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Evidence from Wages and Prices on the Limited Utility of Germany's First Paper Money (1772-1873)

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Abstract

Saxony's *Kassenbillets* (1772–1873) are widely referred to as Germany's first 'successful' paper money, yet no systematic analysis has examined what made them successful. This paper challenges this consensus by testing whether *Kassenbillets* could practically be used to cover essential purchases across different income groups. Using a historical consumer price index for Leipzig and Dresden (1763–1803) and wage data, the analysis compares the cost of annual consumption baskets against income levels and evaluates whether *Kassenbillets* aligned with actual purchasing patterns.

Three critical problems limited their use as everyday currency: extreme price volatility with the consumer price index (212.81% increase); structural insufficiency of wages with 26.09% of incomes falling below basic consumption costs; and systematic exclusion of lower income groups, as 57.33% of wages fell below one *Taler* weekly, making even the smallest denomination impractical. Contemporary sources recognised that the average income was 50 *Taler* annually, yet authorities introduced one *Taler* as the smallest denomination, effectively designing a financial instrument inaccessible to most. While *Kassenbillets* were designed to support state debt financing, they failed as a medium of exchange for the broader population, demonstrating that monetary innovations can serve elite interests whilst excluding the wider population.

1. Introduction

In 1772, the financially struggling Electorate of Saxony issued Germany's first paper bills, known as *Kassenbillets*.[1] These paper bills would remain in circulation for over a century until their replacement by the German *Mark* in 1873. Although

[1] The original legal documents use the term *Churfürstlich Sächsischen Cassen Billets* (Electoral Saxon Treasury Bills). This paper uses the modernised German spelling *Kassenbillets* throughout for consistency with academic literature. The terms *Kassenbillets*, 'bills', 'paper money' and 'paper bills' are used interchangeably unless otherwise specified.

not the first paper money in Europe, *Kassenbillets* are commonly regarded in academic literature as the first 'successful' German paper money. Writing in 1801, Röder calls them 'one of the wisest financial operations' in Saxony's history.[2] This interpretation still resonates to this day, with the German Bundesbank board member Johannes Beermann calling the *Kassenbillets* evidence of Saxony as a 'pioneer and innovation driver in monetary affairs'.[3]

Yet this consensus is based on limited empirical foundations. While *Kassenbillets* are universally deemed successful, no systematic analysis has examined the reason for this nor is there a unified definition of 'success' in the context of early experiments with paper money. Generally, their long–term circulation and acceptance are implicitly treated as proof of success. Much attention has been paid to the volumes and longevity of later issuances, but the metrics for the initial 1772 emission remain largely unquestioned.[4] Data on the *Kassenbillets* is scarce, and the literature often references other secondary literature instead of primary evidence. This is unfortunate, as the archival records reveal extraordinary care in planning the first issuance of *Kassenbillets* on May 6, 1772, by a commission specifically established for this purpose. The *Kassenbilletcommission* met almost daily in the weeks before and after May 1772, calculating revenue projections, determining denominations, and deciding on distribution channels. Despite this meticulous documentation, the primary sources provide rather limited evidence for the success of *Kassenbillets.* The secondary literature establishes a circular narrative, wherein the assertion of the success of Germany's first paper money is repeated but not challenged.

This paper therefore proposes a different approach to define success: by quantifying the extent to which *Kassenbillets* were practical for everyday transactions. The *Kassenbillets* are a good example, as they provide empirical

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[2] Röder, *Geographisches Statistisch–Topographisches Lexikon von Obersachsen Und Der Ober– Und Niederlausiz*, 527.
[3] Beermann, 'Sachsen als Vorreiter und Innovationstreiber im Geldwesen'.
[4] The terms 'emission' and 'issuance' are used interchangeably in this paper to refer to the act of putting *Kassenbillets* into circulation.

support for the competing theories of money's origin and nature.[5] The barter theory of money suggests that money emerges organically as traders converge on goods that served as media of exchange. In contrast, the state theory argues that money is a creation of sovereign authority, deriving its value from the state's ability to impose tax obligations payable in the designated currency. The *Kassenbillets* clearly exemplify the latter: they were created by sovereign edict in 1772 to address state fiscal needs following the Seven Years' War (1756–1763). The requirement that fees of two *Taler* or more be paid at least in half in *Kassenbillets* demonstrates the state imposing demand for its currency rather than market acceptance. The central question of this paper is whether the *Kassenbillets* were practical for essential consumption and income levels beyond their initial intent.

To address this, a historical consumer price index was constructed for Leipzig (Electoral Saxony's primary commercial centre) and Dresden (the capital), covering 1763–1803, beginning with the end of the Seven Years' War (1763) through four decades of *Kassenbillet* circulation.[6] The index tracks the cost of essential consumption including wheat (2.54 hectolitres annual consumption), beer (2.5 hectolitres), and wood (75.83 hectolitres), standardised to grams of silver per hectolitre (g.Ag/hl). These price data were analysed alongside incomes from 22 occupations across four sectors (industrial, professional, domestic, and mining), drawn from 75 observations. The results assess whether *Kassenbillets* aligned with the purchasing patterns and income levels of different social classes. Could Saxons actually use the smallest denomination, a one *Taler* note, for essential expenses? If *Kassenbillets* proved to be effective across different income groups for basic consumption, this would indicate not only appropriate monetary design but also suggest that the financial instrument was well integrated into daily economic life across society.

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[5] Hudson, 'Origins of Money and Interest: Palatial Credit Not Barter', 51.
[6] Noback and Noback, *Vollständiges Taschenbuch Der Münz–, Maass– Und Gewichts–Verhältnisse, Der Staatspapiere, Des Wechsels– Und Bankwesens Und Der Usanzen Aller Länder Und Handelsplätze*, 3: 219, 464.

