

Seiji Horii

*Promotion of high-quality textiles by prize competitions during the Enlightenment in Saxony. From raw material to finished product manufacturing*

## 1. Introduction

Many European governments implemented economic policies for introducing advanced «useful knowledge» during and after the Industrial Revolution. Their strategies included: providing bounty, awarding medals, inviting engineers from industrially advanced countries, ordering overseas dispatch, and establishing patent systems. Researchers often describe them as «innovation-inducing systems». In Saxony, these policies were implemented from the late eighteenth century (Forberger 1958; Schlechte 1958). A significant policy in Saxony was the system of *Preisauflage*, or «prize competitions».<sup>1</sup>

Prize competitions encouraged the public to find solutions for industrial, academic, or social issues, and the amount of prize money to be paid to the innovator was announced in advance. Thus, the premise of the prize competitions can be outlined as: «if you achieve something or solve some difficulties by a predetermined deadline, we will pay you the predetermined amount of money».<sup>2</sup>

According to KEI Research Note (2008)<sup>3</sup>, prize competitions have been held worldwide from the sixteenth century onwards, in various industrial or academic fields. KEI Research Note (2008) shows examples implemented in the eighteenth century. Their target has ranged from industrial themes to social issues and mathematics. Prize competitions are still held in several fields. For example, Millennium Prize Problems, published by Clay Mathematics Institute in the United States, provides incentives to solve scientific problems. For the textile industry – the driving industry of the Industrial Revolution – prize competitions were established for the invention or introduction of textile machinery since the development of Hargreaves' spinning jenny and Arkwright's water frame.<sup>4</sup>

I will discuss the diffusion of useful knowledge in the latter half of the eighteenth century from the perspective of the textile industry. Discussions about

---

<sup>1</sup> Previous studies translated «*Preisauflage*» to «prize contest» and «prize essay contest». Moreover, «*Aufgabe*» could have been more appropriately translated as «task» or «assignment», but I chose «competition» to reflect this system's competitive nature.

<sup>2</sup> Specific examples in Saxony are listed in section three.

<sup>3</sup> You can access this research paper on this URL: <https://www.keionline.org/book/kei-issuesreport-on-selected-innovation-prizes-and-reward-programs>

<sup>4</sup> Prize competitions related to silk or carpet manufacturing were also set according to KEI Research Note (2008). However, this study does not discuss them in detail.

knowledge or technology diffusion in the eighteenth-century textile industry mainly focus on the transmission of methods and machinery for manufacturing textiles, such as the spinning jenny, from England to the continental European countries. However, this study shows the intention to transfer «useful knowledge» and improve the quality of textile products and manufacturing textile machinery via prize competitions held in Saxony. Knowledge dissemination about product quality originated in England, France, Belgium, and other continental European countries, where high-quality textile products had already been manufactured at that time.<sup>5</sup> These products involved textile goods and their raw materials, and the government also promoted the skills of bleaching and dyeing and the establishment of training institutions. In the latter half of the eighteenth century, the knowledge transfer network in the textile industry was already a multilinear network, including several countries, rather than a uni-directional flow (e.g., from England to one continental European country).

## 2. Textile industry development in Saxony

*Kurfürstentum Sachsen*, the electorate of Saxony, industrialised relatively early. According to Tilly and Kopsidis (2020), Saxony was «The first German region to achieve the transition from agrarian to an industrial economy several decades earlier than the northern *Rhineland* and *Ruhr* area» (Tilly and Kopsidis 2020, 26). Saxony pioneered the mechanisation of the textile industry, which began in the latter half of the eighteenth century, providing the foundation for industrialisation by promoting mechanisation from the nineteenth century onwards. The process of mechanisation – including the introduction of spinning machines – has been mentioned in numerous previous studies. The policies of the Saxon government, merchants (e.g., Bugenhagen) and famous inventors (e.g., Matthias Frey, Carl Gottlieb Irmscher, Christian Wilhelm Forkel and Johann Gottfried Pfaff) improved productivity or facilitated the introduction of jenny or carding machines (Forberger 1958; Horii 2020).

The textile industry in Saxony was already well established long before industrialisation began. By the turn of the sixteenth century, fustian weaving and dyeing were brought to Saxony. Dyeing flourished in *Erzgebirge* (Ore Mountains); however, the development of the Saxon textile industry was crippled by the Seven Years' War. It took a heavy toll on Saxony, but a series of economic policies under the German scientific, cultural and industrial enlightenment helped to restore the land. It was able to recover relatively quickly from the devastation (Bochmann, Dresler, and

---

<sup>5</sup> France produced silk, and Belgium produced superior quality bobbin lace in the eighteenth century. European countries took various approaches to replicate Chinese products. According to Suzuki (2006), «by the end of the seventeenth century, silk production in Europe had developed considerably. By the end of the eighteenth century, the silk industry in Europe had reached the level of China in terms of the technology of the manufacturing process» (Suzuki 2006, 301). Moreover, bobbin lace was mainly embroidered in Brussels. The reputation of Brussels lace grew before the end of the seventeenth century, when it was embroidered on various products – including ties, jewels, aprons, dresses – and used in interiors. Even after 1760, Brussels had a high reputation in Europe for its lace (Kraatz 1989).

Tietze 1995, 540). Prize competitions incentivised innovation, thereby contributing to recovery from the war.

Previous studies have drawn the following conclusions about the Saxon textile regions: First, the industry's development differs from region to region even within a single territory. For example, according to Schäfer (2015), the textile industry in Saxony can be divided into the following six districts: (1) the southern *Vogtland* around the city of *Plauen*; (2) northwards from *Reichenbach/Vogtland*, including the *Zwickau* und *Crimmitschau Werdau* areas; (3) *Chemnitz* and *Glauchau*; (4) *Chemnitz* and the western *Erzgebirge*; (5) the higher ranges of the *Erzgebirge* (lace making and the manufacture of *Posamenten*) and (6) southern *Oberlausitz*. Other textile industry areas were scattered in *Kamenz*, *Bautzen*, *Bischofswerda* and other regions (Schäfer 2015, 117-118). These areas were considered representative of proto-industrialisation, and the foundation for the later industrial age was laid during the eighteenth century. *Erzgebirge* and *Chemnitz* mentioned in (3), (4) and (5) and *Vogtland* mentioned in (1) and (2) were important regions for the textile industry in Saxony.

Second, in the early modern period, the *Erzgebirge* textile industry replaced linen with cotton products, for example, bobbin lace making, embroidery (*Posament*) and ribbon weaving (Karlsch and Schäfer 2006, 20; Tilly and Kopsidis 2020, 29). In *Chemnitz*, in the northern part of the *Erzgebirge*, the manufacture of «high-quality» socks made of cotton began at least in 1728. As early as 1770, cotton weaving and printing spread, and *Chemnitz* later became a centre of calico printing. Many of these products (e.g., canvas, *wallis*, and *piqué*) were copies of fashionable products made in England and France (Kowalski, Matera, and Sokolowicz 2018, 20; Schäfer 2015, 120). Moreover, by the 1780s, *Plauen* and rural areas in *Vogtland* were mainly producing light, thin and «high-quality» cotton products, such as muslin (Kaufhold 1986, 129-31). Although the production of cotton products increased in the latter half of the eighteenth century, the production of traditional textile products, such as linen and wool, did not stop completely. In contrast to the textile regions of southwestern Saxony, the southern part of *Oberlausitz* mainly produced linen until the end of the eighteenth century. Although linen production there stagnated in the late eighteenth century, the linen industry still constituted a large share of Saxon textile goods exports in 1785 (Karlsch and Schäfer 2006, 20-21). Thus, in the eighteenth century, the Saxon textile industry produced a wide variety of textile products, fabrics, socks, and ornaments made of cotton or other raw materials. They produced a range of quality ready-made and decorative items in addition to yarn and cloth.

