

Crafts in divided Ottoman-era Hungary

On 29 August 1526, near Mohács, the Hungarian royal army was overpowered by a numerically superior Ottoman force. Louis II and many dignitaries of the kingdom, secular and ecclesiastical, were lost. The country became embroiled in a civil war. In 1526 the divided Hungarian estates elected two kings: Archduke Ferdinand Habsburg of Austria (King of Hungary and Bohemia: 1526–1564, Holy Roman Emperor 1556–1564) and John Szapolyai (1526–1540). The wars between them further weakened the kingdom, and in 1541, Sultan Suleyman took Buda Castle and imposed Ottoman rule on the central part of Hungary. The western and northern part of the Kingdom of Hungary came under the control of Ferdinand I and his successors, and Transylvania became a principality, paying tribute to the Ottomans but retaining its internal autonomy (its diet sat usually twice a year and passed its own laws, and there was freedom of religion). Hungary thus divided into three parts: the Kingdom of Hungary under the Habsburg kings, the Principality of Transylvania, and the lands occupied by the Ottoman Empire.

Already a vulnerable point of the Hungarian economy in the Middle Ages, industry actually went into decline in the early modern age, the same time that it was on the rise in the rest of Europe. The stagnation of industry, and of towns, was due to several factors. Prime among them was Hungary's place in the international division of labour. Imports of foreign manufactures rose, putting pressure on what had already been undeveloped local industries (Makkai 1986: 1013–1016) (Pálffy 2009: 149–159). Foreign competition, such high saleable textiles im-



Fig. 215 Waffle-iron with form of two-headed eagle, 16th century (Hungarian National Museum, Budapest)

Fig. 216 Map of Hungary divided into three parts, 16th and 17th centuries (Pálffy 2009b: 102)

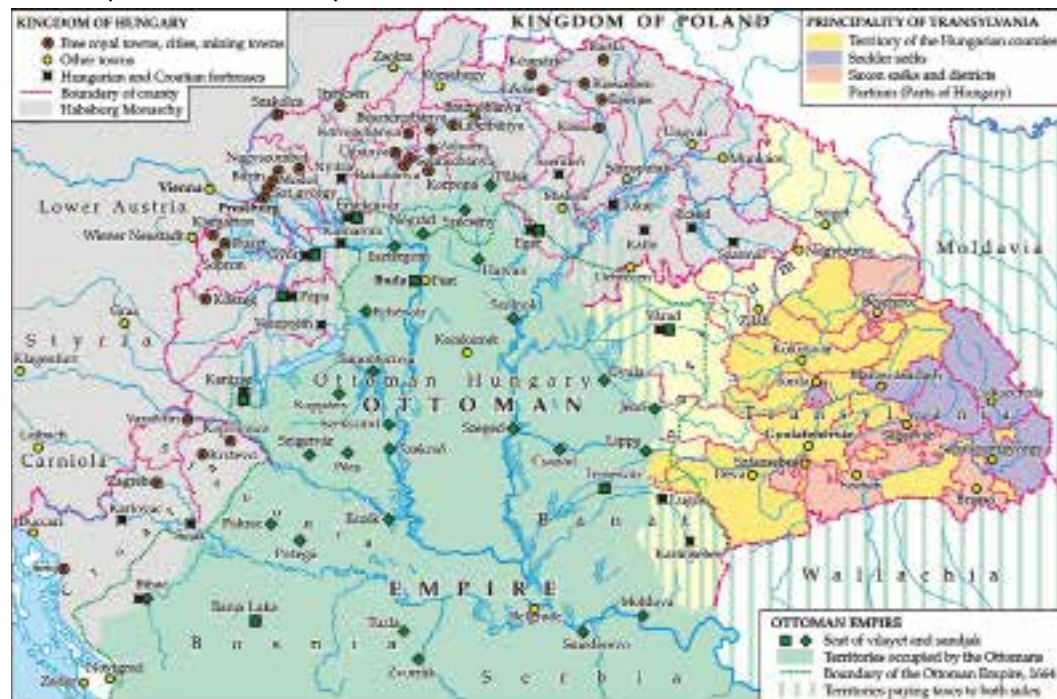




Fig. 217 *The fortress city (Festungsstadt) of Győr in the second half of the sixteenth century. Woodcut by Georg Hoefnagel after a ground plan by the Italian fortress-builder Niccolo Angelini. (Pálffy 2009b: 111)*

Fig. 218 *The Sopron butchers' guild tankard 1654. From the Ágoston Szalay Collection (Hungarian National Museum, Budapest)*



ported from Poland, sealed the fate of barchant weaving in Kassa (Košice, Slovakia), and stifled the development of linen weaving in Bártfa (Bardejov, Slovakia), whose products had previously served distant internal markets such as Debrecen and Székesfehérvár.

It must be borne in mind that the imports coming in on this large scale were products of a high level of industrial organisation, and their lower prices assured them a broader consumer base. Intensifying foreign trade and the “price revolution” of the second half of the sixteenth century opened the doors to agricultural and raw-material exports, attracting even more finished goods into Hungary (Zimányi 1987: 17–27).

Without a strong king, and in a state of political division, the country had no means of protecting its internal markets, where buying power was in any case limited by the chronic decline of population, despite occasional local rises (Dávid 1988: 79–87). Many of Hungary’s centres of industry and

trade, including the royal free towns of Buda, Pest, Szeged and Székesfehérvár and the large market towns of Kecskemét, Ráckeve, Makó, Mohács and Pécs, whose substantial craft and trade operations may clearly be inferred from their size and from the surnames common among their inhabitants, were under Ottoman occupation. Some artisans and traders were forced to flee. Komárom (Komarno, Slovakia) received refugees from Tolna County, and Nagyszombat (Trnava, Slovakia) received many from Temesvár (Timișoara, Romania), Pécs, Csáktornya (Čakovec, Croatia) and many smaller towns and villages. The parts of the country where most craftspeople went to escape the Turks were Transdanubia, Upper Hungary (Slovakia) and Transylvania (Székely 1975: 39–42).

Towns in the free areas had to be fortified, and reinforced town walls and modern bastions providing effective defence provided the architectural framework for development. That is how, for example, both Kassa, a high-ranking royal free town (H. Németh 2004: II. 371–372), and Győr, whose economic significance belied its official status as a mere market town (Gecsényi 1993: 59–77), became “fortress towns”.

The nobility also sought out the security of royal free towns. They initially came as refugees, and then settled, asserting their legal rights, bringing the long-standing tension between nobles and burghers inside the town walls.