The results, however, reveal that *Kassenbillets* were mainly targeted at elites. They were not intended to cover basic consumption needs and were of very limited usability for lowest income groups earning less than one *Taler* weekly. More than half of the occupations in this dataset earned less than the smallest denomination (one *Taler*) and could not facilitate frequent, small–scale purchases essential to the lower class. This mismatch was intensified by extreme price volatility, with a gap of 200% between the lowest and highest point in the consumer price index. What makes this striking is that contemporary sources from 1783 documented average annual incomes at 50 *Taler*, precisely the median value of the income data analysed in this paper. This suggests perfect understanding of income realities when *Kassenbillets* circulated, yet the smallest denomination remained impractical for those earning less than that.

The evidence contributes to further understanding monetary innovation in Germany, which Kindleberger calls a 'backward' financial landscape, behind the development of its neighbours such as Italy.[7] His statement is somewhat ironic in the context of this paper, given that the *Kassenbillets* represented one of the first instances of successful paper money. The article also contributes to developing further metrics in assessing the 'success' of early modern money. The results indicate that effective currency design should correspond to the transactional behaviour and income levels of various groups. The *Kassenbillets* thus offer important lessons about the social prerequisites for monetary innovation, and how currency created for state financing may fail to serve broad groups of the population.

The remainder of this paper proceeds as follows. Chapter 2 reviews the relevant literature on *Kassenbillets* and other forms of 'successful' early paper money (Chapter 2.1 and 2.2) as well as contemporary literature on the Electorate of Saxony (Chapter 2.3). Chapter 3 outlines the research method and its limitations. Chapter 4 describes the data collection and cleaning procedures. Chapters 5

[7] Kindleberger, *A Financial History of Western Europe*, 117.

presents the results on the practicability of *Kassenbillets*. Finally, Chapter 6 discusses the implications of the results and offers concluding remarks.

2. Literature Review

Despite being frequently referred to as the first 'successful' paper money in Germany, *Kassenbillets* remain little researched in academic literature. Existing research provides anecdotal narratives but lacks systematic evaluation of the *Kassenbillets*. The literature reveals three problems that undermine claims about their success. First, the information available on *Kassenbillets* and their issuance volumes, prices and circulation patterns are fragmented and often contradictory. Much of the secondary literature merely reiterates figures from preceding works without referencing the primary sources, which leads to a circular narrative in the research and difficulty in verifying their accuracy (Chapter 2.1). Second, the absence of standardised criteria for defining 'successful' paper money in early modern context makes it difficult to compare *Kassenbillets* with other paper money (Chapter 2.2). Third, literature includes contradicting descriptions of Electoral Saxony's economic and social context as both marked by wars and prosperous, without systematically analysing how these contradictions influenced monetary needs among social groups (Chapter 2.3).

2.1 Kassenbillets

All legal provisions for Saxony from 1255 to 1818 (*Corpus Juris Saxonici*) are compiled within the *Codex Augusteus*. Therefore, this Codex was used as a starting point to review relevant literature, as it should provide a comprehensive record of the legal provisions governing *Kassenbillets*. To navigate the extensive Codex, a well–cited guide from 1839 by Jässing supported this research, which summarises all legal provisions in alphabetical order, including *Kassenbillets*.[8] Secondary literature points to multiple issuances of *Kassenbillets*, with the initial emission

[8] Jässing, *Alphabetisches Promptuarium Der Ältern, Neuern Und Neusten Sächsischen Gesetze Des Codex Augusteus Dessen Drei Fortsetzungen Und Der Amtlichen Sammlungen von 1818 Bis Mit 1838*, 19.

on May 6, 1772. However, only the legal provision for the first issuance could be verified by the *Codex Augusteus*, which lacks any record of subsequent emissions after 1772.[9] Jässing's guide does not contain any references to other issuances beyond the initial 1772 decree.[10] Hence all emissions after 1772 could not be verified by primary sources.

Archival records show remarkable detail about planning the *Kassenbillets'* introduction yet reveal very little reasoning behind the decisions made. As early as April 1772, the *Kassenbilletcommission* began calculating how much revenue could be generated from the issuance of *Kassenbillets*.[11] The commission had already made detailed decisions regarding material, form, mechanism, and distribution by April 28, 1772, as the protocols indicate.[12] In the weeks preceding the first issuance in early May, the *Kassenbilletcommission* met almost daily, a routine that continued even after. By June, it was expected that half of the income from fields for military provisions would be paid in *Kassenbillets* (approximately 10,964 *Taler*).[13] This estimate was confirmed by the end of the month.[14] Interestingly, undated drafts of the legal provision on the bills' first issuance already reflected the same denominations and emission volume later used.[15] Contrary to the widespread argument that the primary function of the *Kassenbillets* was to reduce Saxony's state debt, archival data indicate that this relationship might be less significant (or following a longer–term strategy) than thought. The *Kassenbilletcommission* recorded detailed lists of number of bills issued and received per month. For example, in the second half of September 1772, 19,280 bills were issued and 29,884 received.[16] Assuming a total emission of 1.5

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[9] *Codex Augusteus, Oder Neuvermehrtes Corpus Juris Saxonici*, Forts. 2, Abth. 2, 398–402.
[10] Friedrich August I., 'Jhrer Chur–Fürstl. Durchl. zu Sachßen, [et]c. [et]c. Edict wegen derer, bey Dero Cassen, auszugebenden und anzunehmenden Cassen–Billets'.
[11] Hauptstaatsarchiv Dresden (hereafter HStA Dresden), Geheimes Kabinett, 10026/Loc. 000483/03, 'Die wegen der zu kreierenden *Kassenbillets* verordnete Kommission', Fol. 57, 58.
[12] HStA Dresden, Geheimes Kabinett, 10026/Loc. 000483/03, Fol. 77ff, 79f, 80.
[13] 'Fields for military provisions' (*Portions– und Rationsfelder)* were designated for agriculture aiming at military provisioning.
[14] HStA Dresden, Geheimes Kabinett, 10026/Loc. 000483/03, Fol. 199.
[15] HStA Dresden, Geheimes Kabinett, 10026/Loc. 000483/03, Fol. 177–184, 250–258.
[16] HStA Dresden, Geheimes Kabinett, 10026/Loc. 000483/04, 'Die wegen der zu kreierenden *Kassenbillets* verordnete Kommission, ingleichen des königlich–preußischen Geheimen Kommerzienrat Wurmb Projekt zu Anlegung eines Staatskontors', Fol. 8.

