Institutional barriers to Economic Development: The Silesian linen proto-industry (17th to 19th century)

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The beginnings of the Silesian linen production date back to the early 16th century.¹ The first production centre was the town of Jauer (Jawor) and its surroundings in the Oder plain. The merchants of Jauer started with the export of linen cloth (\textit{Jauersche Leinwand}) to foreign markets. The flourishing trade was interrupted by the 30-years-war when the town of Jauer was completely destroyed. Another effect of the desastrous war was an enormous decline in population. In the Oder plain, the fertile ground per capita increased. The area had a remarkable agricultural surplus so that the growing of flax, the raw material for linen spinning, was possible on a larger scale. Spinning was still done as a part-time occupation by the farmers in the valley. But the woodlands around Jauer had diminished as an effect of war actions and of deforestation.² Wood was necessary for bleaching the cloth. That is why the centre of production shifted to the mountain areas where there still existed a wood supply which was expected to last for many decades. In addition, there was an expanding labour surplus. Hirschberg (Jelenia Gora) and Landshut (Kamienna Gora) became important trade cities. The industry did not remain city-based but spread rapidly throughout the surrounding villages. The expanding industry was export-orientated. The reasons for this process are well described by the theory of proto-industrialization.³

This paper focuses on the relations between home producers and the merchants in the cities. The latter group lived within the production area and exported linen cloth to distant markets. They took a strong influence on the production methods in the countryside. The market relations between these two unequal groups shall be analysed within the framework of the theory of institutional economics.

One main characteristic of a proto-industrialized region is the orientation on supra-regional markets. The trade activities were centered in the premodern towns. The income from trade was regarded as undispensable for the town’s survival. As the

² Michael, Ernst: Die Hausweberei im Hirschberger Tal (Heimarbeit und Verlag in der Neuzeit, Bd. 7), Jena 1925, p. 18.
town had no agricultural production, it was not capable of feeding the inhabitants by its own forces. The Silesian linen markets were located in the centre of the production areas. There were smaller markets for the turnover of nearby villages and bigger ones in the above mentioned export-orientated trade towns. The city-based merchants bought up the raw linen and arranged the final preparation which was done by different kinds of craftsmen in the towns such as bleachers.

Since Mediavial times, the merchants and craftsmen were associated in guilds. These institutions endeavoured to guarantee stable incomes for their members, who all should have equal possibilities to achieve an income consistent with their status. The methods of organizing this were: (1) control of the number of members through guild obligation, entrance fees and a minimum starting capital, (2) control of technical know-how, production processes and product qualities, (3) limitation of the inputs such as labour, labour times, means of productions, the regulation of wages and prices, (4) a sanctioning system including the destruction of non-approved goods, (5) output restrictions.

In the linen centre of Hirschberg, the merchant class grew so strong that in 1658, they split from the all-craftsmen-guild (Vielhandwerkerzunft) which had previously included all kinds of crafts.4 As the most dynamic element of the town's economy, the trade broke out of the guild's barriers. But immediately after the separation, the merchants gave themselves a new catalogue of corporation rules. After the formation of a new guild, they chose leaders, called aldermen (Kaufmannsälteste). Their reunions took place quarterly under the supervision of Hirschberg's lord mayor. The aldermen had to be held in high respect as they had the penal right in guild affairs. For all the guild members, solidity and reliability were indispensable as well as the prohibition of unfair competition and the duty to buy well-fabricated good from the linen weavers that came to the city on market days.

In 1675, the Hirschberg guild was renamed the merchant-association (Kaufmanns-sozietät). Two years later, a similar organisation was formed in Landshut. These associations set up regulations for cloth manufacturing and for the inspection of the production process. The most important control institution was the Schau (inspection of the cloth) which had already been introduced with the foundation of the Hirschberg guild. The inspector verified whether the weaver's work had the right length, width and was of sufficient quality. The required measures were laid down by the guild's

rules. Four combinations of length and width were allowed. As a trade mark they were well-known to the clients on foreign markets and called *Hirschberger Maß*. A similar control system existed in many other branches and places since early Medieval times.