The textile industry was established in Saxony in the sixteenth century, but it did not always grow steadily during the eighteenth century. Like the other continental European countries, it was significantly affected by the British Industrial Revolution. However, although the influx of British cotton products had already begun in the 1770s, it did not initially threaten the Saxon textile industry. Rather, it provided a positive stimulus – to some degree – in the form of textile varieties and manufacturing methods. From the 1790s the influence grew stronger. Many merchants and the government felt the pressure at that time because the British brought numerous cotton products to the market in *Leipzig*. Moreover, muslin manufactured in *Plauen* faced stringent competition from British products in the *Leipzig* market. The prices

of cotton cloth and cotton yarn made in England were 10-30% lower than those of Saxony. Additionally, with the outbreak of the French Revolutionary War, British manufacturers established sales channels in *Hamburg* and *Leipzig*. The textile industry was in a difficult situation between 1793 and 1806. During this period, the competition with England increased, firstly in the production of muslin and then in the middle- and low-quality products (Bein 1884; Crouzet 1964, 577; Oshima 1960, 466-68; Schäfer 2015, 121). Furthermore, from the mid-1780s, countries such as France, Austria and Russia began closing their markets and imposing high tariffs, thereby placing Saxon textile producers in a predicament (Kowalski, Matera, Sokolowicz 2018, 19).

### 3. Enlightenment and the promotion of industrial development

The Seven Years' War had a significant economic and financial impact and one of the government's main tasks was to restore the predominantly agricultural economy – as well as the mining and textile industries. This series of reforms was called *rétablissement*.

These reforms in Saxony were inspired by the French and English enlightenment (Blaschke 1967, 74-76). The *Kommerzien Deputation*, which had already been established in 1735, was reorganised in a series of reforms as the *Landes-, Ökonomie-, Manufaktur- und Kommerzien Deputation* in April 1764. The Deputation was not given direct command but was responsible for demographic studies, and research into statistics, education, agriculture, forestry, hunting, fishing, commerce, factories, and many other fields (Czok 1989, 288-289).

Immediately after the establishment of the Deputation, the *Leipziger Ökonomischen Sozietät* – one of the leading scientific academies in the continental European countries – was founded, although it lagged the leading examples of European countries<sup>6</sup> (Henderson 1985, 36). The Economic Society played an important role in spreading the spirit of enlightenment and useful knowledge. Its mission was to «promote the common weal» although its contents tended to be diversified (Bödeker 2012, 182). The focus in the early years was on agriculture and livestock, to improve the nutritional status of the civilian population affected by the war. However, three levels were included – natural science (i.e., mineralogy, chemistry, and mechanics), manufacturing, and trade and agriculture (Bödeker 2012, 188).<sup>7</sup>

These two institutions worked together to implement the system of prize competitions. According to Rübberdt (1934), since the founding of the Economic Society in 1764, it had widely published several types of publications, one of which

---

<sup>6</sup> Before these efforts in Saxony, scientific or economic societies were established in European countries to expand the network of intellectual exchange. For example, in England, the Royal Society of London was founded in 1660; in France, the Royal Academy of Sciences was founded in Paris in 1666 and in Germany, the Academy of Sciences in Berlin was founded in 1700.

<sup>7</sup> «Their activity included promoting industry by providing advanced training, offering prizes and organising exhibitions; supporting existing (or establishing new) charitable institutions; reforming poor relief, rescue services and health education; setting up schools for midwives; and promoting new policies on vaccination programmes. The four main areas were agriculture, trade and industry, policies (domestic and social policy) and education» (Bödeker 2012, 196).

contained the announced prize competitions (Rübberdt 1934, 53-54). Forberger (1958) mentions the prize competitions, but he only describes who would receive the prizes and when and how many prizes would be awarded in individual cases. He indicates that the awarding of money through prize competitions assisted the development of various industries, but the overall picture is vague.

The study of economic societies by Eichler (1978) is the first authentic examination of prize competitions in Saxony. He positions the economic society in the scientific world of eighteenth-century Saxony and mentions the function of prize competitions. Eichler (1978) reconstructs the data on their winners including the promulgation year of the prize competitions, their theme, the amount of the prizes, the year of the prize awarded, and the names, occupations, and residences of the winners (Eichler 1978, 381-86). He cites the *Leipziger Intelligenz-Blatt* as historical material. However, how this table was executed remains unclear, because the prize winners are not mentioned in the document, and no page numbers are given as the source. Nevertheless, his work is cited in subsequent studies of the achievements of Saxon prize winners in this period, and there is no discussion based on other documents (e.g., Czok 1989; Schöne 2001; Stöbe 1996). Bosse (2018) also discusses this economic policy extensively, but the content of achievements could not be discussed due to the limitations of historical material. Accordingly, Horii (2021) discusses the results achieved by the prize competitions based on the primary data.<sup>8</sup>

I build on the discussion by Horii (2021), to examine the intentions of the prize competitions and the question of who was responsible for the transmission of knowledge and technology in the textile industry in the eighteenth century «who achieved». This will elucidate the origins of the inventors and workers who supported industrialisation.

#### 4. Historical materials

I analysed a part of *Landes- Ökonomie- Manufaktur- und Kommerziendeputation*. The unpublished documents are *Verzeichnisse über die nach den Preisaufgaben der Kommerziendeputation, 1764-1791* (*Verzeichnisse 1764-1791*) and *Verzeichnisse über die nach den Preisaufgaben der Kommerziendeputation zuerkannten Prämiengelder, 1792-1810* (*Verzeichnisse 1792-1810*), classified as 02. 03, *Rechnungslegung der Prämienkasse in 02. Kassen- und Rechnungswesen bei der Deputation*.

These historical materials include a list of prize winners provided by the Deputation and the Economic Society. The information includes the amount of the

---

<sup>8</sup> Horii (2021) examined the cases of textile industry-related prizes. The prizes awarded can be classified into the following eight categories: «(1) raw materials supply; (2) spinning process; (3) weaving process; (4) bleaching, dyeing, processing, finishing and the decoration process; (5) manufacturing of ready-made products, which were directly related to production processes; (6) establishment of textile factories; (7) introduction, manufacturing and improvement of machinery; and (8) education» (Horii 2021, 7). Some points in the process leading up to the awarding of the prizes are unclear, such as the difference between the actual amount awarded and the amount stated in the sentences outlining the prize competitions». However, we can ascertain a specific trend in the recipients of the prizes, indicating that many prototypes were submitted in response to the prize competitions.

prize; the occupation, name, and residence of the winners; the type of the prototype; other details and the number of prize competitions.<sup>9</sup> These historical documents contain information on prototypes and awards that have not been examined in previous studies, and they provide clues to clarify the overall picture of the prize competitions (Horii 2021, 4-5). However, some years are not recorded in the archives, 1773-1781, and I cannot necessarily be sure that all cases that led to the awards have been recorded. The awardees are recorded without interruption except for that blank period.

These historical materials are best suited for examining the subject of this paper. It is widely known that many technological and quality improvements were achieved in Saxony during the eighteenth century. The use of these materials makes it clear what the prize competitions were aiming at and who was responsible for the achievements.

## 5. Prize competitions implemented in Saxony

This section provides an overview of the prize competitions in Saxony in the late eighteenth century. *Kurfürst Friedrich August III.*, Elector of Saxony from 1763 to 1806 (later *Friedrich August I*, King of Saxony, 1806-1827),<sup>10</sup> inherited his father's willingness to support science and the dissemination of knowledge,

[...]to promote agriculture, manufacturing and trade in the Electoral Saxon lands, and thus to encourage the entire food supply (*Nahrungsstandes*), decided to grant certain premiums to those who would excel in one of these areas, decided to have certain premiums handed out to those who would excel in one of these types, consequently set up a revenue fund for this purpose, and ordered *Landes- Ökonomie- Manufaktur- und Kommerzzen- Deputations* to bring the prize competitions drafted under the same highest approval [...] (*Leizpiger=Intelligenz-Blatt*, 28 Juli, 1764, 276-77).