million *Taler*, this means that in September 1772, only around 2.57% of the bills contributed to reducing state debt.[17]

Claims on the issuances of *Kassenbillets* and their volumes are contradictory within secondary literature. Some, such as Metasch, present figures for subsequent emissions (i.e., 1804, 1807, and up to 1812), but without transparent referencing (Table 1).[18] Metasch's work includes footnotes stating that 'a specific verification of the numerous paper money regulations, all of which are found in the *Codex Augusteus*, must be omitted here'.[19] However, these regulations could not be traced back to the codex while conducting this literature review. An article from April 1807 in the *National–Zeitung der Deutschen* records further issued *Kassenbillets* by stating that the previously circulating 1.5 million *Taler* no longer met the economic needs of the time.[20] Merkel claimed in his 1804 publication that high value notes of 50 and 100 *Taler* were never actually issued and estimated that only 1 million *Taler* entered circulation.[21] Röder stated 1.5 million issued *Kassenbillets* in 1801, but noted that only two thirds were effectively in use.[22] A journal article from 1784 included that even only 600,000 to 800,000 of the planned 1772 total volume were issued (40–53% of the total supply).[23] In conclusion, there is no consistent evidence regarding the amounts, denominations, or legal basis for later issuances.

[17] Based on data from the second half of September: 19,280 bills issued, doubled to estimate monthly total (38,560), calculated as percentage of 1.5 million *Taler* total emission.
[18] Metasch, 'Moderne Formen Staatlicher Geldschöpfung. Die Erfolgreiche Einführung von Papiergeld in Sachsen 1772.', 76, 78.
[19] Metasch, 'Moderne Formen Staatlicher Geldschöpfung. Die Erfolgreiche Einführung von Papiergeld in Sachsen 1772.', 80.
[20] *National–Zeitung Der Deutschen*, 'Staatsgegebenheiten', 372.
[21] Merkel, *Erdbeschreibung von Kursachsen Und Den Jetzt Dazu Gehörenden Ländern*, 65.
[22] Röder, *Geographisches Statistisch–Topographisches Lexikon von Obersachsen Und Der Ober– Und Niederlausiz*, 527.
[23] 'Schreiben Aus Dresden Vom 14. Februar 1784', 234.

Table 1: Emissions of Kassenbillets by Denomination and Total Value, 1772–1812

Issuance	Denomination of bills	Amount of bills	Sum in Taler
May 6 1772	1 Taler	500,000	500,000
	2 Taler	200,000	400,000
	5 Taler	60,000	300,000
	10 Taler	22,500	225,000
	50 Taler	1,000	50,000
	100 Taler	250	25,000
	Total	**783,750**	**1,500,000**
January 2 1804	1 Taler	700,000	700,000
	2 Taler	250,000	500,000
	5 Taler	60,000	300,000
	Total	**1,010,000**	**1,500,000**
Up to 1812	1 Taler	1,750,000	1,750,000
	2 Taler	1,000,000	2,000,000
	5 Taler	250,000	1,250,000
	Total	**3,000,000**	**5,000,000**

Note: Only the issuance on May 6, 1772, was verified by primary sources.

Contemporary estimates by Hunger in 1783 suggested that theoretically, around 21,875,000 *Taler* were required in circulation. He derived the 22 million *Taler* based on a population of 1.75 million citizens and an average annual income of 50 *Taler* 'for his earnings and livelihood' (87.5 million *Taler* total annual income), assuming each *Taler* circulated four times annually.[24] Notably, his estimate of 50 *Taler* annual income aligns with the findings of this paper, where the median wage across 75 observations was 50 *Taler* per year (see Chapter 4.2). The initial emission of 1.5 million *Taler* in *Kassenbillets* therefore represented only about 7% of Hunger's estimations on total *Taler* in circulation, which is an indication that most transactions continued to rely on metallic currency and other forms of payment or that the Elector had a very long–term strategy concerning the *Kassenbillets*.

[24] Hunger, *Kurze Geschichte Der Abgaben, Besonders Der Konsumtions– Und Handels–Abgaben in Sachsen*, 118–19.

Academic literature includes further discrepancies on the exchange value of *Kassenbillets* compared to metallic coins. Pick claims that *Kassenbillets* circulated at a premium of six *Pfennig* per *Taler* by 1779 (2.08% over their face value), attributing the reissuing of certain denominations in 1804 to wear and tear and forgery.[25,26] Metasch discusses that their exchange rate in 1813 dropped to 79% of their face value because of an increased supply and the German campaign of 1813 but recovered by 1815.[27,28] Sneedorf described them in 1793 as equivalent to banknotes, rarely seen in circulation, and generally accepted at full value, with discounts of at most 1%, and only occasionally.[29] Walburg states that those who exchanged the *Kassenbillets* for coin at the exchange offices had to accept a deduction, which could be as high as nine *Pfennig*s per *Taler* (3.13%), but gives no indication on what period this applied to.[30] Neither of these claims can be verified against legal or archival records or are supported by citations in the respective papers.

