisberg, *Guild Structure*, 99-101).
[77] ENA NS 2, II, 41. Ed. Goitein, typed texts (http://gravitas.princeton.edu/tg/tt/).

The second mechanism that in Europe structured the transfer of skills were the guilds. In fact, S.R. Epstein has argued that the single most important reason for the existence of guilds in late medieval Europe was their contribution to the development and diffusion of human capital. Guilds were able to fulfil this role through an apprenticeship system that provided an answer to the externalities involved in the training of youngsters. Masters were only prepared to invest time and energy in training if they could be certain that apprentices stayed on long enough to make the investment worthwhile. Apprentices wanted to be sure their masters gave them a solid training completed by a qualification that allowed them to make a living in their profession. Through regulation and formal and informal forms of disciplining, the guild apprenticeship system was able to provide these guarantees.[78] It is not clear if in the late medieval Middle East similar guarantees were supplied by other mechanisms.

We are slightly better informed about the institutions available in the Islamic world for that other important function of the guilds in Europe, the reduction of information asymmetries between producers and consumers. European guilds contributed to this goal in more than one way. Important were the frequent workshop inspections ('searches') in every stage of the production process. Guild officials not just inspected the finished products, but also raw materials, implements and procedures. Members who were caught making or selling defective products were punished. In export-oriented industries, with textiles as a prime example, this was often complemented by branding. Fabrics were given distinctive characteristics, such as a special weave or colour, which identified them to potential buyers as products made by a member of a specific guild. In addition, as a token that quality standards had been met, a stamp or seal could be attached to the fabric.[79]

In Middle Eastern textile manufacturing the phenomenon of sealing was not completely unknown, but examples seem to be very scarce. Ibn al-Balkhi, writing in the early twelfth century, mentioned that such a system had existed in the town of Kazerun in Fars. There the bales of linen cloth produced by the weavers on the orders of the emir's treasury were inspected by an overseer and prized and stamped by brokers in the service of the treasury. The bales were then sold to foreign merchants. Elsewhere the bales could be sold without being opened and examined, since the stamp guaranteed the quality. However, by the time al-Balkhi wrote, this system no longer functioned. Despite the stamp the cloth was often of inferior quality and merchants no longer wanted to buy it.[80] Furthermore, it is not clear if the Kazerun

[78] Epstein, 'Craft Guilds'.
[79] Richardson, 'Brand Names'.
[80] Le Strange, 'Description of the Province of Fars', 336-337.

branding system was also used elsewhere: other references to stamps in the sources appear to be related exclusively to taxation purposes, not to quality control.[81]

Regulation and supervision of urban manufacturing by the *muhtasib*, on the other hand, was standard practice in the Islamic world. Textile manufacturing was no exception. *Hisba* manuals provide examples of the kind of regulations imposed on craftsmen employed in textile-related occupations. They prescribe, for instance, the use of certain dyestuffs and forbid others because the colour does not hold, prohibit pounding by the bleachers because it damages the cloth, and states that yarn may not be sold in balls because the spinsters might put in stones or other objects to increase the weight.[82] To European eyes this type of regulation looks familiar. Rules very much like these can also be found in many urban by-laws and guild statutes in north-western Europe.

But was enforcement of these rules by the *muhtasib* an alternative for the intensive, continuous inspections in every stage of the production process as organized by the European guilds? To be sure, the *muhtasib* was assisted in his supervisory duties by a number of *urafa* (sg. *arif*). An *arif* was an experienced craftsman, appointed by the authorities to deal with any conflicts between the craftsmen and supervise their adherence to the rules prescribed by the *muhtasib* for the craft.[83] It has been argued that the *arif,* because he was appointed by the authorities, only served as an instrument of government policing: he represented, in other words, a top-down and not a bottom-up construction.[84] That is probably too harsh a judgment. The *arif* must have enjoyed a certain freedom in his supervisory tasks and especially in his role as an adjudicator in conflicts; and as Cahen remarks, it is hard to imagine that the authorities would have appointed an *arif* who did not enjoy the respect of his fellow craftsmen.[85] In practice, the difference between a guild official in Europe and an *arif* in the Middle East was therefore probably not as great as the distinction in formal status suggests.

There was, however, another difference. In Europe, the role of guilds in quality control was usually supported by the local authorities, who had a clear interest in the matter. In some cases, as in the southern Low Countries, this was because the textile guilds were formally represented in the town government. Elsewhere the local government was dominated by

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[81] Serjeant, 'Islamic Textiles' I, 82; IV, 95.
[82] Lévi-Provençal, *Séville musulmane* nos. 161, 163, 199; for more examples: Serjeant, 'Islamic Textiles' V, 63-65.
[83] Goitein, *Mediterranean Society I*, 84 ; Sabari, *Mouvements populaires*, 30-31; Lévi-Provençal, *Séville musulmane*, nos. 44, 91-93, 120, 187. Levi-Provençal translates *amin* (the term used in Spain instead of *arif)* as "prud'homme de la corporation" but at the same time states that the manual does not mention guilds (xxi-xxvii).
[84] Stern, 'Constitution of the Islamic City', 43-44; Baer, 'Guilds in Middle Eastern History', 13-16.
[85] Cahen, 'Y a-t-il eu des corporations', 60; cf. Hamdani, 'Rasa'il Ikhwan al-Safa' and the Controversy', 162-164.

merchants, as in the textile towns of late medieval Holland.[86] But commercial and industrial interests coincided when it came to the reputation of a town's products on the international market: the competitive position of the local textiles benefited significantly from reliable quality guarantees. The sealing of cloth was thus very often the responsibility of the urban government, even if the execution might be delegated to a guild.[87]

Can a superior organization of quality control and the transfer of skills help to explain why European textile industries gradually came to outperform their Middle Eastern counterparts in the late Middle Ages? For the time being this remains an hypothesis which needs to be substantiated in the future. It does, however, receive some support from the chronology of events.