In other words, the prize competitions promulgated in Saxony were designed to promote agriculture, industry and commerce and improve the food supply after the devastation of the Seven Years' War.

---

<sup>9</sup> Some of them mentioned almost all the items, whereas others did not mention information, such as the winner's occupation.

<sup>10</sup> *Friedrich August I*, King of Saxony, was the second son of *Friedrich Christian*. He was underage when his father died, and he assumed the throne in 1763. His uncle, Prince Franz Xavier, served as his representative. He succeeded with his father's willingness to learn about the production from other regions to rebuild Saxony.

### 5.1 The number of prize competitions implemented during the eighteenth century

Tab. 1. Prize competitions promulgated during the eighteenth century

Promulgation Year	Prototypes Submission Deadline	Number of Promulgations	Number of Promulgations on Textile Industry	Ratio of Textile Industry
1764	Michaelmas, 1764	29	19	65.5%
	Easter, 1765	9	2	22.2%
	St John's Festival, 1765	7	3	42.9%
	Michaelmas, 1765	6	2	33.3%
	deadline not determined	7	1	14.3%
1766	Easter, 1766	6	2	33.3%
	Michaelmas, 1766	5	2	40.0%
	Easter, 1767	3	1	33.3%
	1767-1771	4	0	0%
1767	Easter, 1767	3	1	33.3%
	Michaelmas, 1767	5	0	0%
	Easter, 1768	3	1	33.3%
	Michaelmas, 1768	5	2	40.0%
	1769-1771	3	1	33.3%
1770	Easter, 1770	23	6	26.1%
	Michaelmas 1773			
	deadline not determined	4	1	25.0%
1778	Michaelmas, 1779	1	1	100%
1782	1782-1785 (Extended until 1788)	26	8	30.8%
1788	1788-1800	58	12	20.7%
All Years		207	65	31.4%

Source: 1764; *Avertissement, wodurch auf höchsten Befehl Ibro Königlichen Hoheit des Prinzen XAVERII, Königl. Prinzens in Pohlen und Litthauen u. auch der Chur Sachsen Administratoris, zur Aufmunterung des Nahrungs=Standes sowohl einige bereits unterm 18ten Julii 1764 anderweit ausgesetzte Preis=Aufgaben, mit einiger Erläuterung als auch einige neue Aufgaben bekannt gemacht werden (Avertissement)*, 1-16, 1766, 1767, 1770, 1778, 1782; *Verzeichnisse, 1764-1791*, 3, 9, 13-14, 19-21, 32-35, 1788; *Preis=Aufgaben, so auf Höchsten Befehl Ibro Churfürstl. Durchl. zu Sachsen zur Aufmunterung des Nahrungsstandes auf das gegenwärtige, und die folgenden Jahre 1789, 1790 und 1791 ausgesetzt worden sind, und von Er. Churfürstl. Landes = Oekonomie = Manufaktur = und Commerzien = Deputation bekannt gemacht werden.(Preis=Aufgaben)*, 4-20.

Consequently, the first prize competition in Saxony started in 1764. The prize competitions were not static throughout the late eighteenth century but were up-

dated occasionally. New prize competitions were promulgated seven times: 1764, 1766, 1767, 1770, 1778,<sup>11</sup> 1782, and 1788 – the last remaining valid until 1800.<sup>12</sup> According to Table 1, 207 prize competitions were valid from 1764 to 1800.<sup>13</sup> Their contents ranged from agriculture to mining, and the textile industry accounted for 31.4% of all assignments. This shows that the Deputation and Economic Society regarded the textile industry as one of the most important targets for promoting development.

The prize competitions in Michaelmas 1764 were the most frequent throughout the early part of the period. The textile industry accounted for 65.5%, which means that it was prioritised by the Saxon government for industrial development in the early stages. After that, there were fewer prize competitions until 1767. Nevertheless, a certain number were related to the textile industry. More than 20 prize competitions were promulgated in 1770, and the largest number (58 prize competitions) was promulgated in 1788. Of these, the textile industry accounted for 20-30%.

## 5.2 Overview of each prize competition

I undertook a textual analysis of each sentence outlining the prize competitions. I tabulated: the deadline, prize number, raw material, the distinction between the domestic or foreign origin of the raw material, the manufacturing process, product name and prize amount.<sup>14</sup> The 1764 prize competitions included that information (Table 2). Most raw materials mentioned were wool or linen, with camel hair, silk and nettle being the exceptions. No. 6's wool was specified to be made from foreign raw materials, and the rest – wool and camel hair – had to be made from domestic raw materials.<sup>15</sup> In the case of wool, many processes, such as shearing, brushing, spinning, weaving, fulling, dyeing and finishing, were included. Linen processing included: harvesting raw materials, spinning, and weaving.

---

<sup>11</sup> A special prize competition on dyeing was set in 1778 for one subject only. A reward of 100 Taler was to be paid for submissions relating to red dyeing on exquisite pale burlap or cotton cloth, not yet known at this time (*Vorzeichnisse 1764-1791*, 31).

<sup>12</sup> Forberger (1958) said that the prize competitions were published on 18 July 1764, 1 May 1765, 8 February 1766, 28 March 1767, 13 January 1770, 5 June 1782, 13 August 1788, 26 February 1800, 31 December 1805, 14 October 1816, 22 February 1820, and 12 May 1826 (Forberger 1958, 244). The prize competitions promulgated on 1 May 1765 cannot be confirmed in historical materials.

<sup>13</sup> There were three divisions of economic development in Saxony: «the first emphasising developments in the eighteenth century up to the French, or Napoleonic era; the second covering the French period (1792-1815) and the third from Saxon industrialisation up to about 1840 or 1850» (Tilly and Kopsidis 2020, 26). Considering this division of time, we selected the prize competitions in the late eighteenth century before the French influence.

<sup>14</sup> In addition to such information, detailed conditions and other information were sometimes attached. I have provided an overview as there is insufficient space to include all the detail.

<sup>15</sup> As reported in the table, no raw material was specified in many cases, or no distinction was made between domestic and foreign products.



Tab. 2. Overview of the 1764 prize competition

Prototypes Submission Deadline	No.	Raw Material	Domestic or Foreign Materials	Manufacturing Process	Product Name	Prize (Taler)
Michaelmas, 1764	1	wool	Domestic	shearing	<i>Landvolle</i>	60
	2	wool	Domestic	shearing	<i>Landvolle</i>	60
	3	wool		spinning	<i>Garn</i>	20, 20
	4	linen		spinning	<i>Garn</i>	20
	5	wool	Domestic	weaving	<i>Tuch</i>	80
	6	wool	Domestic or Foreign	spinning, processing, fulling, dyeing, finishing	<i>Tuch</i>	100
	7	camel hair	Domestic	weaving	<i>Camelott</i>	50
	8	wool		spinning, weaving, dyeing, finishing, defining	<i>Zeng</i>	15, 10, 5
	9	silk		weaving	<i>Zeng</i>	20
	10	nettle		weaving	<i>Nesseltuch</i>	20
	11	linen		weaving	<i>Leinwand</i>	15, 10, 5
	12			weaving	<i>Zwillich</i>	15, 10, 5
	13	linen		weaving	<i>Damast</i>	15, 10, 5
	14			bleaching	-	100
	15			weaving	<i>Kammertuch, Batist</i>	50
	16			spinning	<i>Garn</i>	10
	17		Domestic	twisting	<i>Lotzwirn</i>	30
	18			twisting, bleaching	<i>Zwirn</i>	25
	19			lacemaking	<i>Spitzen</i>	50
Easter, 1765	3	wool		brushing, spinning	<i>Garn</i>	10
	4			spinning	<i>Gespinst</i>	50
St John's Festival, 1765	4	wool	Domestic	shearing	<i>Wolle</i>	50
	5			fulling, finishing	<i>Walk, Fullererde</i>	30
	6			final product	<i>Hut</i>	30
Michaelmas, 1765	5	linen	Domestic	harvesting raw materials	<i>Flachsbaum</i>	50
	6	wool	Domestic	shearing	<i>Wolle</i>	50
deadline not determined	7		Foreign(?)	socks knitting	<i>Strumpf Wurker Stuhl</i>	30

Source: *Avertissement*, 1-16.