The cloth passed the *Schau* and received a seal to testify that the work had been correctly carried out. With this trade mark, the goods could be higher priced in far away fairs and markets. Thus, they could be more easily marketed. Until the end of the 18th century, the trade mark system remained very common in European business. The town's council (*Magistrat*) was interested in the *Schau*, too. The common thought was that the town's economic survival depended on its exports. So the council tried to maintain a high quality standard of the exported goods. The reputation of the cloth was essential for the maintenance of the town's wealth. As an officially approved quality inspection was necessary, it was advantageous for the council to delegate the task to the merchant's association. By doing so, the treasury could save the costs of an own control institution. Finally, the state was also interested in high quality standards to promote the exportation of textile goods. It was one of the main mercantile aims to get an active export balance. In 1662, the court in Vienna confirmed the regulations for the *Schau* by an imperial charter (*Reichspatent*). The Habsburg regime wanted to encourage the export-orientated home industries which were based on the manufacturing from domestic raw material. The inspector's task was to control both the small producers and the merchants. On all levels of the administration's hierarchy the idea of the *Schau* was supported. The market-orientated alternative, the individual control of the goods by the purchaser, was not realistic under these conditions.

At the start of mountain-based production, the *Schau* was only attended by Hirschberg craftsmen. With the expansion of weaving to the countryside, the capacity of the municipal institution turned out to be insufficient. The linen markets were so crowded that it became impossible for the merchants to inspect all the goods they bought up on a market morning. As the production had spread out, many weavers lived far from the trade towns. It became increasingly difficult for most of them to attend the weekly markets themselves. They sold their products to intermediary salesmen who dispatched the cloth to the market towns. In 1724, a new imperial charter introduced the *Schau* in every village where linen was produced. The municipalities or the

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7 *see Zimmermann*, pp. 37-43: *Leinwand- und Schleyerordnung im Herzogthum Ober- und Nieder-Schlesien*. Such regulations for linen production were already known in Medieval towns, for example
landlords in rural areas had to survey the installation of a Schau-room. The inspectors were selected by the state authorities but earned their wage on every piece of cloth that was inspected. The weavers were charged with the payment of the inspector. A well-produced piece of cloth received a seal which was fixed on both ends. The capital letters of the weaver's name were marked in brass and gave a hint to the identity of the producer. Non-sealed products were confiscated on the markets, the dishonest seller was severely fined. If a weaver denounced another one of fraud, he received a third of the good's worth as a reward.

With the introduction of a wide-spread Schau-system, the instructions for the production process were regulated in more detail. The small Schau-institutions in the villages were supervised by state inspectors. Therefore, the Silesian linen production area was divided in four districts, each with an inspector of its own. They stood under the direct control of the commercial board (Kommerzienkolleg). The urban regulations were now imposed on the whole production area. Thus, the purchase on a large scale was facilitated for the merchants in the trade towns. Neither did they have to inspect the individual goods nor did they have to exert any control on the production sphere. The government took over the task of controlling and safeguarding the production process. The countryside-based home industry produced standardized goods according to the Hirschberger Maß.

The state’s supervision did not only concern the final products, but also the preliminary working process. The spinners were only allowed to use reels that were manufactured according to the charter’s regulations. The reels had to be revised every two weeks in wintertime and once a month during the summer. The father of the family had to furnish a reel for every spinning member of the household. This prescription was to prevent the yarn made by different spinners which may have been of different thickness from getting mixed up with each other. By using the same reel, each spinner provided a homogenous yarn for the weavers. The law of 1724 introduced harsh punishments for offenders: the spinners could be beaten, sent to gaol or put in the pillory.

The yarn collectors bought up the yarn from the spinners in the Oder plain and brought it to the yarn markets or directly to the weavers' houses. The charter of 1724 assigned some control functions to them. They had to insure that the spinners and spoolers worked with clean hands. Another task was to guarantee a certain

homogeneity and quality standard by classifying the yarn. In the spirit of former guild regulations, the charter also called upon the weavers' solidity and reliability. The weavers had to use yarn of the same size and avoid the mixture of different qualities. Every small detail was regulated by law and strictly overseen by the state authorities.