Escape from the Turks and distance from Ottoman-held castles did not mean a life of peace: central authority lay with a foreign power, and aroused the opposition of the estates, nursing grievances regarding their rights, nationality and religion, which frequently turned the area around the towns into military camps or campaigning grounds. When opposing armies clashed, towns could be besieged, citizens were forced to pay several times their usual taxes, and many other burdens were imposed: they had to make weapons and gunpowder, transport guns and troops, and provide supplies for the army.

It was not of course only the external circumstances that made life difficult for townspeople. Differences in wealth were sources of tension even within the walls. From Upper Hungary to Transylvania, linguistic and religious conflicts between Hungarian and German artisans were not uncommon, and in some

towns of southern Hungary, there were similar conflicts between German and Slovak inhabitants. In Nagyszombat and Besztercebánya (Banská Bistrica, Slovakia), however, an arrangement conforming to a decree of the 1608 Diet – the annual alternation of Hungarian, German and Slovak office-bearers – moderated these tensions.

It is possible to categorise industry in Hungary at that time by locality: the craftsmen who worked in towns, market towns and villages differed from each other, and even more so from those on estate farms and industrial workers (Szűcs 1963: 97–164). The main distinction arose from the larger proportion of unqualified workers, effectively labourers, who worked in the industry of estate farms and in mining (carrying wood, breaking stones or pumping water).

Industry in Ottoman-era Hungary meant craft industry, and its highest level of development was represented by guilds. Guilds were not confined to royal free towns. There were market-town guilds, and craftsmen around some villages and market towns also set up their own guilds (Szűcs 1963: 143–149, Gyimesi 1975: 138–141, 221–22), as the Statutes of the Murányvölgy Blacksmiths' Guild attest. There were also many examples of craftsmen of different trades forming mixed guilds (Pálmány 1989: 66–67). Only about a third of the 60–70 craft trades reached the stage of forming guilds, and there were guilds for specialisations within trades in the major royal free towns (Gecsényi 1989: 117–120). The statutes of high-status guilds in large towns became the models for many smaller towns, and it was not unusual for “subsidiary” guilds to have a guild charter derived from a “principal” guild and endorsed by the lord of the town.

Despite bans and restrictive measures, there were also non-guild, i.e. unqualified, tradesmen, and home crafts remained prominent throughout the period. Some home craft products went beyond satisfying the needs of the family, and the resulting commodities represented competition on what was in any case a limited market.

Market constraints caused guilds to close their ranks, a perceptible trend in sixteenth- and seventeenth-century Hungary. Among the manifestations of this were restrictions on founding guilds, attempts to stop non-guild crafts, strict regulation of the number of masters, journeymen and apprentices within each guild, rules on production and procurement of raw materials, tight requirements for becoming a master and the stipulation of a costly guild banquet. There were occasional attempts in Transylvania to break this restrictiveness, but even the forceful Prince Gábor Bethlen (1613–1629) had to struggle against the tough defence of their privileges by the Saxon towns.



Fig. 219 *Shark cup from the last third of the 17th century*
(Museum of Applied Arts, Budapest)

Fig. 220 *View of the major Upper Hungary city of Kassa (Košice, Slovakia) on an engraving by Georg Hoefnagel, 1617*
(National Széchényi Library, Budapest)





Fig. 221 Miner pushing a mine bogie on the letters patent granting arms to the Lienpacher family, 1608 (National Archives of Hungary, Budapest)

Fig. 222 Means of entering a mine in Agricola's *De re metallica*



Mining

Mining was the most capital-intensive branch of the economy, and provided work for craftsmen of many trades. It also generated enormous revenue, and before the Ottoman era it had aroused the interest of foreign merchant capital. The Thurzo–Fugger Company gradually extended built up its interests in mineral extraction (Zimányi 1987: 60–63). Internal strife before and after Mohács (1526), however, coupled with the mounting Turkish peril and high transport prices, made Hungary less attractive, especially at a time when the New World was beginning to offer tempting opportunities. The Fuggers completely withdrew from the country in 1546. After they left, the treasury took control of what were mines of European standard, as well as the Kőrmöc (Kremnica, Slovakia) mint, and every detail of staffing and production was scrutinised from the imperial court – in Vienna, and sometimes in Prague.

Ore extraction did not become a complete treasury monopoly. For example, private investors set up a mining company in Selmečbánya (Banská Štiavnica) in the second half of the sixteenth century, receiving profits in proportion to their contributions.

The best-known and most sought-after mineral was *gold*, brought to the surface mainly in the areas around Kőrmöcbánya and Selmečbánya, but also around Nagybánya (Baia Mare) and Kapnikbánya (Cavnic) in Transylvania (Paulinyi 1981: 27–39). Panning for gold in river silt was also common (Uzsoki 1985: 285–303).

Fig. 223–224 Extracting gold ore. Engravings from Lazarus Ercker's book *Beschreibung allerfürnemisten Mineralischen Ertztz, unnd Bergwercks arten, wie dieselbigen, unnd eine jede insonderheit, der Natur und Eigenschafft nach, auff alle Metale Probirt ... In fünff Bücher verfast*, 1574 (National Széchényi Library, Budapest)



Purchasing and refining of precious metals was a state monopoly in both the Kingdom of Hungary and Transylvania, and the treasury naturally tried to hold down the prices it paid for them. Nonetheless, gold mining in Körmöc ran at a loss in the late seventeenth century, and the yield of Transylvanian mines was only enough to supply the prince's mints.

At the mercy of fortune and permanently short of capital, precious ore mining also suffered from the influx of gold from the New World and the price revolution. These combined to cause higher production costs in Europe and thus reduced profits. It was partially in response to this that the mining chamber attempted to drive down mining workers' wages and the mining municipalities attempted to fix prices.

There was no decline in technical standards in the mines, in fact great progress was made in drainage (Paulinyi 1978: 109–132) and gunpowder blasting. Private entrepreneurs were less able to withstand the rising costs, however, and in the 1670s – partly through forfeiture – more and more mines passed into treasury ownership. The treasury estates demanded corvée labour of their peasants, who did much of the woodcutting, ore transport and minewater pumping.

Real wages fell in the final third of the seventeenth century, causing a scarcity of skilled labour, with adverse consequences for precious-metal and copper ore mining.

Copper mining was centred around Besztercebánya. The strong demand for copper was due to its versatility: its alloys were raw material for industries that produced an enormous range of products from household implements to gun and bell casting. The high silver content of copper from the Carpathians enhanced its value. Venetian and South German merchant capitalists competed for copper from the Kingdom of Hungary as early as the fifteenth century. Copper from the treasury mines was first bought up by the Fuggers, who later gave way to other German tenants, and they in turn to Dutch merchants in the late seventeenth century.