Although no raw materials were specified, bleaching, lacemaking and twisting were also included, and processes other than simple spinning and weaving were incorporated into the list of processes to be promoted. Additionally, prize competitions were allocated for the manufacture of ready-made goods (e.g., hats and socks) and the search for raw materials for fulling. In this way, the 1764 prize competitions were aimed at various processes and products.

Some of the 1766 and 1767 prize competitions were similar in content to Tables 3 and 4. Almost all of them share the same contents: the production of *Zeug*<sup>16</sup> by weaving silk, the harvesting of linen and domestic wool and the production of cambric (*Kammertuch*) and batiste. In 1766 twisting of *Lotwäzirn*, and in 1767, fulling was identified as separate items. The number of prize competitions in these years was less than in 1764, and they did not seem to be actively pursued as an economic strategy.

Tab. 3. Overview of the 1766 prize competition

Prototypes Submission Deadline	No.	Raw Material	Domestic or Foreign Materials	Manufacturing Process	Product Name	Prize (Taler)
Easter, 1766	3	silk		weaving	<i>Zeug</i>	20
	5		Domestic	twisting	<i>Lotwäzirn</i>	30
Michaelmas, 1766	3	wool	Domestic	shearing	<i>Wolle</i>	50
	4			weaving	<i>Kammertuch,</i> <i>Batist</i>	50
Easter, 1767	1	linen		harvesting raw materials	<i>Flach</i>	30
1767–1771		not set on the textile industry				

Source: *Verzeichnisse 1764-1791*, 9.

<sup>16</sup> *Zeug* is a small, narrow, borderless fabric made from long wool, with little or no felting, whereas *Tuch* is a felted fabric. While *Zeug* has no precise definition, it seems to be distinguished from *Tuch* on three aspects: small width, unfilled and use of worsted yarn (Morota 1962, 262).

Tab. 4. overview of the 1767 prize competition

Prototypes Submission Deadline	No.	Raw Material	Domestic or Foreign Materials	Manufacturing Process	Product Name	Prize (Taler)
Easter, 1767	1	linen		harvesting raw materials	<i>Flach</i>	30
Michaelis, 1767		not set on the textile industry				
Easter, 1768	2			fulling, finishing	<i>Walk, Fullererde</i>	30
Michaelmas, 1768	2	wool	Domestic	shearing	<i>Wolle</i>	100
	5			weaving	<i>Kammertuch, Batist</i>	50
1769-1771	1	silk		weaving	<i>Zeug</i>	20

Source: *Verzeichnisse* 1764-1791, 13-14.

Tab. 5. Overview of the 1770 prize competition

Prototypes Submission Deadline	No.	Raw Material	Domestic or Foreign Materials	Manufacturing Process	Product Name	Prize (Taler)
Easter, 1770	3	wool,		dyeing	<i>wollenen, baum-</i>	10
-		cotton,			<i>wollenen, und lei-</i>	
Michaelmas, 1773	6	linen		dyeing	<i>nenen Waren</i>	
	9	wool		dyeing	<i>Strumpf</i>	25
	9	cannabis	Domestic	harvesting raw materials	<i>Hanf</i>	30
	10		Domestic	dyeing	<i>Färberrote</i>	5
	13	linen		bleaching	<i>Leinwand</i>	50
	16	linen		harvesting raw materials	<i>Flach</i>	20, 15, 10
	20	silk		harvesting raw materials	<i>Maulbeerbaum</i>	50, 30, 20
submit any time until Michaelis, 1773	2	wool, cotton, linen		spinning, weaving, dyeing, finishing, designing	<i>wollenen, baumwollenen, und leinenen Waren</i>	billing

Source: *Verzeichnisse* 1764-1791, 19-21.

Table 5 shows that the 1770 prize competitions did not have numerous entries, but significant changes exist in the content outlining them. First, cotton was identified as a raw material for the first time. After the Industrial Revolution, even before

the influx of large quantities of cotton products, the importance of cotton production and processing in Saxony was recognised. In addition, four competitions for dyeing wool, cotton, or linen were established. The necessity of high-quality dyeing in the textile industry was also recognised. Furthermore, the harvesting of silk raw material – sericulture and the cultivation of mulberry trees to feed the silkworms – were also added to the prize competition list. Wool spinning and weaving, and the harvesting of raw materials (linen and hemp), were also established.

As demonstrated in Table 6, there were no notable changes in the types of prize competitions and most were the same as in the previous ones in 1782. The manufacturing process included: raw materials harvesting, spinning, weaving, fulling, bleaching, dyeing, and finishing. However, preparing, drawing, and silk threading were added to the list, meaning that the targeted processes diversified. It is also noteworthy that when silk was used as raw material, work related to sericulture and silk threading itself was required.

Tab. 6. Overview of the 1782 prize competition

No.	Raw Material	Domestic or Foreign Materials	Manufacturing Process	Product Name	Prize (Taler)
3			socks knitting	<i>Strumpf Würger Stuhl</i>	30
8			fulling, finishing	<i>Walker Erde</i>	30
10	wool, cotton, linen		spinning, weaving, dyeing, preparing, drawing	<i>wollenen, baumwollenen, und leinenen Waren</i>	10-50
16	linen, cannabis		harvesting raw materials	<i>Flach, Hanf</i>	20, 30, 40
18	wool	Domestic	spinning	<i>Garn</i>	100, 200
19			bleaching		50
25	silk		harvesting raw materials, threading	<i>Maulbeerbaum Seide</i>	50
26	silk		harvesting raw materials	<i>Maulbeerbaum, Seiden Kultur</i>	12 <i>grossen</i>

Source: *Verzeichnisse 1764-1791*, 32-35

Finally, Table 7 provides an overview of the prize competitions published in 1788. First, four prize competitions were independently related to silk production. They included the cultivation of mulberry trees and hedges, sericulture, and silk threading. In Europe, the soil and climate are not suitable for growing mulberry trees, and despite efforts in various European countries, there was a history of failed trials (Tsurui et al., 2010, 15). These silk-related prize competitions were part of these efforts. Additionally, there were two bleaching prizes – for cotton and lin-

en. Moreover, a prize competition was held to innovate new products across various processes, such as No. 41, which had been submitted since 1782. Three prize competitions were conducted for spinning, sock knitting and the manufacturing of *Stubl*.

Tab. 7. Overview of the 1788 prize competition

No.	Raw Material	Domestic or Foreign Materials	Manufacturing Process	Product Name	Prize (Taler)
34	silk		harvesting raw materials	<i>Maulbeerbaum</i>	50, 30, 20
35	silk		harvesting raw materials, threading	<i>Seide</i>	12 <i>grossen</i>
36	silk		harvesting raw materials	<i>Maulbeerbaum</i>	20
37	silk		harvesting raw materials	<i>Maulbeerbecke</i>	20
38	wool	Domestic	spinning	<i>Garn</i>	100, 200
39			spinning	<i>Garn</i>	30, 20, 10
40			spinning	<i>Garn</i>	several
41	wool, cotton, linen, silk		spinning, weaving, dyeing, preparing, drawing	<i>wollenen, baumwollenen, leinenen, und seidene Waren</i>	10-50
42	cotton		bleaching	<i>Bleichanlage</i>	50-100 <i>grossen</i>
43	linen		bleaching	<i>Leinwand</i>	50
44			socks knitting	<i>Strumpfwürker</i>	30
45				<i>Stubl</i>	15, 20, 30, 40

Source: *Preis=Aufgaben*, 14-17.