The best method of saving yarn was manipulating the warp. The yarn was wounded on the warp beam. If the weavers used a shorter warp, the cloth had less width. So it was indispensable for the correctness of the cloth that the beam had the prescribed measures. Since 1716, the inspectors were responsible for the control of the warps. The producers of warp beams were put on oath and had to learn their work properly. From 1736 on, their names were burnt into the warp.\(^8\) When the weavers used shorter warps they had to stretch the cloth to get the measures requested in the inspection. By doing so, the linen ripped very frequently and had to be sewed together again. The authorities persecuted these frauds with the same penalties as mentioned above for the spinners.

That framework of regulations remained in place until the Prussian era. The annexation of 1740/42 did not change anything in the weavers' and spinners' working conditions. The organization of the putting-out-system was not touched. Meanwhile, the number of merchant associations had risen to five which merged into one body called Gebirgshandelsstand. In 1742, Friedrich II recognized the organisation as the official representation of the merchant class in the Silesian mountains. Beside Hirschberg and Landshut the town of Schmiedeberg (Kovary), which was situated between the two others, was involved in the linen trade. Another merchant guild existed in Greiffenberg (Gryfów Slaski), thirty kilometers north-west of Hirschberg. During the second part of the 18th century, a further association formed in the town of Waldenburg (Walbrzych). The most important of those linen-exporting towns remained Hirschberg. The newly installed Prussian governments in Glogau (Glogów) and Breslau (Wroclaw) supervised the quarterly meetings of the Gebirgshandelsstand which was presided over by the director (Landrat) of the Hirschberg Kreis (the Kreis was the smallest administrative unit). Now the merchants had an adequate institution to coordinate their commercial interests and synchronize their control activities with the state’s authorities.\(^9\)

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\(^8\) Göbel, p. 18.

In 1742, the regulations for linen production were renewed and diversified by a new law, and substantially amended in 1788.\textsuperscript{10} These two laws provided clearer instructions for the home workers and precise instructions for the production process. As it was difficult to get an equally twisted yarn, there were more detailed prescriptions for the reeling. It was desired to get equal terms for the measuring of yarn. From then on, one Gebünde consisted of 20 threads. Other measures were the Zaspel, the Stück and the Schock. One Schock equals 60 Stücke, or 720 Zaspel or 14.400 Gebünde or 288.000 Fäden (threads). The measuring system was comparable to the Irish sizes called skeins, bundles and bunches. For the cloth as the product of weaving, the length and width were regulated as before by the old Hirschberger Maß. The 1788 law was more strict: To improve the control on fabrication, the production of warp beams was only allowed in the five trade towns of the Gebirghandelsstand.

This organisation of the Schau-system guaranteed the manufacturing of standardized products in the whole proto-industrialized area. The interpretation of the regulations was very strict. Even when a piece of cloth was too long, it had to be cut off. As, in the merchants' eyes, the Schau was indispensable for the mass purchase of linen, they provided a Schau-table for every village in the mountains. The tables were free of charge for the inspectors and delivered by the merchant class itself. The payment for the inspection could be reclaimed by the weavers when they sold their cloth on the town market. This arrangement led to some complications because the merchants refused to restore the money paid for the inspection. This practice was one of the main reasons for the troubles of 1793. The state's protection for the Schau strengthened during the first decades of the Prussian government.

When the weavers came to the Schau with incorrect goods, the authorities regarded that as cheating. The offenders had to expect severe punishments. The most common form was to stand in front of the church on three successive sundays with an iron collar around the neck. The 1788 law introduced Oberschauämter (higher inspection offices) to improve the control of the local institutions. The home producers suffered under the control of the executive police forces such as Landdragoner or Polizei-Bereuther. These state officials watched the yarn and linen markets and supervised the work of the yarn and linen collectors. Every incorrectness was persecuted immediately. The controls improved steadily in a period of rapid expansion of linen production that lasted from the middle of the century until the Napoleonic wars. The 1788 regulations were more detailed than those of the charters before. More and more people were involved in the supervision system. Most of them, especially the

\textsuperscript{10} cf. Zimmermann, pp. 79-82, 176-182.
policemen, had to be informed very precisely because they did not have any specific knowledge of the production process.