One of Transylvania's valuable minerals was mercury, which occurred in its gold and silver mines. This valuable heavy metal was used to make amalgam and for silvering mirrors. Not surprisingly, some Transylvanian mercury also found its way to Venice.

Iron mining and metallurgy

Despite the existence of iron ore deposits at several points in the Kingdom of Hungary, mining and smelting was concentrated in the north. There some mines and bloomeries of secondary significance in Lower Hungary, mostly treasury-owned, and the Vajdahunyad area was noted for iron-making in Transylvania. The iron-making operations of national significance, however, were in the counties of Gömör, Szepes and Abauj (Gemer, Spiš and Abov, Slovakia). The smelters and forges were owned by the landowners, and the hámoroses (blacksmiths who worked on a relatively large scale, often with water-driven hammers) paid rent to the landlords and ran their own businesses using their own expertise, employing wage-workers and servants, purchasing raw materials, etc. Technical progress in ironmaking was slow but steady. Some merchants from royal free towns also took a financial interest in the business. In Transylvania, some forges were owned



Fig. 225 Ore processing in Agricola's *De re metallica*

Fig. 226 Representation of metal smelting on the letters patent granting arms to the Lienpacher family, 1608 (National Archives of Hungary, Budapest)





Fig. 227 Arms of the salt-rich county of Máramaros: salt miners at work
(National Archives of Hungary, Budapest)

by the prince and others by landowners, and the workers, apart from the blacksmiths, were bonded peasants (Paulinyi 1974: 346–396).

The bloomery was 2–4 metres high. It was charged with a mixture of iron ore and charcoal, into which fired clay was also added, and air was blown in to drive the smelting process. The iron bloom, a mixture of metal and slag, then had to be re-heated and hammered. The technology of smelting and forging (Heckenast 1990: 113–121) required that the bloomeries be sited next to water, because the bellows and hammers were driven by water wheels.

Although iron production in Hungary could not compete in either quantity or quality with that in neighbouring Styria, some of its products had a good reputation, and found customers all through the country and beyond. The iron industry provided a living for many *hámorosos*, and some of them became wealthy, but very few were raised to the nobility.

Salt mining

Salt was the flavouring and preserving agent that everyone used, and it enjoyed an unbroken demand. The salt mines of Máramaros (Maramureş) in Transylvania had a reputation throughout Europe and attracted South German merchant capital – the Fugger House of Augsburg – in the early sixteenth century. Uniform salt blocks bearing their miners’ marks were transported down the Rivers Tisza and Maros (Mureş). Much of the tax income of the Principality of Transylvania came from salt trading (Draskóczy 2002: 280–289). Salt mining also provided a living for craftsmen of other trades: iron, timber, candle-making and rope-making.

Fig. 228 Water mill under the castle of Sáros.
Engraving by Georg Hoefnagel, detail, 1617
(National Széchényi Library, Budapest)



Food

Mills

One branch of the food industry that went beyond the level of handicrafts was milling. The commonest mills were watermills, some of which – such as those in Papa, Tata and Óvár – were supplied from dams with the capacity to drive 10–12 pairs of millstones. Ship mills, despite being a hazard to navigation, were common on the Danube and the Tisza, and not unknown on other large rivers from the Vág (Váh) to the Maros. There are also records of small watermills driven by streams, but the fluctuating flow must have limited their use. Where it was not possible to drive a water wheels even by building a dam or a weir, the only alternative was the “dry mill”, driven by animal power. Neither treadmills nor windmills became widespread in Hungary. Mills were of particular importance for feeding armies, and the enemy’s mills were often a military target. In camp, the army used small handmills, mostly procured abroad.

From the Ottoman perspective, milling in Hungary was quite advanced. In the middle of the seventeenth century, the world-renowned Turkish traveller Evlia Chelebi was amazed

by “...artificial watermills with the Hungarian mechanism, with which they make flour and screen it, separating the bran.” It is true that the shaker sieve was already widespread in Hungary in the late sixteenth century. About three quarters of the grain became flour after grinding, and a quarter bran and dust loss. Ottoman-era millers operated by “milling toll”, i.e. they were paid in kind rather than in money. Only part of the toll was theirs, however, because milling rights belonged to the landlord, and most millers were tenants in their mills.

Not even large towns had enough millers to warrant setting up a millers’ guild, and so millers of one region or neighbouring counties joined together in “guild unions”. There were examples of these in Transylvania and Upper Hungary.

Mills, mill-like mechanisms and waterwheels were not all used for milling grain. They had other food-related uses in meal mills, salt crushers and oil presses; their metallurgical applications included ore crushers, bellows and hammers; in the timber industry they drove sawmills; they were involved in the spinning and weaving industry in fulling and flax dressing mills; and gunpowder mills were essential for producing explosives. If the landlord ran a brewery near the mill, it was also the miller’s job to make the malt.

Baking

Milling was not as closely related to baking in the sixteenth and seventeenth centuries as in earlier periods. The biggest bakeries were probably in the centres of large estates, because the magnates had to provide enormous quantities of bread for castle garrisons, farm workers, travellers and temporary residents. Wherever and whenever events of national consequence took place, there was an enormous demand for bakery products. For example, the court household required 260 loaves and 12,000 bread rolls a week at the Diet of Pozsony (Bratislava) in 1655.

Evidence of guilds in the urban baking industry is the formation of the Körmök Baker’s Guild in 1554. In larger towns and cities, there was specialisation among bakers. We know of bread bakers, and bakers specialising in kalács (sweet egg-bread), pretzels and gingerbread, in West Transdanubia, Pozsony and Debrecen. In Nagyszombat, a city where a university was founded in 1635, there were several pretzel and pogácsa (scone) bakers, as well as those who baked bread, in the middle of the seventeenth century. Taken together, there were more people working in baking than any other craft trade in the city.

Competitors to the town bakers were local and itinerant “baking women”, and the better-off burghers were to some extent independent of the market, because their households included bakeries and flour stores, and the amount of grain they held is evidence that they baked their own bread.

For the people of that time, a concomitant of the successive military campaigns was the periodic demand that they supply bread to the army. On one occasion in 1626, Gábor Bethlen, Prince of Transylvania, requested 25,000 “old [large] home-made loaves” for his troops. The fortress towns set up “provisioning houses”.

In the late seventeenth century, food shortages and inflation favoured supply in kind, and this adversely affected the baking industry.