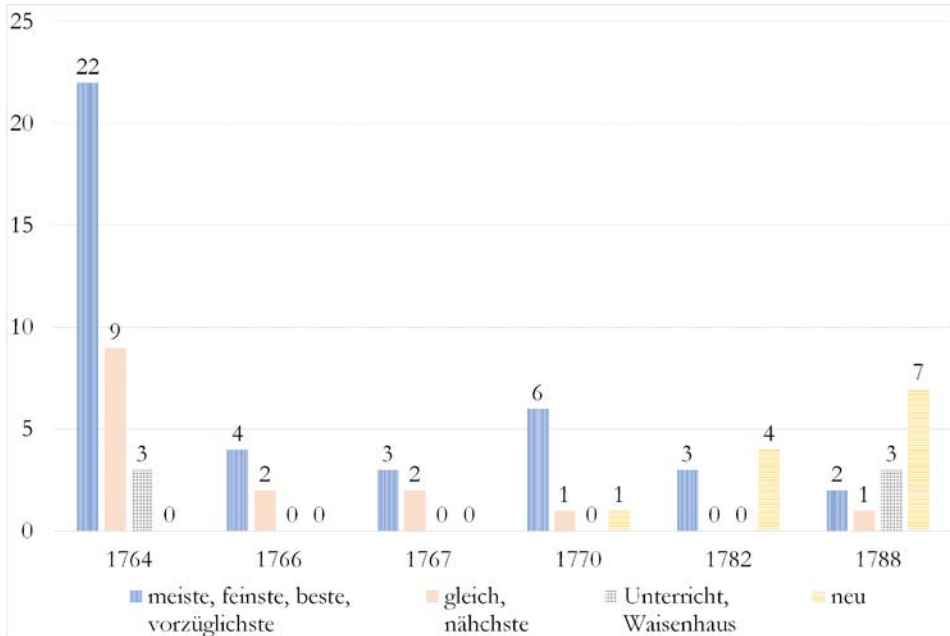
The amount of the prize varied, so my analysis did not identify a trend. Nevertheless, most of the prizes amounted to 10 *Taler* or more. Considering that the weekly salary of a weaver at that time was 1 to 2 *Taler* (Oshima 1960, 457), the prizes represented more than the average monthly salary of a weaver. Hence, some of the prize competitions, especially the ones above 100 *Taler*, were very motivating for the entrants.

## 6. Textual analysis of primary documents: what were the intentions?

I have clarified the characteristics of prize competitions from the viewpoint of aspects of production in the textile industry – such as raw materials and processes – and followed this with a detailed textual analysis of the sentences outlining the prize

competitions to discover the intentions. I extracted the frequently used terms from the sentences describing the prize competitions.<sup>17</sup> These enabled the exhibitors to understand the criteria on which the prizes would be awarded. The following words were frequently found: (1) *meiste, feinste, beste, vorzüglichste*; (2) *gleich, nächste*; (3) *Unterricht, Weisenhaus* and (4) *neu*.<sup>18</sup> (see Graph 1).

Graph 1. Frequently used terms outlining the prize competitions



Source: *Verzeichnisse 1764-1791, Preis=Aufgaben*.

## 6.1 Textual analysis (1): best prototypes

Collectively, (1) was intended to award prizes to the «best» prototypes. In the 1764, 1766 and 1770 prize competitions, phrase (1) was found in more than 80% of the setting sentences; in 1767, the same phrase was found in three of five settings related to the textile industry. In the 1782 and 1788 prize competitions, the number of (1) phrases decreased, but they were still present to some extent. Such expres-

<sup>17</sup> This refers to keywords or criteria for awarding the prize and excludes commonly used conjunctions, articles, and pronouns, such as *und* («and» in English), *die* («the» in English) or *er* («he» in English).

<sup>18</sup> These words translate into English as (1) most, finest, best, most exquisite; (2) equal; (3) education, orphanage, (4) new. The same word is not always used in different prize competitions. For example, *gleich* and *nächst* have different meanings, but the intention is the same (that is, to make the product equivalent to other regions).

sions were not limited to the prize competitions, but were a common feature in innovation-inducing systems.

## 6.2 Textual analysis (2): an equivalent quality to foreign products

Meanwhile, (2) reflects the frequently used terms of the Saxon prize competitions in the late eighteenth century. These expressions indicated that prizes would be awarded to those who could produce prototypes of «an equivalent quality to foreign products». This is evident in the following examples from the relevant parts of the prize competitions in Michaelmas 1764:

No. 6. Whoever exhibits [...] cloth that is equivalent to English or French cloth in fineness and quality [...] No. 7. Whoever exhibits fine domestic camlet [...] closest to the French, Brussels, and Leiden camlet in quality [...] No. 9. [...] for the most exquisite piece [...] of the various silk cloth, which comes closest to the French [...] No. 14. Whoever proves [...] that he can bleach the goods as well as they bleach in Harlem or comes closest to the way they bleach there [...] No. 17. Whoever produces the finest *Lotzwim* [...] which is equal to the Dutch one [...] No. 19. Whoever has a piece of lace [...] equal to Brussels manufactured [...] (*Avertissement*, 1-16).

In Easter 1765 No. 3 and Midsummer (St John) 1765 No. 5 and 6:

No. 3. they have carded the wool [...] in the Dutch way [...] No. 5. Whoever discovers a quantity of fulling or fuller's earth in the country that is equivalent to the English [...] No. 6. For the hat that comes closest to the finest English in all qualities [...] (*Avertissement*, 1-16).

The 1766 prize competitions No.3 and 5 and the 1767 prize competitions No. 2 and 1, contained two expressions (2) each:

No. 3. [...] for the most exquisite piece [...] of the various silk, which comes closest to the French [...] No. 5. Whoever produces the finest unbleached *Lotwzim* [...] which is equal to the Dutch [...] No. 2. [...] has found it to be equal to the English [...] No. 1. [...] for the most exquisite piece [...] of the various silk cloth, which comes closest to the French [...] (*Verzeichnisse* 1764-1791, 9, 13-14).

After this, in the wording of the prize competitions promulgated in 1770, expressions like (2) were rarely used. The 1770 prize competitions No. 9 and 1788 No. 43 were an exception:

No. 9. Whoever in Thuringia knows how to prepare the cannabis harvested there as finely and as well as the *Rbenish* [...] (*Verzeichnisse* 1764-1791, 32-35).

No. 43. Whoever can bleach [...] and thus comes closest to the foreign bleaches [...] (*Preis=Aufgaben*, 14-17).

However, No. 9 implied that it was not made in a foreign country but manufactured in another territorial state, and No. 43 does not have a specific foreign country's name.