In Italy textile guilds with corporative status appeared on the scene in the beginning of the thirteenth century: the first references, to the wool guild in Florence and the cotton guild in Verona, date from 1212 and 1214. By that time both were probably well established.[88] In the southern Low Countries most guilds were not acknowledged as self-governing institutions with legal status until the violent uprisings of the late thirteenth or early fourteenth century. [89] However, informal associations of craftsmen, often in the form of religious confraternities, did emerge at an earlier stage. The confraternity of the shearers in Arras is a good case in point. An ordinance for this confraternity dating from 1236 makes it clear that the shearers were subjected to control by the ruling elite of drapers and merchants, but it also demonstrates the existence of a set of rules—probably based on existing practice—for the transfer of skills and for quality control. Terms and payment for apprenticeship are specified, and it is, for instance, stated that cutting always has to be done by a master and a journeyman together, "for nobody can measure well on his own".[90] Confraternities of craftsmen like this probably predate the thirteenth century: around 1170 Arras had a confraternity in which the tailors and cobblers participated.[91]

The emergence of artisan associations in major textile-producing regions in the late twelfth and early thirteenth centuries thus coincided with the first advances of textiles from these regions on Middle Eastern markets. Notably, at this stage not all of these associations enjoyed corporative status. This confirms the notion that not so much incorporation of

[86] Kaptein, *Hollandse textielnijverheid*, 148-150.
[87] [PM: Egan and Endrei and Egan, 'Sealing of Cloth'?]
[88] Goldthwaite, *Economy of Renaissance Florence*, 269; Mazzaoui, *Italian Cotton Industry,* 107.
[89] Wyffels, *Oorsprong der ambachten,* esp. 85-97.
[90] Espinas and Pirenne, *Recueil de documents* I, 219-223.
[91] Verhulst, *Rise of Cities*, 131; Delmaire, *Diocèse d'Arras,* 380.

craftsmen's associations *per se*, but rather the combination of self-organization of craftsmen backed up by the commercial interests of governing urban elites may have given European textile manufacturing an advance over Middle Eastern competitors. Hard proof awaits further research, but the impression that the success of European textile industries owed at least something to the textile guilds, in combination with urban autonomy, is hard to resist.

5. Conclusions

This paper set out to throw more light on an important development in the histories of Europe and the Middle East: the divergence of the industrial performance of the two regions that took place in the Middle Ages. In export-oriented textile manufacturing the first signs of this divergence became visible in the second half of the twelfth century, when European textiles first gained a foothold on Mediterranean markets; in the course of the late Middle Ages the competitive advantage of the European products gradually increased. The paper explored the possible contribution of two institutional elements to the early success of export-oriented textile manufacturing in the Middle East and its later failure to keep up with the West: the prominent position of the state and the absence of craft guilds.

The decline of textile manufacturing in tenth-century Iraq appears to have little to do with a growing dominance of the state. In terms of employment and output state workshops were of minor importance under the reign of the Abbasids and the evidence for an increase of the role of the state under the Buyids and Seljuqs is but slight. It is more likely that textile manufacturing simply followed the downward demographic and economic trend that by that time had set in. But then, Iraq was not primarily a manufacturing country. Egypt was. In Egypt there are more indications for state domination in textile manufacturing. State workshops were more numerous and produced also for the market; the trade in natron and alum, used in bleaching and dying, was monopolized by the state; and taxes were levied on production and export of textiles. This situation, however, was not, as claimed by Ashtor, a development of the Ayyubid and Mamluk eras, but dates back to the Fatimid era, when the Egyptian linen industry was at its peak. If anything, state involvement appears to have declined afterwards instead of increased; it can therefore hardly be blamed for the later decline of Egypt's textile industries.

By the second half of the twelfth century, European textiles first began to make inroads on Middle Eastern markets. Around the same time, in the European textile towns associations

of craftsmen in textile-related professions began to emerge. The connection suggested by the chronology is supported by the fact that early thirteenth-century documents testify to the role of these associations in training youngsters and maintaining the quality of work. By fulfilling these functions artisan associations may have contributed to the rapid expansion of the European textile industries at this early stage. That not all of them were, at the time, fully incorporated is remarkable. It suggests that, in contrast to a cherished paradigm among scholars of guild history, it was not so much corporative status by itself, but rather the combination of artisan self-organization and merchant rule over the towns that gave European textile manufacturing a competitive edge. In this sense Hamdani's plea to pay more attention to informal artisan associations in the Middle East acquires a new perspective: perhaps we should look in more detail at the contexts in which artisan associations, formal or informal, functioned in Europe and in the Middle East, rather than at their official status.

Obviously this paper leaves many questions unanswered. It has investigated the organization of textile manufacturing in the Middle East and its performance, but it has not systematically analyzed how the first affected the second; it also has not systematically weighed the role of institutional versus non-institutional factors. For the Middle East the source material unfortunately restricts possibilities for such an analysis. However, the sources that do exist deserve more detailed study.

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