Fig. 229 Ship mill in front of Pozsony. Engraving by Georg Hoefnagel, detail, 1617 (National Széchényi Library, Budapest)



Fig. 230 Mill-wheel – heraldic device of a trade in a noble coat of arms. György Müller was granted nobility and arms by Ferdinand II in 1629 (National Archives of Hungary, Budapest)

Fig. 231 Bakers’ coat of arms carved in stone, from the wall of a bakery (Museum of Bakery, Sopron)





Fig. 232 Brewer. Engraving by Jost Amman

Brewing

Brewing was more widespread in areas where cool, wet weather prevented grapes from ripening and transport costs made wine expensive. Brewing was organised on a municipal or estate basis, the lord of a large estate sometimes controlled brewing not by building a brewery but by distributing barley from the manorial farm to the tenant peasants, who then brewed beer as part of their corvee obligations. Hop gardens were laid out on some manorial farms, although the lord sometimes collected hops from his peasants.

Town-dwellers with the rights of burgher, and nobles taking residence in a town, could brew beer for their own needs, but the municipal authorities restricted sale of the beverage to protect their income from taverns. Szepesség was general regarded at the time as brewing the best beer. Lőcse (Levoca) was famous for its beer, and a brewers' guild was established in Késmark (Kežmarok) in the late sixteenth century.

Unlike wine, which found its way to distant – even foreign markets, beer was never transported far, and the sources make only scattered mention of imported foreign beer.

Where brewing was widespread, it is reasonable to infer that spirit was sometimes also distilled from it. Pálinka was made from fruit (=schnapps) and grape skins (pomace brandy). The alcoholic beverage distilled from wine-lees also fetched a good price.

Slaughter and butchery

Butchers had to conduct a public slaughter of a cow and a pig to prove their competence with the cleaver and the knife, and their skills in preparing meat for sale. In royal free towns and larger market towns, the butchers banded into guilds, and even some of the larger villages had their own butcher. The right to

Fig. 233 Seal of the Győr butchers' guild, 1570 (Xantus János Museum, Győr)



Fig. 234 Guild chest of the Győr butchers, 1640 (Xantus János Museum, Győr)



run a butchery was in principle held by the lord, but he could rent it out as well as requiring that the butcher provided fresh meat for his household.

Members of town butchers' guilds were involved in more than just cutting and selling meat. They also sold leather and tallow, and the better-off among them had interests in the cattle trade.

Meat in Ottoman-era Hungary meant beef, because the keeping of pigs near the house was a rarity. Fresh beef was on offer only for a brief seasons in autumn and winter, from the day of the patron saint of butchers, St Martin (11 November) until shrove Tuesday, i.e. the start of Lent. Mutton, however, was also eaten more often than now. Customers lined up for mutton in July, after the sheep shearing.

People in sixteenth- and seventeenth-century Hungary ate quite large amounts of meat. The average annual “meat portion” of the inhabitants of Sopron and Kassa has been estimated at 65–75 kilograms, a remarkable figure when it is considered that the lower limit for soldiers' consumption has been put at 62 kilograms (N. Kiss 1979: 86–88; Zimányi 1987: 47).

The rise in the price of meat was a temporary phenomenon, and the resulting disputes between butchers and the populace were ended by the town elders, who ordered a “trial slaughter” to determine a fair price at which the people would not grumble and the butchers would not threaten to leave their trade.

Some of the tallow from a slaughter went to the candlemakers, and the rest, together with other fats, to be made into soap. The Debrecen Soap Makers' Guild was famed afar, and received its charter in the late sixteenth century. Due to the skills of various craftsmen, no part of cow was wasted; from the horns, for example, they made buttons, buckles, combs and drinking vessels.

Leather

Raw hide was taken from the butchers to the tanners. A close relationship is observable between the number of butchers and the number of people who lived from the leather trade. In Lőcse, at a time when there were 32 butchers, there were 55 craftsmen working with hide and leather: 19 tanners, 15 furriers, 8 shoemakers, a few bootmakers, a belt-maker, a pouch-maker and a saddler. The furriers mainly worked with sheepskin, but also marten, otter, fox and wolf skins, and even the occasional bear pelt. Some leather items were export commodities, part of regular foreign trade.

In market towns, the leather trades were furriers and shoemakers. Furriers made sheepskin coats (the short *ködmön* and the long *suba*), leather gloves, linings for upper clothing, and the *süveg* fur cap. The price of a product depended on the kind of leather it was made from, the size, and whether it was intended for the gentry or the lower orders. The modern Hungarian sur-



Fig. 235 Prince Mihály Apafi's diploma granting customs exemption to the butchers of Gyulafehérvár (Alba Iulia, Romania), 1663 (National Archives of Hungary, Budapest)

Fig. 236 Seal of the Veszprém furriers' guild (Laczkó Dezső Museum, Veszprém)



Fig. 237 Master Tobak (saffian and cordovan tanner). Detail of guild “summoning tablet” (Museum of Ethnography, Budapest)



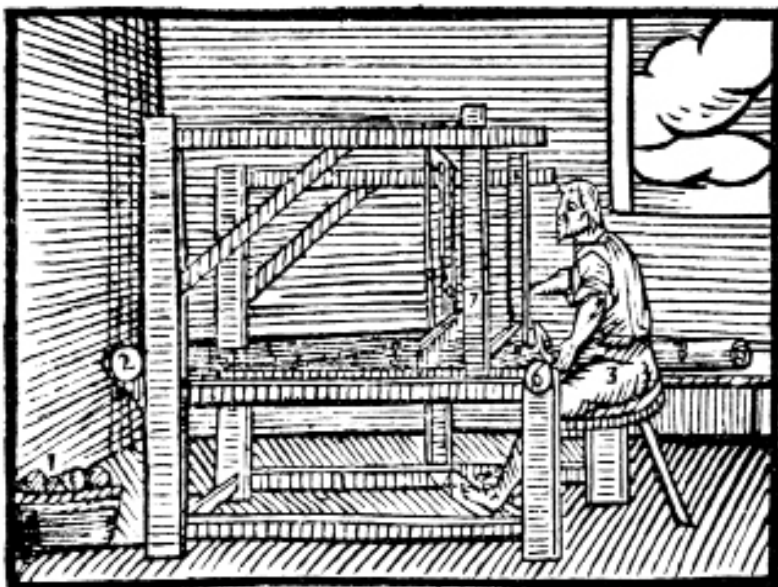


Fig. 238 Seal of the Kőszeg shoemakers' guild, 1613
(Xantus János Museum, Győr)



Fig. 239 Seal of the Győr tailors' guild, 1576
(Xantus János Museum, Győr)

Fig. 240 Representation of a weaver in Comenius' book *Orbis pictus*



names *Kesztyűs* (glover) and *Síveges* (cap-maker) show that gloves and hats were made by different craftsmen.