Additionally, contemporary fiction points to a lack of clarity. For instance, a story set in 1849 contains the phrase 'There will come a time, when you will beg for less than a *Kassenbillet*'.[31] While fictional, the scene reflects that the value of *Kassenbillets* was very volatile and quite low in later years. Similar observations are also noted in secondary sources, although as stated before, largely uncited. For instance, Müller notes that after the Battle of Leipzig in 1813, the price of the notes declined as the scarcity of silver made redemption impossible, causing the bills to trade below face value.[32]

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[25] Assuming 1 *Taler* = 24 *Groschen* = 12 *Pfennig*, therefore 1 *Taler* = 24 x 12 = 288 *Pfennig*.
[26] Pick, *Papiergeld Lexikon*, 305f.
[27] Metasch, 'Papiergeld und Banknoten in Sachsen 1772 bis 1936', 18.
[28] The 1813 campaign (*Befreiungskriege*) against Napoleon in German territories, culminating in the Battle of Leipzig, brought military occupation and economic disruption to Saxony, which had allied with France.
[29] Sneedorff, *Briefe eines reisenden Dänen, geschrieben im Jahr 1791 und 1792 während seiner Reise durch einen Theil Deutschlands, der Schweiz und Frankreichs*, 51–52.
[30] Walburg, 'Wertstabiles Papiergeld im 18. Jahrhundert', 37.
[31] 'Das Kassenbillet', 25.
[32] Müller, 'Die Königlich Sächsischen Cassenbillets Gemäß Gesetz Vom 16.04.1840', 9.

2.2 'Successful' money

To evaluate whether *Kassenbillets* were actually 'successful', this section examines how paper money success is defined in academic literature and compares *Kassenbillets* with other Western European examples. The literature reveals no consistent definition of 'success' for early paper money, criteria range from long circulation periods, limited supply, an appropriate denomination structure and stable exchange rates.

On *Kassenbillets*, Walburg argues that the key factor for their success was the strictly limited supply of notes to 1.5 million *Taler* originally defined in 1772, with new notes issued only to replace old or forfeited ones.[33] This supply constraint contrasts sharply with the over–issuance problems that caused other early paper money experiments to fail. Implicitly, their long circulation period, only stopped by the German unification and their subsequent replacement by the German *Mark* in 1873, serves as evidence for their success.

Austrian paper money provides the closest parallel to *Kassenbillets*: So called *Banco–Zettel* were introduced in 1762 to pay off state debt needed to finance the final stages of the Seven Years' War.[34] Austrian paper money was legal tender and traded at par. Jobst and Kernbauer argue that the metric of their success was its long circulation period until 1812.[35] Further, Austrian paper money often traded at a premium of 1% to 2.5% above coins in the market, reflecting the public's willingness to pay for the convenience of paper money.[36]

Supply discipline is often cited as the fundamental requirement for a successful paper money experiment. Those unable to maintain limits on the bills in circulation failed catastrophically. France, under John Law, planned to replace gold and silver with paper money, is one such example. As Velde outlines, Law attempted to control inflation by pegging the price of shares above their market

[33] Walburg, 'Wertstabiles Papiergeld im 18. Jahrhundert', 36–37.
[34] Kindleberger, *A Financial History of Western Europe*, 130.
[35] Jobst and Kernbauer, *The quest for stable money: Central banking in Austria, 1816–2016*, 23.
[36] Geldmuseum der Österreichischen Nationalbank, *Österreichische Geldgeschichte*, 50.

level, which led to over–issuance of paper money. This strategy eroded public and governmental trust, resulting in the collapse of the system by May 1720.[37] Similarly, Sweden's initial paper money experiment (1661) failed rapidly due to over–issuance of their *Riksdaler* and the central bank's inability to maintain convertibility of paper bills to metallic currency.[38] Sweden's entry into the Seven Years' War halved the value of the local currency against the Hamburg *Mark Banco*.[39]

Beyond supply control, successful paper money required appropriate denomination structures. From 1797, Britain's smallest denomination was five *Pounds*, which was rather large considering it was more than double of a worker's monthly wage. The bills were therefore too large for typical daily transactions but useful for wholesale or merchant–level payments.[40] This suggests that while paper money was accepted, its practicability for everyday transactions appears to have been limited.

Comparative analysis reveals several, yet not cohesive criteria for evaluating early paper money success beyond long circulation periods: maintenance of convertibility or par value, supply discipline preventing over–issuance, and appropriate denomination structure. The Saxon experience appears successful by most of these measures, though questions remain about practical usability for lower income populations.

2.3 Electorate of Saxony

The Electorate of Saxony around 1772 is described ambiguously: While it was severely affected by the consequences of the Seven Years' War, failed harvests and economic strain, it was also described as prosperous and very well–developed,

[37] Velde, 'Experiments with Paper Money', 421–22.
[38] Velde, 'Experiments with Paper Money', 505.
[39] Kindleberger, *A Financial History of Western Europe*, 132.
[40] Velde, 'Experiments with Paper Money', 419.

especially regarding agriculture.[41] Saxony's dense settlement pattern, with 15 to 20 large cities supported by fertile soils, enabled both agricultural autonomy and active trade.[42] Cities like Dresden had grown into urban centres, and Leipzig had developed into the leading commercial hub of central Germany.[43] Parts of Electoral Saxony remained among the Holy Roman Empire's most economically advanced regions throughout the early modern period.[44]

Official population data for Saxony were collected by the *Commerziendeputation* but are based on inconsistent administrative districts and collected at irregular intervals.[45] Data for all districts was summed up in Table 2 (full Table in Appendix A.2.), which shows the Electorate of Saxony's population ranging from approximately 1.63 million (1772) to 1.89 million (1792).[46]

Table 2: Population in the Electorate of Saxony, 1755–1792

Region	**1755**	**1772**	**1790**	**1792**
Sum	1,695,026	1,632,606	1,878,100	1,892,660

Note: The sum of individual district population equals 1,695,286, though the archive records the total as 1,695,026 (a discrepancy of 260). The official archival total is used here.