Until the Prussian state's territorial reforms of 1815, Silesia was divided into the two départements of Breslau and Glogau. The smallest administrative units, the above mentioned Kreise, can be used here to precisely define the borders of the proto-industrialized region.11 From 1750 to 1800, proto-industry grew as quick as the population. In the 32 Kreise of the Breslau Department, the number of linen looms almost doubled within fifty years (1750: 9,088, 1800: 17,974).12 The fastest growth could be noticed in the newly industrialized Kreise such as Bolkenhain (Bolków), Glatz (Klodzko), Reichenbach (Dzierzoniów) and Schweidnitz (Swidnica). The old-industrialized Hirschberg Kreis, which was, apart from Löwenberg, the only proto-industrialized district in the Glogau Departement, just kept its 5,000 to 6,000 looms between 1750 (5,745 looms) and 1805 (5,331 looms). For a short period, during the economic crisis of the 1770s, the number declined to 4,144 looms (in 1775). The population growth in the second part of the 18th century was in the same order, nearly doubling between 1742 (1.1 million inhabitants) and 1803 (1.95 million).13

The growth of the linen industry was extensive. With the rising number of looms, the labour surplus in the agricultural sector could be turned into productive home-industrial work. Futhermore, the putting-out-system did not know any output limiting. That is an important difference to the way of production of the city-based guilds. But trade was not completely free because there still were similarities to the guilds' restrictions. The merchants' associations limited the number of people permitted to the trade by demanding high entrance fees. They tried to maintain a system of trade relations that was centered around the market towns. On the privileged markets, the wholesale trade was monopolized. The problem was how to guarantee this monopoly. In the countryside, a variety of small merchants who dealt with yarn or linen would have been in a stronger position if free competition had prevailed. This is why licenses were introduced that permitted trade outside the towns. This measure restricted the number of yarn and linen collectors according to the needs of the city-based merchants. The merchants accused the collectors of being responsible for the

11 Toni Pierenkemper: Space: A Missing Piece in the Puzzle of Economic Growth, September 1995, see: WWW-side, Universität zu Köln (Cologne), Dept. of Economic and Social History (Wirtschafts- und Sozialgeschichte), URL: http://www.uni-koeln.de/wiso-fak/wigesch/space.html.
12 Zimmermann, pp. 448-451.
increase of raw linen prices. In modern terms: By avoiding intermediary negotiations, the transaction costs created by the frequent change of property rights could have been lowered. Therefore, the city-based merchants made numerous efforts to oppress the small countryside-based merchants' activities. However, they only succeeded in limiting their number to a convenient size.

Generally, the linen markets opened in the middle of the morning. Hundreds of linen weavers and collectors came there to sell their goods for a reasonable price. In Hirschberg, the old merchant houses were situated around the central square. The houses had arcades and on market days, the merchants sat in front of their houses on high chairs from where they overlooked the hustling crowd. The sellers came to the bottom of the chair to offer their piece of cloth. From above, the merchant verified the piece of cloth by a short glance. It was not necessary to unroll the cloth because it had already been inspected in the local *Schau*-institution. The merchant gave his price. If the weaver agreed, a chalk mark was made on the rolled linen. That meant that the cloth was sold and no other purchaser was allowed to make another offer. The chalk mark could only be removed by washing the cloth, but there was no time to do so. As the merchant only signed the pieces he really liked, the sellers were completely dependant on his goodwill. The major role of the *Schau* was to assure a minimum quality standard of the produced goods. In view of the confusion on the markets, the *Schau* reduced the intransparency of the market situation - in a literal way. The maintainance of the institution as well as of the whole rural trade system was essential for the city-based merchants because these institutional arrangements reduced their transaction costs.

Standardization, supervision and disciplining were the most important conditions for the marketing system in Silesia. The merchants were the main beneficiaries and defended the existence of the *Schau*. When in 1811 freedom of trade was established, the Gebirgshandelsstand claimed the maintenance of the old *Schau*-regulations that dated from 1788. Based on the weaver's oppression, the arrangements of the Silesian putting-out-system were rational and guaranteed profits to the merchants.