Village shoemakers principally made various kinds of sandals for the local population and fairgoers, and of course they also sometimes worked for the troops. The German shoemakers of the royal free towns of Pozsony County, however, declared that they did not do “peasant work”. Clearly their customers were from the wealthier sections of society.

Harnessmakers mostly used cattle hide, and produced large quantities of horse tack for civil and military use. They made “fancy” tack for the horses of the gentry and simpler black versions for the ordinary people. Only the latter appeared in the fairs of Upper Hungary.

The mining towns had a heavy demand for cattle hides because of the attire needed for descending to the depths – the essential miner’s apron and many belts and straps. Production was frequently interrupted by a shortage of hides caused by the driving of live animals abroad and the export of raw hides.

“Greek merchants” – frequently actually Balkan Slav, Turkish or Jewish traders – also brought leather and leather goods such as crimson, cordovan and saffian into Hungary: (Gecsényi 2007: 55–71); there were also a small number of Turkish craftsmen in or near the castles occupied by the Ottoman Empire (Hegyí 1989: 98–114).

Weaving and garments

The craft industries of spinning and weaving, despite the availability of all the necessary raw materials apart from cotton, failed to make significant progress in Ottoman-era Hungary.

The dominance of imports, which reached back to the Middle Ages and grew further in the sixteenth century, blocked off opportunities for domestic textiles, especially broadcloth weaving. The more sophisticated weaving industry of Wallachia and Moldova had export capabilities but did not produce a sufficient surplus to substitute for imports. Consequently, the Prince of Transylvania sometimes imposed strict bans on exports of Brassó (Braşov) broadcloth. Transylvanian coarse grey broadcloth sometimes appeared among Turkish goods in the occupied area of Hungary (Pach 1997: 18–19).

Broadcloth weaving was not restricted solely to Transylvania. Some inhabitants of Szakolca in West Hungary, in Puhó (Púchov) in the Vág (Váh) valley, and in Bazin (Pezinok, Slovakia) and Modor (Modra, Slovakia), towns in the Little Carpathians famous for their viniculture, made their living from weaving. Lőcse in Szepesség registered several broadcloth weavers and even more tailors in the 1660s.

There were separate words for different kinds of weaver in the old Hungarian language: the *csapó* made wool broadcloth and the *takács* linen fabric. They did not make their yarn, but purchased it from the womenfolk of the

neighbouring villages. Guild charters from Késmárk to Pozsony record that the takácses were obliged to sell their linen by standardised bolt. A weaver would produce 3.5 to 4 of these a day. Hungarian linen weavers could not compete with the high-quality imported damask and fine linen. The first dyers' guilds were established in Szepesség, West Hungary and Transylvania in the first third of the seventeenth century.

The fact that some market had a dozen or so tailors towns is clear evidence that many more people made their living from making clothes than from weaving. Also indicative is that Szabó (tailor) is one of the commonest surnames in Hungary. There were fewer constraints on the number of apprentices in this craft, because of the demand for their products both within the towns and at fairs throughout the country. More prosperous tailors traded in fabric as well as finished garments.

The szűrszabós or coarse grey cloth tailors used the material woven by the csapós. The seal of the Debrecen csapó guild survives from 1529, but local szűrszabós did not rely on them completely, because they also bought cloth from Transylvania. A Transylvanian tariff from 1627 shows that white, black and grey coarse broadcloth was sold by the bolt (Gáborján 1979: 375–395), and the szűrszabós could ask most for a szűr (long embroidered coat of felted woollen cloth) decorated in the “Kolozsvár style” – white material with a fur-lined broadcloth collar.

Also associated with the spinning and weaving industry were the button-making, braid-making and linen-dying trades, and not far removed were the süveges (later kalapos, hatter) and rope-makers. Larger towns, where ecclesiastical and secular dignitaries had their residences, also had an upholsterer in the seventeenth century.

The common village and market-town folk only went to the tailor, or perhaps the market, for their outer clothing, and most undergarment linen was home made, the product of the peasant spinning and weaving industry.

Metalwork

This branch of industry was heavily specialised, from the village blacksmith to the wealthy goldsmith of the royal free town. Among the peasantry, the blacksmith – whether employed by the lord on an estate or worked among the village people – was a jack-of-all-trades. Smithing was not an honoured trade in the major royal free town of Kassa, even though there was a Kovács (blacksmith) Street there. Blacksmiths manufactured some of their products in enormous quantities. In 1569, those in Rozsnyó (Rožňava, Slovakia) made 150,000 shingle nails for the Turks, and in 1633 their lord – Archbishop Péter Pázmány – ordered 50,000 shingle nails, 10,000 batten nails and several hundredweight of iron bars. They also had to satisfy the demands of the military, for whom they made lances, swords, spurs, horseshoes and bits.

In the royal free towns, metalworking crafts separate from blacksmiths included knife makers, weaponsmiths, locksmiths, armourers, gunsmiths, tin founders, coppersmiths and tinsmiths; in some towns there were also bell-founders of wide renown.



Fig. 241 *Characteristic tools of the fulling trade on the “summoning sign” of the Székesfehérvár guild*
(Szent István Király Museum, Székesfehérvár)

Fig. 242 *Nomad blacksmith’s anvil driven into a log on a crested letter, 1633*
(National Archives of Hungary, Budapest)





Fig. 243 *The seal of the Győr goldsmiths' guild (1610) showing one of the trade's patron saints, St Leo, making a chalice on. The folded ribbon bears the name of the guild in Latin: "Sigil(lum) / a/u/ri/fab(ri)s: ci/vi(tatis): lavri/en(sis):"*
(Xantus János Museum, Győr)

Fig. 244-245 *Obverse and reverse of a Rudolf thaler struck on a roller press in Nagybánya (Baia Mare)*
(Hungarian National Museum, Budapest)



Fig. 246 *Mint. Engraving by Hans Burgkmair, c. 1515*



The blacksmiths of market towns in the occupied part of the country worked not only for their own and surrounding villages, but had to do work to “Turkish orders”. At Nagykőrös, three to five blacksmiths made the enormous bridge rivets that reinforced the bridges of Buda and Szolnok.

A sign of the development of metalwork was that the locksmiths had their own guilds in royal free towns. In Kassa, this existed as early as 1557, but perhaps because of dwindling numbers of craftsmen, they joined related trades in the seventeenth century in the guild of “Locksmiths, Clockmakers and Gunsmiths”. In the royal free towns of Pozsony County in 1668, however, there were different guilds for the German and Hungarian locksmiths, and they set different prices for their products.