For reference, in the Austrian territories (Austria above and below the Enns), paper money was introduced ten years before the *Kassenbillets*. The population was approximately 2.73 million in 1754, increasing to 2.97 million in 1780 and surpassing 3.05 million by 1800.[47] This indicates that Saxon paper money served a proportionally smaller but economically significant population.

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[41] Uebele and Grünebaum, 'Food Security, Harvest Shocks, and the Potato as Secondary Crop in Saxony, 1792–1811', 3–4.
[42] Däbritz, *Die Staatsschulden Sachsens in Der Zeit von 1763 Bis 1837*, 33.
[43] Wuttke, *Sächsische Volkskunde*, 185; Keller, 'Saxony: Rétablissement and Enlightened Absolutism', 312–13.
[44] Schirmer, 'Der Bevölkerungsgang in Sachsen zwischen 1743 und 1815', 26.
[45] The *Commerziendeputation* was later renamed to '*Landesökonomie–Manufaktur– und Cornrnerziendeputation*' in 1764.
[46] HStA Dresden, Geheimes Kabinett, 10026/Loc. 00056/01, 'Konsumentenlisten Und Getreidepreise', Fol. 4, 28, 68, 84.
[47] Klein, 'Österreichs Bevölkerung 1754–1869', 56.

In financial terms, Saxony was under extreme pressure during and after the Seven Years' War. Schlechte describes how the state had already been struggling to fund its foreign policy before the war, relying heavily on for example tax increases.[48] Däbritz attributes the foundations for the debt crisis primarily to the times after the acquisition of the Polish crown in 1697.[49] Since then, Saxony's elector also became King of Poland–Lithuania as part of a personal union between the two states.[50] This position brought prestige but also imposed heavy financial burdens. The Seven Years' War brought this situation to a breaking point. Saxony not only suffered military defeat and the loss of the Polish crown but also had to pay reparations estimated between 290 and 350 million *Taler*.[51] Schlechte argues that the war marked the worst crisis for Saxony since the Thirty Years' War (1618–1648).[52] The actual size of Saxony's debt after 1763 remains unclear. Estimates vary depending on source and method. Metasch reports a debt of 49 million *Taler*, equalling ten times the state's annual revenue.[53] Sneedorf listed 29.4 million *Taler* in guaranteed debt plus 20.5 million in additional liabilities, summing up to 49.9 million *Taler* in 1763.[54] While these numbers are not fully consistent, they all point to an overburdened fiscal system. Although severe, high debt–to–revenue ratios were common in premodern Europe, with many Imperial estates within the Holy Roman Empire carrying debts more than ten times their annual revenue.[55] Following this approach, Saxony's revenue of 1.5 million *Taler* through issued *Kassenbillets* represented around one third (30.62%) of annual revenue.[56] Beyond these structural debt problems, the famine of 1771/1772 worsened the financial situation of Saxony, which according to Metasch caused around 100,000 deaths in

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[48] Schlechte, *Die Staatsreform in Kursachsen 1762–1763*, 20–21.
[49] Däbritz, *Die Staatsschulden Sachsens in Der Zeit von 1763 Bis 1837*, 34–35, 41–42.
[50] The personal union was first ruled by August II (also Elector of Saxony as Friedrich August 'the Strong', 1694–1733), later his son August III (1733–1763). The personal union ended with the death of August III, as Saxony could not secure the elective Polish crown again.
[51] Including 40–50 million to Prussia and 250–300 million in costs incurred by allied occupation forces.
[52] Schlechte, *Die Staatsreform in Kursachsen 1762–1763*, 23.
[53] Metasch, 'Papiergeld und Banknoten in Sachsen 1772 bis 1936', 16.
[54] Sneedorff, *Briefe eines reisenden Dänen, geschrieben im Jahr 1791 und 1792 während seiner Reise durch einen Theil Deutschlands, der Schweiz und Frankreichs*, 50.
[55] Volckart, *The Silver Empire: How Germany Created Its First Common Currency*, 171–72.
[56] Based on annual revenue of 4.9 million *Taler* (one tenth of debt of 49 million *Taler*), the *Kassenbillet* emission of 1.5 million equalled 30.62% of yearly revenue.

Saxony alone (6.13% of total population).[57] Schirmer notes smaller numbers, stating over 20,000 people fled Saxony for Prussia that year and 64,532 people died in 1772.[58] The later *Kassenbillet* period coincided with the Napoleonic Wars (1792–1815), which brought sustained economic disruption to Saxony. Following Napoleon's victories at Jena and Auerstedt (1806), Saxony switched allegiance to France in December 1806, gaining elevation to kingdom status but assuming costly military obligations including providing auxiliary troops for French campaigns. The continuous warfare created economic pressure through military expenses and occupation costs, explaining the persistent price volatility evident in the consumer price index throughout the early 19th century.[59]

Despite these crises, fiscal recovery efforts followed relatively quickly. Stöver wrote in 1785 that Saxony recovered 'miraculously' fast after the Seven Years' War and few countries contributed as much of taxes relative to their size as the Electorate of Saxony.[60] This statement is particularly interesting, as it highlights that *Kassenbillets* were proposed by the Saxon tax council (*Obersteuerkollegium*) to close the capital deficit. In 1865, the bulk of Saxony's fiscal revenue derived from taxation, while only 11.7% came from state–owned *domains*.[61,62]

The complexity of Saxony's economic situation is reflected in secondary literature. Henning and Weber highlight that growing wealth among the upper classes, and the effects of the Thirty Years' War, went hand in hand with increasing impoverishment of large parts of the population, high child mortality and limited social mobility.[63] Sneedorf wrote in 1791 about Saxony being ravaged by past wars and poor governance yet still marked by visible prosperity and grand institutions.