What could the merchants expect if the *Schau*-system had been abandoned? Under free market conditions, the merchant would have been forced to reorganise his ways

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14 Zimmermann, p. 57.
15 Archiwum Państwowe Jelonej Gorze (APJG), Hirschberger Societät No. 278. Conference on the 8th April 1811. See also: Geheimes Staatsarchiv-Stiftung Preußischer Kulturbesitz Berlin, Rep. 120, B II 1, No. 3.
of purchase. That would have meant large information and bargaining costs.\textsuperscript{16} The centre of trade would have shifted to different markets in the countryside. The convenience of buying up in front of his own house would have been lost. The small rural merchants would have had very much better starting conditions. They knew the local producers personally. Furthermore, they were closer to the production process as, in many cases, they had abandoned their work as craftsmen only a few years ago and they had succeeded in establishing a small business. In the Landshut Kreis, two thirds of the registered linen collectors had been weavers before starting their commercial activity.\textsuperscript{17} On the other hand, the city-based merchants would have to establish new purchase connections and fix the detailed conditions of new commercial exchanges. These costs would have exceeded by far the supervision costs of the existing organised markets. The commercial framework guaranteed a stable income for the privileged merchants whereas the market uncertainty connected with the abolition of the \textit{Schau}-system was incalculable.

What were the \textit{Schau}'s effects on the production sphere? The producer’s main aim was that his fabricated goods passed the inspection without complaints. The historical sources give hints that the \textit{Schau}-rooms were very crowded, too. For instance, it was prohibited to carry out the inspection during nighttime.\textsuperscript{18} Presumably, the inspection of the cloth by the inspectors was rather fast as he increased his salary by doing his work more quickly. He had to decide if the cloth was just good enough to pass the inspection. Sometimes, it was of poor quality but within the sizes for length and width indicated by the 1788 law. Such kind of "fraud" seems to have been very common among the weavers. They produced pieces of cloth that did not have the right width. That came from illegally using warps of Bohemian origin which were shorter than the Silesian ones according to the regulations of 1788. Before going to the \textit{Schau}, they moistened the piece of cloth and stretched it to get the right size (\textit{Schauerung}). When they did so, the cloth often ripped and had to be sewed. Such kind of damages led to an inferior quality of linen. Therefore, Silesian linen was known all over Europe as a mass product of low quality standards but with low prices as well. Since the middle of the 18th century, it was mostly exported as cheap clothing to the American overseas territories via England or Spain.

\textsuperscript{17} APJG, Landshuter Societät No. 82. Consignation der im Landshutischen Creyße befindlichen Leinwandt Einkaeuffer (28th March 1763).
\textsuperscript{18} Zimmermann, p. 115.
The home producers had no interest in a rise of quality standards under the purchase conditions described above. The chances of getting a higher price for a better product were small. The merchants' mass purchase did not allow to differentiate between several types of quality. The whole transaction was realized so quickly that there was no time left for merchandizing. No stimulus existed to enforce an improvement of quality.

Furthermore, there was a lack of interest to diversify output. Even the renewed 1788 regulations for the Schau fixed only four different cloth sizes where a certain length corresponded to a prescribed width. The four sizes allowed in the Schau-system were still the old and traditional Hirschberger Maß that had remained unchanged for a century. Once the epitome of a good reputation, it had turned to a standardized size that allowed the mass production of the Silesian proto-industry, but now of a poor quality. As long as the Schau existed, it was difficult to introduce product innovations because the prescriptions for the inspection would have to be changed every time. Deciding in favour of the Schau's supervision meant accepting mass output on a low price level.

The merchants remained hostile to innovations in other domains. The Prussian government wanted to settle Saxon damask weavers in the Silesian mountains where this craft was fairly rare before. The measures reflected the spirit of Colbertism in the Prussian government. The settlement of craftsmen should provide an extensive growth by increasing the labour force involved in the production process. The government's arrangement led 61 families from Saxony to Silesia who settled in the Hirschberg region in the late 1740s. The settlers were exempt from military services and taxes, received free housing accommodation and full civic rights. Despite these great efforts, the damask industry did not flourish. The main problem was the merchants' refusal to trade with this new type of cloth. Traditionally, damask had only been manufactured for the interior market by the city-based craftsmen guilds or had been imported from Switzerland or France. The merchants in the Hirschberg valley claimed that the storage costs for damask were too high and that the designs went out of style too fast. As they had sold only simple linen goods before, they had no experience with that new kind of product and did not want to take the risk of trading in it. They only bought up the weavers' damask if there was an explicit order from foreign clients. Thus, the introduction of damask weaving failed. The merchants in the cities could not be persuaded to trade with those products and the smaller

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19 Zimmermann, pp. 97-100.
merchants in the countryside were prevented from participating in the supra-regional trade by the strict regulations of the 1788 charter.  