Rivets, knives, tools and iron bars of various sizes made by blacksmiths in Upper Hungary found their way to the occupied territory via merchants from Rimaszombat (Rimavská Sobota) and other market towns. Some of these were cattle traders from market towns in the Great Plain, who on their way home occasionally brought iron- and metalware from Vienna and – more often – from Győr and Pozsony.

The high point of metalwork in sixteenth- and seventeenth-century Hungary was the artistry of the goldsmiths, who flourished in the towns and cities of Upper Hungary and Transylvania. Goldsmiths often turned gold and silver coins into make cases adorned with enamel inlay, precious stones and beads, ornaments and devotional objects, goblets, cups, tankards, bowls, cutlery and jewellery. The goldsmiths of Brassó and Kolozsvár (Cluj-Napoca) had a reputation far and wide, although they worked at a different level to those of Augsburg and Nuremberg. There were goldsmiths among the wealthiest inhabitants of Kassa, Selmecebánya

(Banská Štiavnica), Besztercebánya and Lőcse, and there were several of high standing in Debrecen and Kecskemét. A member of the goldsmiths' guild, the "Societas Aurifabrorum", found it easier than other craftsmen to be appointed a municipal office-bearer or chief judge or, in Transylvania, the supervisor of gold refining, head of the royal mint. In the early seventeenth century, goldsmiths in the fortified cities of Győr, Komárom, Esztergom and Érsekújvár (Nové Zámky, Slovakia) joined together in a guild union.

Some Transylvanian goldsmiths were commissioned by the Prince to make gifts for the Sublime Porte, and for his own treasury. Some Transylvanian goldsmiths had the Prince's permission to mint coins in accordance with statutory requirements. In the Kingdom of Hungary, the minting of coins was a separate branch of metalwork and was under direct crown supervision (Gedai 1985: 305–322). The Kőrmöcbánya (Kremnica) mint was one of several in divided Hungary, and it was one of the principal mints in the Habsburg Empire, giving it Europe-wide significance (Holzmair 1974: 51–59). Between 1659 and 1680, it produced nearly 38% of the coins made in the eight Habsburg mints (Buza 2000: 152–153). Although there were attempts to mechanise minting even before 1526, coins were made by hammer and die in Kőrmöcbánya until the mid-seventeenth century. The Nagybánya mint successfully commissioned a roller press at the turn of the sixteenth and seventeenth centuries (Gündisch 1932: 74), but it was another fifty years or more before its use became widespread.

Cannon founding was a labour- and material-intensive branch of metallurgy, or rather weapons-making. It was a trade plied only in a few royal free towns in Hungary and Transylvania. György Rákóczi I set up a cannon-foundry in Gyulafehérvár (Alba Iulia).

Woodworking and construction

Carpenters could turn their hands to all aspects of woodworking. The beams of roofs in many public buildings – town and county halls, belfries and church towers – stand today as testaments to their skills. Carpenters and builders were well-paid craftsmen, as surviving accounts of their wages record. Joiners formed guilds in many places, as did wood turners in the Saxon towns of Transylvania.

There were also coopers' guilds, especially where viticulture and the wide trade were strong. Their work was not of course confined to wine casks. They also made barrels for cabbage, and for gunpowder, tubs of all sizes up to bathtubs, convex containers of all sizes – flagons, pails and butts.

Coopering was the most widespread woodworking trade, with strong guilds in the counties of Sopron, Pozsony and Trencsén (Trenčín, Slovakia), and south of the River Maros (Mureş) in Transylvania. There were also a good number of wheelwrights' guilds in the sixteenth and seventeenth centuries. Peasant needs were satisfied by ploughwrights, plough-carriage makers and cartwrights – dividing into makers of wagons and coaches. So close was their cooperation with blacksmiths, there were joint guilds in several market towns of Vas and Sopron Counties in the



Fig. 247-248 Ferdinand I's "angel" thaler struck in Kőrmöcbánya (Kremnica) in 1553

(Hungarian National Museum, Budapest)

Fig. 249 Accommodation sign of the hoopers of Kismarton/Eisenstadt (Nagy 2008: 76)





Fig. 250 Builders. Woodcut from Comenius' book *Orbis pictus*

Fig. 251 Gingerbread form with Madonna, 1671 (Museum of Applied Arts, Budapest)



seventeenth century, and one such was among the first guilds to be formed in Székesfehérvár after its liberation from Ottoman rule.

Building materials went through considerable changes through these centuries, with the trade of mason gradually giving way that of “builder”, whose raw material was increasingly likely to come from a brick-maker rather than a quarryman. Brick-making was sometimes a crown enterprise, and the royal free towns often followed the example of landed estates in using peasant corvée labour under the direction of paid craftsmen.

The wages paid to builders varied between summer and winter, as the length of the working day varied. In Sopron, craftsmen’s day-rates were one third higher in summer than in winter. Journeymen earned 10–12% less than craftsmen, and apprentices about half or two thirds, in the 1640s. In royal free towns, brick-makers and public building projects were under the supervision of “building officers”. In towns and market towns, the community bore the costs of repairing and refurbishing churches,

town halls, schools, hospitals and other public buildings. The townspeople provided these funds partly through taxes and partly through donations. There are many surviving wills in which wealthy local residents left some of their money to churches and to charity. Builders and their journeymen were rarely in demand in villages and small market towns, where there were few brick-built houses. People who lived in such houses had a status that earned them the informal title of *küházi* (“stone house dwellers”).

Other crafts

Pottery was a craft constrained by a factor of economic geography – the quality of clay available locally (Kresz 1985: 479–501). Potters joined together in guilds in the sixteenth century in towns such as Kolozsvár and Dés (Dej) in Transylvania, and in Kassa, Sopron, Pozsony and Nagyszombat in Royal Hungary. In the seventeenth century, the practice of forming guilds spread to market towns, from Körmend to Nagyvárád. Folk pottery was also productive, notably around Rimaszombat, in many towns in Gömör, in Székely Land, in the Saxon towns outside the guilds, and in villages. Transylvanian potters experienced competition from the Habans, an Anabaptist community who settled under permission of the Prince and were renowned for a distinctive style of high-quality pottery (Klusch 1980: 13–18).

The Kassa guild statutes of 1574 stipulated that a master candidate had to throw pots, jugs, a large vessel called an *abáló* and a measuring cup that precisely conformed to the calibrated municipal *meszely* (a measure, approximately 0.4 litre). A specialised group of potters, the *gerencsérs*, made decorative glazed pots, jugs, plates and bowls and also built stoves, or repaired old ones by filling in with clay. The folk potters of Kalotaszeg were famous for their stove tiles.