The prize competitions classified as (2) often referred to specific foreign countries, where the people engaged in the textile industry manufactured the most illustrious products or used the most advanced technology in Europe. For instance, the prize competitions that mention silk were prize No. 9, (Michaelmas 1764), prize No.3, (Easter 1766) and prize No. 1, (between 1769 and 1771). Their purposes were to produce silk fabrics of the same quality as French silk fabrics. Silk products of high quality were well established, especially in China. Subsequently, by the end of the eighteenth century, the silk industry in Europe had reached a level comparable with that of China in terms of manufacturing process technology (Suzuki 2006, 301). Italy and France were the centres of this industry.<sup>19</sup>

### 6.3 Textual analysis (3): educational intentions

The educational prize competitions categorised in (3) were established in 1764 and 1788. In the 1764 prize competitions, the administrators were incentivised to train children living in some orphanages to produce twisted yarn or spin. A modern view is that this practice represents servitude, not education, but at the time it was regarded as training in a useful skill, so the word 'educational' applies. The Easter prize competitions in 1765 featured similar elements, promising a prize to the schoolteacher who taught the children how to make twisted yarn after school. However, the 1788 prize competitions had a more overtly 'educational' intent. In other words, No. 39 aimed at establishing a spinning school in an area where spinning mills did not exist, expanding the textile industry and securing workers with a certain level of skill. The 1788 prize competitions No. 38 and No. 40 were not directly 'educational' in intent. They sought to introduce the skill of spinning in «lands where it has never been common to engage in spinning».

---

<sup>19</sup> Another example is camlet. It is mentioned in prize No. 7 of the Michaelmas prize competition in 1764. In the eighteenth century, camlet was mainly produced in England, France, Netherlands, and Flanders. In fact, in the prize competitions, products made in France, Brussels and Leiden were considered the quality standards to be replicated. Furthermore, it was expected that the products would be manufactured at the same level as the main production areas by the Deputation and Economic Society. The prize No. 19 in Michaelmas 1764, called for the manufacture of lace of the same quality as Brussels lace. The lace embroidered in Brussels was of a type called bobbin lace. In the late seventeenth century, the reputation of Brussels lace began to rise, and it was embroidered on a wide variety of items (e.g., neckties, jupes, aprons, dresses, and interior decorations). After 1760, Brussels lace was still popular in Europe. In 1760 and later, Brussels lace was still in use in Europe, and the lace was highly valued (Kraatz 1989, 90). The competition organizers were sensitive to the market demand and the need to produce lace of high value.



#### 6.4 Textual analysis (4): novelty

Finally, the word *neu* began to appear for the first time in 1770. This expression was first identified in the prize competitions promulgated in 1770. In this way, prize competitions for «novelty» in the textile industry began to be established. More than half of the prize competitions promulgated in 1782 and 1788 contained keywords related to (4). From this, I understand that the intention was to supply the market with abundant goods by widely seeking textile products that had not previously been manufactured in Saxony.

Prize competitions often try to award prizes to the most outstanding submitted prototypes. Additionally, in the 1760s and 1770s, when prize competitions were first implemented, product quality was required to be equivalent to that of foreign countries. However, after the 1780s, the authority mainly demanded «novelty». This may have been in consideration of the changes in the circumstances of the textile industry discussed in Sections 2 and 3. Unfortunately, the real changes in policy intentions cannot be easily captured because how these sentences were developed by the Deputation and the Economic Society is unclear from the existing historical documents. Nevertheless, the demand for high-quality products from abroad and the attempt to provide spinning training are specific characteristics of Saxony's prize competitions.

#### 7. Who were the achievers?

I analyse who the achievers were, how the achievements were accomplished, and what the implications are, based on primary historical documents.

First, I examine the general trend. It is noteworthy that in numerous cases, the occupation of prize winners was not mentioned. Table 8 shows that more than half of occupations for 1782 and 1788 had no description or were listed as «unknown». Tables 9 and 10 show that for both the 1782 and 1788 prize competitions, the largest number of respondents whose occupations were unknown was in the field of silk (and half silk). In 1782 and 1788, 56.5% and 32.0%, respectively, of those whose occupation was unknown, were in the silk industry, including silk threading and weaving. Given that the silk industry had not been established in Saxony until the eighteenth century, most of the spinners and weavers who were engaged in the traditional production of wool, linen and cotton would not have entered the costly silk industry. In addition, given the need for pruning skills or growing mulberry trees, many of those whose occupations are not listed are likely to be categorised into the two occupations: gardener and large farm owner.

Tab. 8. The occupations of the prize winners

Occupation		1764	1766	1767	1770	1782	1788
factory owner	textile factory owner	4	1	10			1
	socks factory owner					1	1
	band factory owner					1	1
	pile factory owner						1
	lace factory owner						1
machine builder							2
gardener	royal palace gardener					5	20
	gardener						8
large farm owner	large farm owner					2	14
	large silk farmer						1
spinner	spinner <i>Meister</i>						1
	spinner	4					
	wool spinner	11					
weaver	weaver <i>Meister</i>						2
	weaver	5	1		1	5	31
	linen weaver	1			1	1	1
	cotton weaver					1	
	velvet weaver	1					1
processing process worker	bleacher						2
	dyer				2		
	fulling worker	1					
	<i>Posamentier</i>					1	2
	bobbin lace knitter						1
	<i>Tuchscherer</i>					1	1
	socks knitter	3				10	12
	cabinetmaker					1	
	merchant	2			2		4
educator	educational committee						1
	principal						2
	teacher	1				2	
	school seminarians						1
	cleric, pastor						6
	public officer, public institution	1			3	18	13
	judge				2	1	
	book printer	2					
	child		1				11
	home manager						1
	miner						2
	supervisor of a sulfur smelter						1
	others						2
	no description or unknown	21	2	2	5	62	178

Source: *Verzeichnisse 1764-1791* and *Verzeichnisse 1792-1810*.

Tab. 9. Awards for unknown occupation - Known raw materials and processes

Raw Materials and Processes		1764	1770	1782	1788
Factory	fostering-wool spinning				1
	establishment-wool socks knitting				1
	establishment-band			1	1
Silk	machinery manufacture			1	1
	raw materials		4	14	46
	threading			5	
	weaving			13	6
	printing				1
	decorating (ribbon & lace)				3
	socks knitting				1
Half Silk	weaving				1
	dyeing			1	
	defining			1	
	socks knitting				3
Linen	unknown, others			1	
	machinery manufacture-weaving			1	
	raw materials	3		2	8
	weaving			1	
	bleaching			1	2
	printing				1
Hemp	unknown, others				1
	raw materials				1
Wool	machinery manufacture-worsted	1		2	1
	machinery manufacture-socks knitting				1
	machinery introduction-spinning				1
	spinning	1			
	spinning-firstly produced in the area				1
	weaving	5			
	finishing	1			
	carpet				1
Cotton	machinery manufacture-weaving				1
	machinery introduction-weaving				1
	spinning				1
	spinning-firstly produced in the area				1
	weaving			3	13
	weaving-firstly produced in the area				1
	dyeing	2			2
	printing				1
	socks knitting				5
	new goods				5
Casimir	unknown, others			1	
	machinery manufacture-worsted				1
Typha	printing				1
	socks knitting				1

Source: *Verzeichnisse* 1764-1791 and *Verzeichnisse* 1792-1810.

Tab. 10. Awards for unknown occupation - Only processes or other information is known

Processes and Others		1764	1766	1767	1770	1782	1788	
Spinning	spinning	1	2	1			2	
	machinery introduction						1	
	machinery manufacture						2	
	machinery improvement						2	
Twisting	machinery manufacture					1	1	
	twisting					1		
Weaving	weaving	1					3	
Worsted	machinery manufacture						2	
Fulling	machinery manufacture						1	
Bleaching	bleaching	1					3	
Finishing	finishing						1	
Decorating	machinery introduction-ribbon	5						
	decorating						2	
	unknown others				1			
Socks	machinery introduction					10	4	
Knitting	machinery manufacture						1	
	socks knitting						9	
Ready-made	dress (silk & wool)					2		
	vest (cotton & unknown)						2	
	gilet						1	
	shawl						1	
	shirt						1	
	skirt						1	
	boots						1	
	cotton <i>Beinkleid</i>						1	
	<i>Prinzessin</i>						1	
	new goods						7	
	drawings						1	
	Education	spinning & weaving						5
	Others	machinery sample						1
		machinery for horse comb						1
Unknown				1		1	3	

Source: *Verzeichnisse* 1764-1791 and *Verzeichnisse* 1792-1810.