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[57] Metasch, 'Moderne Formen Staatlicher Geldschöpfung. Die Erfolgreiche Einführung von Papiergeld in Sachsen 1772.', 75.
[58] Schirmer, 'Der Bevölkerungsgang in Sachsen zwischen 1743 und 1815', 33.
[59] Sächsische Landeszentrale für politische Bildung, 'Europa im Bann Napoleons und die Koalitionskriege'.
[60] Stöver, *Historisch–Statistische Beschreibung Der Staaten Des Teutschen Reichs*, 290.
[61] Roscher, *System Der Volkswirthschaft*, Band IV. System der Finanzwissenschaft, 36–37.
[62] The term '*Domäne*' refers to the lands and estates directly owned and administered by the Electorate, including revenues from agriculture, forestry, and associated rents.
[63] Weber, *Deutsches Wirtschaftsleben*, 8–9; Henning, *Das Vorindustrielle Deutschland 800 Bis 1800*, 283–85.

He documented a trade surplus of 800,000 *Reichstaler*, and he also described his fascination for the *Kassenbillets* as 'circulating paper money holds the same value as hard coin!'.[64] This contrast, economic prosperity alongside poverty, recovery alongside crisis, provides context for understanding both the need for *Kassenbillets* and the challenges they faced in achieving broad popular acceptance.

3. Method

This paper is aimed to provide evidence on whether *Kassenbillets* were practical for typical household expenditures during their circulation period. To assess this, a consumer price index (CPI) was created for 1763–1803, spanning 40 years around the first *Kassenbillet* issue (1772), starting from the end of the Seven Years' War (1763). The CPI includes three essential expenditures in early modern context: wheat (representing food), beer (beverages), and oak firewood (fuel) and its intent is to show the real cost of basic consumption. To ensure comparability, all prices were standardised to grams of silver per hectolitre (g.Ag/hl). The cost of the basket is equal to the individual price of the goods multiplied by their annual consumption in hl. The CPI employs a Laspeyres approach using base–year consumption quantities, calculated as:

$$Consumer\ Price\ Index = \frac{p_{i,t} \cdot q_{i,0}}{p_{i,0} \cdot q_{i,0}}$$

- $p_{i,t}$ = Price of the good i in year t (g.Ag/hl).
- $p_{i,0}$ = Price of the good i in the base year (g.Ag/hl).
- $q_{i,0}$ = Annual consumption of good i (in hl, constant across all years).
- i = Wheat, beer, wood.

The base year for wood and beer is 1772 (= 100). For wheat, a five–year average (1770–1774 = 100) was used to account for volatility.[65] This approach avoids

[64] Sneedorff, *Briefe eines reisenden Dänen, geschrieben im Jahr 1791 und 1792 während seiner Reise durch einen Theil Deutschlands, der Schweiz und Frankreichs*, 50.
[65] Average price between 1770 and 1774 equals 69.47 g.Ag/hl of wheat and 89.31 g.Ag/hl in 1772.

distorting the index with extreme price levels of wheat during the 1771/1772 famine, when prices were around 28.56% above the five–year average.[66] Beer and wood prices were relatively stable, so their base–year prices were used directly. Therefore, the composite index value for 1772 is 113.13 rather than 100 because wheat prices that year were significantly elevated relative to their the five–year average.

While other historical price indices use expenditure weights, this article employs a quantity–based approach for several methodological reasons. For assessing whether *Kassenbillets* could cover basic expenditures, the relevant question is the actual cost of buying the physical quantities people required, rather than tracking how price changes affected household budget allocations. Most early modern price indices, such as employed by Brown and Hopkins, account roughly 80% for food, with wheat as the predominant food group as it also accounts for the majority of cost of living.[67] It should be noted that even without applying expenditure weights, wheat naturally dominates the CPI in this article at roughly the same scale: the average price of wheat per hectolitre represents 69.25% of the combined cost of all three goods in the data used. However, since all prices in this article are standardised, using actual consumption quantities directly reflects the cost of purchasing essential goods and better addresses whether *Kassenbillet* denominations could effectively purchase the essential quantities required.

To understand common expenditures, annual consumption was calculated for each of the goods in g.Ag/hl assuming 365 days per year. Table 3 summarises the annual consumption in original and standardised units, details on price conversions are outlined in chapter 3.1. The annual wheat requirement was based on bread consumption. According to Wilcke, a worker requires 1.75 pounds (0.79 kilograms) of bread per day, which typically requires about 0.53 kilograms of wheat flour,

[66] ([89.31 – 69.47] divided by 69.47) × 100 = 28.56%.
[67] de Vries, 'Between Purchasing Power and the World of Goods: Understanding the Household Economy in Early Modern Europe', 89, 96; Brown and Hopkins, 'Seven Centuries of the Prices of Consumables, Compared with Builders' Wage–Rates', 297.

assuming a 60% flour–to–bread ratio.[68] Annualising the wheat flour requirement results in 193.45 kg or 2.54 hl of wheat per year to cover basic consumption needs, based on one hectolitre equal to 76 kg of wheat. Although annual consumption of wood per household is unclear, archival evidence indicates that hospital servants in Leipzig received 2.5 *Klafter* per year.[69] This amount was used as a standard for calculating the wood price index. Annual beer consumption was studied by Unger; although no data exist for Saxony specifically, his estimate of 250 litres of beer per person per year (in the 17th century) was used as reference.[70,71]

Table 3: Annual Consumption of Essential Goods (hl)

Good	**Average Consumption**	**Annual Consumption in hl**
Wheat	1.75 Pounds of bread per day	2.54
Beer	250 Liter per year	2.50
Wood	2.5 Klafter per year	75.83
Total		**80.87**