Glassworks and paper mills were set up on estates in Upper Hungary and princely estates in Transylvania in the seventeenth century. In Transylvania, there was a notable glassworks at Porumbák (Porumbacu) in the Fogaras (Fagaraş) area and paper mills at Görgényszentimre (Gurghiu). These, and the existing urban paper mills, served the Principality's printing presses and schools. Transylvania still depended on imports for fine paper, however. The low quality was partly due to how the prince's officina managed the mills: they were largely operated with corvee labour. Glassworks in Royal Hungary were mostly small operations known as *üvegcsúrs*. They satisfied some local needs but could not compete with the technical standards of foreign glassworks in Bohemia, Nuremberg and Venice. Aristocratic families also set up glassworks. The Batthyány family had a small operation in the middle of the sixteenth century, and a census recorded three on György Rákóczi I's Makovica estate in 1641.

Both landed nobles and towns supported the establishment of printing presses. These appeared in increasing numbers in Royal Hungary and Transylvania from the sixteenth century onwards. Together with presses founded later, they were to be instrumental in the spread of Hungarian-language literacy. Printing and bookbinding were separate trades in some towns, and the large presses worked to similar technical standards as those in Austria and South Germany.

Some non-productive trades also formed guilds. In some towns, mostly those with wine warehouses, there were guilds of cask cellarmen who stacked, unstacked and transported the large wine casks, beer barrels and *pálinka* casks.

Retail traders – *kálmárs* – also set up guilds during the period. Well-capitalised merchants fleeing the Turks set up the *kálmár* guild in Nagyszombat in the mid-sixteenth century. Of more modest means were the market-town traders who formed the *kálmár* guild in Rimaszombat. Their trade in the east-west direction consisted of Hegyalja wine, metal goods and cloth; and to the south, they took textiles and garments, wood and timber products (planks, *csanaks* [carved-out drinking cups], tubs, oars, troughs, etc.), pottery and – despite occasional bans – iron- and other metalware. In the other direction, they brought to Upper Hungary “Turkish wares”, which included hides, furs, boots, slippers, socks, frieze, linen, blankets and expensive Persian carpets. Their guild did not make products, but by exploiting exchange rate differences among currencies, their two-way trade helped craftsmen to sell their wares while protecting them from the risks – and the enormous loss of time – involved in seeking out distant markets.

Townsppeople living from crafts and trade

The highest concentrations of people who lived from industry and trade, if we include among “artisans” everybody from charcoal burners to early-capitalist mineowners, were found in mining towns. Nearly three-fifths of the population of Besztercebánya lived from mining and metallurgy in the mid-sixteenth century, and the proportion was even higher in Selmecebánya As Körmöcbánya expanded again in the sixteenth century, hardly a third of its population, or about half if we add in the coin makers, lived from crafts. If we further add the non-agricultural workers who engaged in traditional handicrafts, and traders, we find

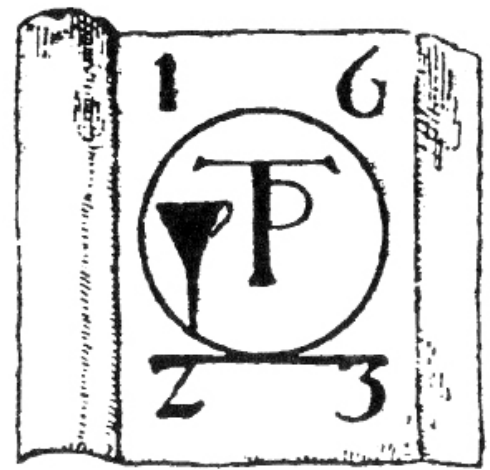
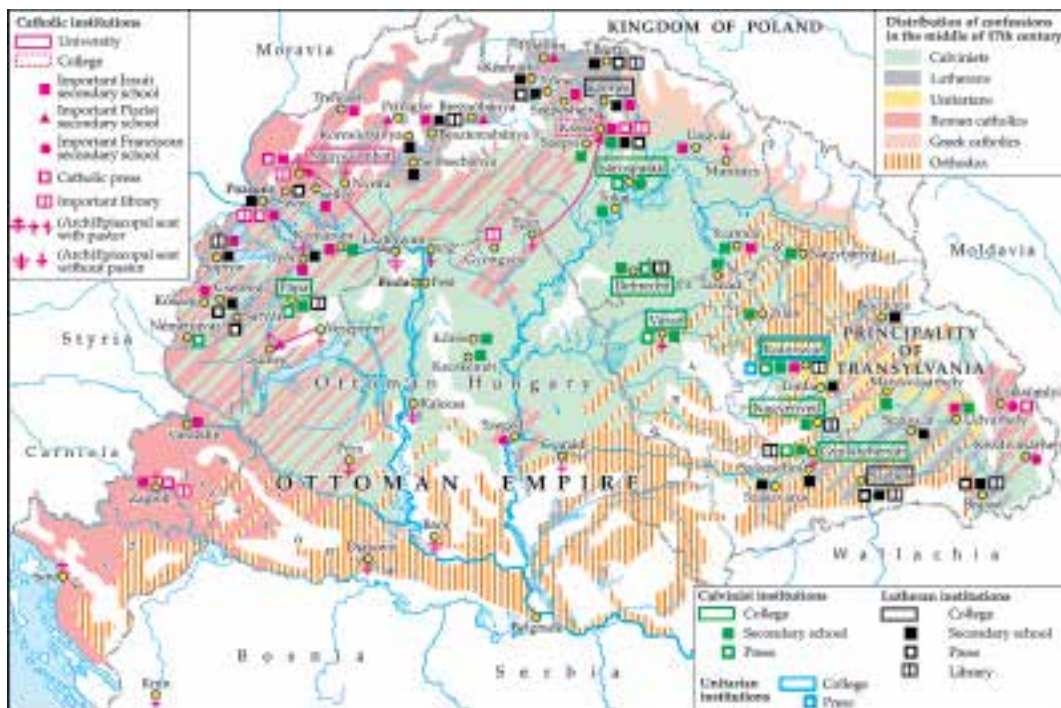


Fig. 252 Péter Tölcséres's glass trade sign, 1623 (Csiffáry 2006: 116)



Fig. 253–254 The high-quality products of the Debrecen soap-makers were mentioned alongside the world-famous Parisian and Venetian soaps. Soap-makers at work on the guild's charter (Déri Museum, Debrecen)





that 85–90% of the population of these three key mining towns lived from industry and trade. The proportions were much lower in the royal free towns. In Nagyszombat, 47% of the taxpaying inhabitants in the final quarter of the sixteenth century were artisans and 30% were traders, but many of them – like the bakers discussed above – had arable land or vineyards (some had both!), and so had not made a complete break from agriculture. Sopron produced a much wider range of wares than the market towns of its county and West Transdanubia in general, but its craftsmen and traders had few apprentices, and they spent some of their time on their lucrative vineyards, the city’s wine being a valuable export commodity. Among the people of Kassa, owning farmland – market gardens, meadows and arable

Fig. 255 *The culture of Hungary in the middle of the 17th century (Pálffy 2009b: 119)*

Fig. 256 *The so-called Kramer can from Lőcse (Levoča, Slovakia) (Hungarian National Museum, Budapest)*



fields – became increasingly widespread. Neither industry nor trade represented could assure to the people of the time the capital security of owning land.