The inadequate diffusion of cotton was another example. Cotton was the most important raw material of the 19th century. Many European regions knew a production of mixed cloth with linen and cotton in preindustrial times. In Silesia, such industries were only located in the Kreise of Reichenbach and Schweidnitz. But this situation was special, too. The fabrication of so called Cannevas or Barchent was promoted by the Reichenbach craftsmen guild whose activities shifted from production to trade of textile goods. Until the middle of the 18th century the main sales area was Silesia itself. As there was no supra-regional export, one cannot speak of real proto-industrialization until that time. The growth of cotton production started relatively late.

Obeying the regulations of 1788, the Reichenbach merchants followed the example of their colleagues from the Silesian linen production areas. In the Reichenbach Kreis, they introduced an obligatory Schau-system for the countryside-based weaving that had the same negative effects on the production as described above. The organisation form of the Silesian putting-out-system was incapable of adopting well-known innovations from elsewhere and of introducing them in the domestic production process.

The expansion of the production sphere followed the path of quantitative growth without any application of new techniques or any kind of modernization at all. The institutions of the putting-out-system guaranteed on the one hand low transaction costs for the merchants, but on the other hand, promoted their hostility to innovations. The Schau survived into the 1830s and even 1840s when Silesia, in pre-modern times one of the largest proto-industrialized areas of Europe, had lost touch with the West-European industrializing countries. The example of this region can disprove the general theory that only the most efficient institutions survived in the economic

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20 For a detailed description until the 1780s see Fechner, Hermann: Wirtschaftsgeschichte der preußischen Provinz Schlesien in der Zeit ihrer provinziellen Selbständigkeit 1741-1806. Breslau 1907, pp. 135-140.
21 Roemer, Hans: Die Baumwollspinnerei in Schlesien bis zum preußischen Zollgesetz von 1818 (Darstellungen und Quellen zur schlesischen Geschichte, Bd. 19), Breslau 1914, p. 15.
22 Archiwum Państwowe we Wrocławiu. Akta Miasta Dzierżoniowa No 912, fol. 136. Magistratsakte (23th June 1789).
23 In the law of 2nd June 1827, the regulations for the Schau were renewed, see Zimmermann, pp. 268-271; Geheimes Staatsarchiv-Stiftung Preußischer Kulturbesitz Berlin, Rep. 120, B II 1, No 2.
process.\textsuperscript{24} The pressure group of wealthy merchants succeeded in keeping economic organization forms that were only efficient for their use, but not for economic development in general.

Following Clemens Wischermann, it is one of the lessons of economic history that the weeding out of inefficient institutions was not a general, but a very particular case.\textsuperscript{25} Of course, this holds true for the whole preindustrial period. At the eve of industrialization, the lack of institutional modernization could have negative effects on the development of a whole region, as the Silesian case shows. In a time of rapid change and accelerated growth, some decades of stagnation were enough to cause some regions to lose to the rapid development of industrialization which was taking place elsewhere. Institutions as the ones described above existed in many regions of the European continent. The absence of similar regulations in England where the state's government was too weak to provide support for such pressure groups seems to have promoted English development.\textsuperscript{26} For the regions, which lagged behind, it was important at which moment the institutional barriers were removed. Obviously, this determined the chances for a successful economic development.

\textsuperscript{24} North, Douglass C.: Institutions, institutional change and economic performance, Cambridge 1990, p. 92.
\textsuperscript{26} Ogilvie, Sheilagh C.: Social institutions and proto-industrialization, in: Ogilvie / Cerman, p. 25.