Second, I discuss the prize winners for whom the occupation was known, based on Table 8. In the 1764 competition, the largest number of prizes was awarded to spinners – especially wool spinners – and the second most common occupation was weavers. Both worked with traditional materials, such as wool and linen. Additionally, the following were engaged in the textile industry: four textile factory owners, three sock knitters and one fulling worker. Meanwhile, two mer-

chants, two book printers, a public officer and a teacher were from professions not normally engaged in the textile industry. Merchants, throughout the period, were responsible for the transport of raw materials and machinery, but they did not directly produce anything.

In the 1766 prize competitions, only three occupations were known: a textile factory owner, a weaver, and a child. In the 1767 prize competitions, ten textile factory owners were awarded prizes, indicating that the prizes were awarded to those who already owned factories. Of these, eight were wool weavers, and again the prize was awarded to those still working with traditional raw materials. These trends seem to have been maintained in the 1770 prize competitions, but dyers and judges<sup>20</sup> were awarded for the first time. Especially, concerning the dyers, this may have corresponded to the four new prize competitions established in 1770.<sup>21</sup>

Corresponding to the changes in the sentences outlining prize competitions examined in Sections 5 and 6, substantial changes also occurred in the attributes of the 1782 and 1788 prize winners. First, awards were given to (royal palace) gardeners and large farm owners, which had not previously been confirmed. They engaged in the silk industry, in aspects such as sericulture and growing mulberry trees. Next were the public officers. For example, in the prize awarded on 28 February 1783, the mayor of *Bautzen* received a prize for setting up a textile factory. However, this was an exception, as most of the public officers were awarded prizes related to the silk industry. Like the merchants, they were awarded prizes for their efforts to spread the breeding of silkworms.

The weavers and sock knitters won many prizes again. As in the 1764 prize competitions, they achieved textile production or sock knitting. The first occupations to be awarded in the 1782 competition were: sock factory owner, band weaving factory owner, cotton weaver, *Posamentier*, *Tuchscherer* and cabinetmaker, and in the 1788 competition: pile factory owner, lace factory owner, machine builders, bleacher, bobbin lace knitters, educational committee member, school principal, student, cleric, pastor, home manager and miner. The occupations – educational committee member, school principal, student, cleric, pastor, home manager and miner – do not seem to be directly related to the textile industry; however, the educational committee members and school principals were involved in the training of spinners and the production of silk-related products; the cleric and pastor supplied raw materials for flax and silk; the home manager presented samples of muslin; and the miner was involved in the establishment of a spinning school for girls, all of which involved silk, education and other achievements not requiring special knowledge.

Moreover, few consistent cross-process awards were given, such as spinners to weaving or dyers to spinning. The Saxon prize competitions did not reflect a policy of encouraging people to change to new professions but incentivised the spreading of useful knowledge in the professions in which they were already engaged (e.g.,

---

<sup>20</sup> The judges were not involved in the textile industry but had planted or delivered mulberry trees in silk-related industries.

<sup>21</sup> Dyeing was not an easy task for anyone and required a certain level of skill and knowledge. This may have led to the establishment of a separate prize competition for dyeing in 1778.

manufacturing high-quality products or new products). However, because the establishment of factories and schools in areas where spinning and similar industries had not previously been common was also sought and achieved, it is evident that work in new industries was undertaken in some cases. Even in such cases, those already engaged in the industry established the factories and schools, and the knowledge dissemination in the occupations in which they were already engaged was still an important achievement.

In many cases, the implementation of the prize competitions confirmed the awarding of prizes to occupations such as factory owners, spinners, and weavers, which were directly related to production in the textile industry. However, some prize winners – merchants, book printers and judges – were engaged in the dissemination of silkworm eggs. Strategies such as prize competitions are likely to be considered «innovation-inducing» but this is not always the case when the realized situation is examined at the micro-level. However, it cannot be denied that they have played a role in promoting some industries, for example, silk production.

Third, I consider some of the individuals who received the prizes. Prominent figures in the Saxon textile industry who introduced or improved textile machinery were M. Frey and C.G. Irmscher. J.G. Pfaff and C.W. Forkel succeeded in replicating and improving carding machines. They received large sums of money from the Saxon government for their work. J.G. Pfaff received a prize for his carding machine on 30 June 1787 through prize competitions, as did C.W. Forkel for his wool carding machine and flax loom on 31 December 1787. However, M. Frey and C.G. Irmscher were never awarded. In addition, Johann Georg Esche – who worked in the sock knitting industry in Saxony during the eighteenth century and laid the foundations for the leading sock manufacturers in Saxony – was not mentioned in any sock knitting award. In other words, most of the awards through prize competitions were given to people who were not considered the most important figures in the history of the development of the textile industry.

## 8. Conclusion: intentions and achievements

In Saxony, the traditional textile industries were established from the sixteenth century, but the ravages of the Seven Years' War devastated the territory, threatened the people's livelihoods, and damaged numerous industries. Coincidentally, the enlightenment was gaining ground in Germany and the Electorate and Saxon government implemented an industrial enlightenment-based policy. A series of reforms and economic policies were proposed after the Seven Years' War. The British Industrial Revolution also influenced these strategies, which included prize competitions.

The prize competitions in Saxony in the second half of the eighteenth century, with its specific intentions – reflected in the demand for «high-quality» or comparable products to those of foreign producers and the establishment of training institutions – had as its main objectives the production of high-quality products and the dissemination of knowledge. The implementation of this policy could have resulted in the production of «high-quality» products in various industries but some re-

searchers thought that improving the quality of textile goods at the beginning of industrialisation or introducing machinery in economically disadvantaged countries was not so difficult. However, as Schäfer (2015) mentions, it is «easier said than done». The government needed to properly assess the situation of the country when implementing a prize competition or any policy, using the principles of the industrial enlightenment. The policy can only find its economic significance when a certain intellectual base in the industry – the existence of workers – is already established. Thus, to investigate knowledge diffusion I will need to attend to «knowledge acceptance».

Numerous points still need to be discussed. First, it is unclear what policy-making process was used to decide on prize competitions. One of the main tasks of the Deputation was to establish the prize competitions but they were also tasked to gather economic information about Saxony and other European countries. They collected information on the devastation caused by the war in Saxony, the influx of British goods, demographics, education and much more. Whether this information was considered in the formulation of the prize competitions and if so, how, is a subject for further investigation. Circumstantial evidence and several previous studies indicate that Saxony's economic stability is evidence that the textile industry must have been supported. This corroborative work will help to clarify the activities of the Deputation.

Second, whether the products, which led to the prize award, were of «high quality» or «equivalent to foreign products» must be examined. I find the following evidence in the prize competition of Easter 1768:

However, after the trials were conducted, the results were not such that the premium could have been awarded to anyone in accordance with the prescribed requisites: This premium is hereby once again awarded [...] (*Verzeichnisse* 1764-1791, 13).

In other words, the Deputation did not award a prize for a prototype that did not meet the criteria. The Deputation conducted an inspection and awarded money to those who maintained a certain level of quality. How this inspection process was conducted is not known.<sup>22</sup> Determining what led to the evaluation of the quality of the prototypes as «high-quality» or «equivalent to foreign products» will enable us to evaluate the results of the prize competitions.