In addition to the CPI, a Purchasing Power Index (PPI) was calculated, which is the inverse of the price index. This index allows for a better understanding of the evolution of purchasing power over time; As prices rise, the real value of wages falls.

$$Purchasing\ Power\ Index = \frac{100}{Consumer\ Price\ Index}$$

3.1 Conversions

Original prices and incomes were given in multiple currencies and units, making direct comparison impossible without standardisation. Therefore, silver equivalents (g.Ag) provide the only consistent measure of value for evaluating

[68] Wilcke, *Über Entstehung, Behandlung Und Erwehrung Der Armuth*, 191.
[69] Elsas, *Umriss Einer Geschichte Der Preise Und Löhne in Deutschland*, Zweiter Band–Teil A, 320, 323.
[70] Unger, *Beer in the Middle Ages and the Renaissance*, 127–29.
[71] Unger's estimates are for beer consumption in 1650 in Diest, part of Spanish Netherlands at that time.

purchasing power and price levels. This section explains how values were converted to g.Ag: Prices were standardised to grams of silver per hectolitre (g.Ag/hl) and incomes to grams of silver per year (g.Ag/year) based on the contemporary Saxon monetary standards in effect during each period. Table 4 summarises all currency and measurement conversions used in this paper.

Saxony adopted the *20–Gulden Standard* on March 14, 1763, which was essentially in place until 1838.[72] Accordingly, one *Cologne Mark* of silver equalled 13 $\frac{1}{3}$ *Taler* (i.e., 13 *Taler* and 8 *Groschen*).[73] As one *Cologne Mark* of silver was 233.856 g.Ag, one *Taler* contained 17.54 g.Ag.[74] *Taler* in this paper refers to *Rechnungstaler*, which was valued at 22 *Groschen* between 1534 and 1540, and 24 *Groschen* from 1540 onwards or 288 *Pfennig*e.[75] Prices or income originally given in *Denar* are synonymous for *Pfennig*.

Following the Seven Years' War, Saxony adhered strictly to the *20–Gulden Standard*.[76] It spread across much of the Holy Roman Empire, where 1 *Meißnische Gulden* equalled $\frac{7}{8}$ *Taler*.[77,78] Values given in *Gulden* were converted using this ratio.[79] In 1838, Saxony adopted the Dresden Coinage Convention (*Münzkonvention*), switching to the *14–Taler Standard*, which was used until the

[72] The *20–Gulden Standard* was also called *20 Guldenfuß*.
[73] Busse, *Kenntnisse Und Betrachtungen Des Neuern Münzwesens Für Deutsche.*, 49; Praun et al., *Gründliche Nachricht von Dem Münzwesen Insgemein, Insbesondere Aber von Dem Teutschen Münzwesen Älterer Und Neuerer Zeiten*, 182–83.
[74] Schrötter, *Wörterbuch Der Münzkunde*, 371.
[75] Elsas, *Umriss Einer Geschichte Der Preise Und Löhne in Deutschland*, Zweiter Band–Teil A, 12; Klotzsch, *Versuch einer chursächsischen Münzgeschichte*, 50–92.
[76] Noback and Noback, *Vollständiges Taschenbuch Der Münz–, Maass– Und Gewichts–Verhältnisse, Der Staatspapiere, Des Wechsels– Und Bankwesens Und Der Usanzen Aller Länder Und Handelsplätze*, 3: 1410.
[77] Elsas, *Umriss Einer Geschichte Der Preise Und Löhne in Deutschland*, Zweiter Band–Teil A, 10.
[78] According to Noback and Noback, the *20 Guldenfuß* spread with the exception of the Hanoverian, Prussian, Swedish–Pomeranian, and Livonian territories, and those lands and cities where the Lübeck 'Kurantfuß' remained in use, at least for the major denominations.
[79] Elsas, *Umriss Einer Geschichte Der Preise Und Löhne in Deutschland*, Zweiter Band–Teil A, 10, 12.

Reich currency reform 1872.[80,81] From 1872, the *Mark* was defined to contain exactly five grams of fine silver.[82] However, as it was also intended to equal $\frac{1}{3}$ *Taler*, its actual silver content was of approximately 5.85 grams (one third of 17.54 g.Ag per *Taler*), which was used for the conversions in this article.

In addition to currency conversions, various local units for weights and volumes required standardisation. Wheat prices were listed per *Dresdner Scheffel*, which converts to $107\frac{1}{3}$ (107.33) litres or 1.073 hl.[83] Beer in the 18th century was measured in different types of unit forms, but the data compiled for this article used *Kanne*, which translates to $60\frac{7}{10}$ (60.70) Parisian cubic inches or $1\frac{1}{5}$ (1.20) litres or 0.012 hl.[84] Wood prices were recorded in *Klafter*, a less common unit in Saxony, where *Schragen* was more typical. Three *Klafter* equal one *Schragen*, whereas one *Schragen* equals $248\frac{5}{9}$ (248.55) Parisian cubic inches or $8\frac{1}{2}\frac{3}{5}$ (9.10) cubic metres. 1 cubic metre equals 1,000 litres, therefore 1 *Klafter* converts to 3033.33 litres or 30.33 hl.[85]

[80] Kindleberger, *A Financial History of Western Europe*, 119; Müller, 'Die Königlich Sächsischen Cassenbillets Gemäß Gesetz Vom 16.04.1840', 11.
[81] This established the 2–*Taler* (3½–*Gulden*) piece as the main silver denomination with seven pieces minted per *Cologne Mark* of fine silver (233.855 g.Ag.), making each standard *Taler* contain 16.71 g.Ag.
[82] Schrötter, *Wörterbuch Der Münzkunde*, 373.
[83] Krüger, *Vollständiges Handbuch Der Münzen, Masse Und Gewicht Aller Länder Der Erde*, 295.
[84] Krüger, *Vollständiges Handbuch Der Münzen, Masse Und Gewicht Aller Länder Der Erde*, 134.
[85] Krüger, *Vollständiges Handbuch Der Münzen, Masse Und Gewicht Aller Länder Der Erde*, 138, 306.