A similar phenomenon emerged in the urban economy. The towns of Upper Hungary bought wine-growing estates in Hegyalja, on which they employed paid workers. The royal free towns had “noble status” as landowners (Zimányi 1987: 39–42). Kassa had more than twenty bonded villages and Bártfa more than ten, and the latter traded in grain up till the late seventeenth century. Lőcse, Nagyszombat, and Sopron also owned villages obliged to provide corvee labour (Szűcs 1963: 152–153). The standard of farming on the land owned by the towns was no higher than that of the farms of landed nobles.

The ecclesiastical and secular dignitaries tolerated the presence in the Hungarian Diet of the royal free towns and the lower nobility, but tried to prevent market towns rising to royal free town status. They could not, however, prevent cities which had been politically and economically prominent in the past – such as Buda, Pest, Székesfehérvár and Debrecen – from recovering or being granted charters as royal free towns. The “noble” towns set up local alliances. The five royal free towns of Upper Hungary – Kassa, Lőcse, Eperjes, Bártfa and Kisszeben (Sabinov) – and those of Pozsony County – Pozsony, Nagyszombat, Szentgyörgy (Svätý Jur), Modor and Bazin banded together to protect their rights and protect their market areas (H. Németh 2004: II. 367–378).

Price regulation, a privilege held by the counties under laws passed by the Diet in 1625 and 1659, was in the interests of the towns, allowing them to protect their markets. Artisans and traders in Transylvania were in a particularly difficult position, because the Diet there set prices until the mid-seventeenth century.

The price regulation provided under the laws of 1625 and 1659 included in its scope artisans, the bourgeois section of society, and royal free towns. The noble Diet could not have allowed the royal free towns to set prices, because there

were several counties which did not have a single royal free town. In practice, the county administrations proved to be quite efficient, if not perfect in every respect. The elders of the royal free towns first requested price lists from those most competent in the matter, the guilds. They then reconciled opposing interests, and where there were other royal free towns in the county, it was possible to arrive at a common position. Then they sent the proposed price regulation or *limitacio* to the county assembly. The county nobility did not wish to set prices arbitrarily. For example, even though there was a royal free town in the county of Sáros, the nobles saw fit to invite delegates from Lőcse, the largest town in neighbouring Szepes County, to the diet where they finalised the county price regulations in 1666.

Prices were usually subjected to an overall review when there was some turmoil in the circulation of money or in money values, or a natural disaster or military campaign led to food shortages. The law on pricing of 1625 came towards the end of a period of inflation afflicting Central Europe, and that of 1659 was passed after another episode of monetary turbulence. It was then that the estates, after more than a century of quarrelling, agreed to align small Hungarian denominations to the value of Austrian coins (Buza 1996: 43–60).

The relative backwardness of Hungarian industry and Hungarian towns was not all the fault of either nobles obstructing bourgeois development or rule by Austria. Besides condemning Vienna in almost poetic terms, Prince Ferenc Rákóczi II of Transylvania observed in his memoirs (written in French and published in 1739, four years after his death) that foreign capital was stronger than domestic: “The fourth estate of the kingdom, the royal towns, were similar witnesses to Austrian rule. Their poverty, their small number of inhabitants, and the incompetence and scarcity of their industry and crafts, demonstrated that our kingdom was orphaned and that her guardians were frittering away the orphan’s chattels. The townspeople gave much loyalty and love, but such was their poverty that this was of modest assistance to me. As they themselves were only agents of the merchants of Breslau and Danzig, they could maintain themselves only by service.”

There were many reasons why crafts in Ottoman-era Hungary failed to progress as they might have done. Past history, inherited backwardness, the loss of people and property in recurring wars (Szakály 1988: 89–101, Elkar 1989: 15–25), the preponderance of subsistence-based and goods-producing farms of nobles and peasants, acting as constraints on the internal market, and competition from consumer goods imported by well-capitalised foreign merchants, meant that craft industries in Hungary could attain no more than an intermediate level within Europe. Although they fell considerably short of Western European standards, Hungarian crafts, as was confirmed by contemporary travellers, were more advanced than in East Europe and the Balkans.

János BUZA

Szecsők			
Egy rothi bűre a lei 307 -	7kr 1/2 50	Egy Öregfű Ártamálkától való kőmön	7kr 1/2
Amalfi csanalaftatul -	7kr 1/2 10	mité csanalaftatul -	7kr 1/2
Egy Farkas bűre -	7kr 1/2 80	Ártamálkától kőmön csanalaftatul 7kr 1/2 -	
Csanalaftatul -	7kr 1/2 20	Egy Öreg fűre csanalaftatul aokasat	
Egy Ördög bűre -	7kr 1/2 50	tal, vagy onaltal aokasat	
Csanalaftatul -	7kr 1/2 75	Egy 3 gőzmagatul -	7kr 1/2
Egy 307 on/ -	7kr 1/2	három gőzmagatul tölde az egy bol	
Csanalaftatul -	7kr 1/2 10	bol, három on/ -	7kr 1/2
Egy Dörög on/ -	7kr 1/2 100	Egy Ártamálkától való on/ -	7kr 1/2 4
Ártamálkától -	7kr 1/2 80	bol, három on/ -	7kr 1/2 5
Egy baram bűre csanalaftatul	7kr 1/2 24	Ártamálkától való on/ -	7kr 1/2 8
kőmön -	7kr 1/2 12	bol, három on/ -	7kr 1/2 8
Egy rothi bűre, vagy on/ -	7kr 1/2 6	Farkas bűre, vagy on/ -	7kr 1/2 8
bol, három on/ -	7kr 1/2 18	Egy 3 gőzmagatul vagy Ártamálkától	
		Bonyol való kőmön	

Fig. 257 Detail from the 1666 price regulations of Sáros county (Archiv of Borsod-Abaúj-Zemplén county, Sárospatak)

Fig. 258 A clock once belonging to Ferenc Rákóczi II (Hungarian National Museum, Budapest)



Fig. 259 Altar cruet from Nagyvárad, 16th century
(Hungarian National Museum, Budapest)