Thus, I cannot conclude that the Saxon prize competitions were an essential economic strategy for developing the textile industry or a policy to form the basis for nineteenth-century industrialisation. I can conclude that the prize competitions aimed to promote the textile industry – the main industry in Saxony – by improving the quality of existing products to be equivalent to those of foreign countries, by incentivising the manufacture of new products and by disseminating knowledge. It

---

<sup>22</sup> For example, the spinning machines were possibly inspected by foreigners who had already been invited or by leading merchants in Saxony. In fact, when the spinning jenny was introduced, submitted drawings and products were carefully inspected (Horii 2020).

was a successful policy, especially from the 1780s onwards, when the development of human resources for the textile industry was a focus.

## BIBLIOGRAPHY

### Archival sources

Sächsisches Hauptstaatsarchiv Dresden (SHD), *Landes-Ökonomie-, Manufaktur- und Kommerziendeputation, 10078, Verzeichnisse über die nach den Preisaufgaben der Kommerziendeputation zuerkannten Prämienfelder 1764-1791*, 220, and *Verzeichnisse über die nach den Preisaufgaben der Kommerziendeputation zuerkannten Prämienfelder 1792-1810*, 221.

### Periodical sources

*Leipziger = Intelligenz-Blatt*, 28 Juli, 1764

### Secondary literature

- Bein, Louis. 1884. *Die Industrie des sächsischen Voigtlandes: Die Textilindustrie, vol. 2*. Leipzig: Duncker & Humblot.
- Blaschke, Karlheinz. 1967. *Bevölkerungsgeschichte von Sachsen bis zur industriellen Revolution*. Weimar: Hermann Böhlau Verlag.
- Bochmann, Andreas, Achim Dresler, and Wolf Tietze 1995. "The city of Chemnitz in Saxony (Germany) building its new economic profile." *GeoJournal* 37: 539-47.
- Bödeker, Hans Erich. 2012. "Economic societies in Germany, 1760-1820: Organisation, Social structures and fields of activities." In *The rise of economic societies in the eighteenth century*, ed. Koen. Stapelbroek, and Jani Marjanen, 182-211. London: Palgrave Macmillan.
- Bosse, Heinrich. 2018. "Dialogische Öffentlichkeit. Preisfragen und Preisaufgaben im 18. Jahrhundert" *Internationales Archiv für Sozialgeschichte der deutschen Literatur*, 43, 2: 235-54.
- Crouzet, François. 1964. "Wars, blockade, and economic change in Europe, 1792-1815." *The Journal of Economic History* 24: 567-588.
- Czok, Karl. 1989. *Geschichte Sachsens*. Weimar: Hermann Böhlau Nachfolger.
- Eichler, Helga. 1978. "Die Leipziger ökonomische Societät im 18. Jahrhundert, in Deutsche Akademie der Wissenschaften zu Berlin." *Jahrbuch für Geschichte des Feudalismus*, 2: 357-86.
- Forberger, Rudolf. 1958. *Die Manufaktur in Sachsen, vom Ende des 16. bis zum Anfang des 19. Jahrhunderts*. Berlin: Akademie-Verlag.
- Henderson, William O. 1985. *Manufactories in Germany*. Frankfurt am Main: Peter Lang.
- Horii, Seiji. 2020. "Introducing spinning machines in the late 18<sup>th</sup> century Saxony textile industry and the function of technical drawings: evidence from



- information collected by the Industrial Deputation.” *社会経済史学*, 85: 397-418.
- Horii, Seiji. 2021. “The achievements of implementing the prize competitions for the Saxon textile industry during the late half of 18<sup>th</sup> century.” In *Discussion Papers 2107*. Graduate School of Economics: Kobe University.
- Karlsch, Rainer, and Michael Schäfer. 2006. *Wirtschaftsgeschichte Sachsens im Industriezeitalter*. Leipzig: Edition Leipzig.
- Kaufhold, Karl Heinrich 1986. *Gewerbelandschaften in der frühen Neuzeit, in Gewerbe- und Industrielandschaften vom Spätmittelalter bis ins 20. Jahrhundert*, ed. Hans Pohl. Stuttgart: F. Steiner Verlag Wiesbaden.
- Kowalski, Kamil, Madera Rafal, and Mariusz E. Sokolowicz. 2018. In “Cotton matters. A recognition and comparison of the cottonopolises in Central-Eastern Europe during the Industrial Revolution.” *Fibres & textiles in Eastern Europe* 26: 16-23. DOI:10.5604/01.3001.0012.5162
- Knowledge Ecology International (KEI). 2008. “Selected innovation prizes and reward programs.” In *KEI Research Note. Knowledge Ecology International (KEI)*. <<https://www.keionline.org/book/kei-issues-report-on-selected-innovation-prizes-and-reward-programs>> (2008-5-20)
- Keller, Katrin. 2002. “Saxony: Rétablissement and enlightened absolutism.” *German History* 20: 309-31.
- Kraatz, Anne. 1989. *Lace: History and fashion*. London: Thames and Hudson.
- Morota, Minoru. 1962. “17・8世紀西南ドイツの特権コンパニーについて-「農村工業」と「問屋制度」との対抗の焦点.” *商学論集*, 30: 255-312.
- Rübberdt, Rudolf. 1934. *Die Ökonomischen Sozietäten: Ein Beitrag zur Wirtschaftsgeschichte des XVIII. Jahrhunderts*. Würzburg: Konrad Tritsch.
- Schäfer, Michael. 2015. “Global markets and regional industrialization: The emergence of the Saxon textile industry, 1790-1914.” In *Regions, Industries, and heritage: Perspectives on economy, society, and culture in modern Western Europe*, ed. Juliane Czierpka, Kathrin Oerters, and Nora Thorade, 116-35. London: Palgrave Macmillan. DOI 10.1057/9781137333414
- Schöne, Andreas. 2001. *Die Leipziger ökonomische Sozietät 1763 bis 1825, in Horst-Springer-Stiftung für Neuere Geschichte Sachsens in der Friedrich-Ebert-Stiftung*, Titel nur online veröffentlicht. <http://library.fes.de/fulltext/historiker/01081.htm> (2023-31-01)
- Stöbe, Frank. 1996. “Zur Geschichte der Leipziger Ökonomischen Societät.” in *Zur Geschichte der Landwirtschaft in Sachsen: Beiträge des Kolloquiums der Arbeitsgruppe "Geschichte der Leipziger Ökonomischen Societät" in der Leipziger Ökonomische Societät e.V. am 16. September 1995*, ed. D. Fuchs, 40-45. Leipzig: Leipziger Ökonomischen Societät e.V. Leipzig.
- Suzuki, Yoshitaka. 2006. “East Asian goods and the substitution of raw materials in European industries during the eighteenth century.” *社会経済史学*, 72: 293-308.

- Oshima, Takao. 1963. “ドイツ産業革命の一側面 - ザクセン綿織物工業における機械制大工業化過程.” *史林*, 46: 449-183.
- Schlechte, Horst. 1958. *Die Staatsreform in Kursachsen 1762-1763. Quellen zum Kursächsischen Rétablissement nach dem Siebenjährigen Kriege*. Berlin: Rütten & Loening.
- Tilly, Richard H., and Michael Kopsidis. 2020. *From old regime to industrial state. A history of German industrialization from the eighteenth century to World War I*. Chicago: University of Chicago Press.
- Tsurui, Yuji, Noriko Iida, Chieko Joraku, and Izumi Tsuneyama. 2009. 養蚕.”財団  
法人大日本蚕糸会 蚕業技術研究所.  
[http://www.silk.or.jp/silk\\_gijyutu/yousan.html](http://www.silk.or.jp/silk_gijyutu/yousan.html) (2023-31-01)
- Yazawa, Daigo. 2006. “ザクセン機械製造業におけるイギリス技術の移転と波及 -19 世紀前半ドイツ初期工業化の時期を中心に.” *早稲田経済学  
研究* 63: 25-47.