Table 3: Currency and Measurements Conversions

	Unit	Value	Equivalent
Currency	1 Taler	24	Groschen
	1 Taler	288	Pfennige
	1 Taler	17.54	g.Ag
	1 Gulden	0.875	Taler
	1 Mark (1871 onwards)	5.85	g.Ag
Volume and Weight	1 Cologne Mark	233.86	g.Ag
	1 Dresdner Scheffel	107.33	litres
	1 Kanne	1.20	litres
	1 Klafter	3033.33	litres

3.2 Limitations

The method includes several limitations that should be considered when interpreting the results. The absence of strict monetary borders in the 18th century complicates any precise determination of *Kassenbillet* circulation volumes and places within Saxon territory, since these bills could flow freely. The exact geographic circulation patterns of *Kassenbillets* remain uncertain given the porous nature of territorial boundaries for monetary instruments. Geographically, this article focuses on the Electorate of Saxony, which emerged from the 1485 division of Saxony as the Albertine branch. It excludes the contemporaneous Ernestine branch that compromised the other half of the former unified territory.

The CPI focuses on essential consumable goods (wheat, beer, wood) but excludes others such as housing, taxes, and services. The quantities of each good rely on estimates from comparative studies rather than direct archival evidence, as such records are extremely rare for this period. Households likely supplemented purchases with home production. The CPI accounts for this by using raw wheat prices rather than bread prices, acknowledging that households would process wheat into bread and other goods themselves. However, this means the index may overstate market dependence and understate home production. Despite careful efforts to standardise prices and incomes, conversion rates vary slightly across sources.

This paper is not aimed at researching total money supply in the Electorate of Saxony and focuses exclusively on state–issued *Kassenbillets*, excluding both metallic currency and private paper money that circulated simultaneously. By the middle of the 19th century, the private sector contributed significantly to the paper money supply through four major issuers.[86,87] In sum, the total private paper money supply in 1851 was 5,584,000 *Taler* compared to 7,000,000 *Taler* of *Kassenbillets*. Based on this data, this analysis would cover around 56.63% of Saxony's total paper money circulation.

These limitations mean the analysis potentially misses out on actual purchasing power dynamics. The coexistence of multiple currency forms potentially influenced the usage patterns of *Kassenbillets* in ways not captured by this analysis.

4. Data

This article builds on two types of historical data, a consumer price index (CPI) compiled from food and non–food items and income data in Saxony. The sources, collection methods, and necessary adjustments for each dataset are detailed in this chapter. Both types of data allow for an overview of average income and expenses, though each comes with important limitations. The main limitation of the price data used for the CPI lies in its local focus on Leipzig and Dresden. Prices rely on average market prices, which may not reflect intra–annual volatility or rural price differentials. Price differences between urban and rural areas and regional economic variations are not captured, potentially distorting the analysis of purchasing power relationships between different areas of the Electorate. For income, the main limitation is uncertainty about actual working weeks and potential additional payments.

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[86] Noback and Noback, *Vollständiges Taschenbuch Der Münz–, Maass– Und Gewichts–Verhältnisse, Der Staatspapiere, Des Wechsels– Und Bankwesens Und Der Usanzen Aller Länder Und Handelsplätze*, 1: XXXIX.

[87] The four major issuer of private paper money were: Leipzig Bank notes (*Noten der Leipziger Bank*): 4,284,000 *Taler*; Chemnitz City Bank credit certificates (*Creditscheine der Chemnitzer Stadtbank*): 300,000 *Taler*; *Oberlausitzer Hypotheken–, Leih– und Sparbank*: 500,000 *Taler* and Leipzig–Dresden Railway: 500,000 *Taler*.

4.1 Consumer Price Index

This CPI incorporates 577 price observations: 470 prices of wheat, 60 of beer, and 47 of wood. All prices were converted to g.Ag/hl for comparison across commodities, 84.27% of all observations are sourced from Leipzig. The data used was mainly gathered for administrative purposes rather than systematic data collection, though this ensures their accuracy for contemporary fiscal use. The frequency of price observations varies from annually to weekly, making annual averages potentially misleading. The article period was marked by wars and resulting economic disruptions, which may have affected both the reliability and completeness of the records. Wheat data was cross validated, where three independent sources allowed for averaging and comparison to verify accuracy. Beer and fuel prices rely on single sources. The dataset provides a comprehensive price series available for Saxony during the late 18th century and is intended to offer insights into price movements and economic conditions around the time of the first issuance of *Kassenbillets*.

4.1.1 Wheat

Wheat price data present both the greatest importance and complexity in constructing the price index. To address the high volatility in prices, data were compiled from three independent sources (Total volume of raw data: 470 datapoints), using their annual averages to minimise source–specific biases. This resulted in a final dataset of 287 yearly prices after averaging.

The first source is data collected by Dittmann in 1889. He compiled average harvest–year prices from 1690 to 1888 for the city of Leipzig on an annual basis, having already converted minimum and maximum prices per week to averages per year.[88] Prices were recorded by him annually in *Mark* per *Dresdner Scheffel* until 1870/1871 and then in *Mark* per ton. For this analysis, prices were then normalised to calendar years because the original data spanned from harvest year to harvest year, not to calendar year. The second source is data collected by

[88] Dittman, *Die Getreidepreise in der Stadt Leipzig im XVII., XVIII. und XIX.*, 13, 33–35.

Hunger in 1789, who documented 'highest' and 'lowest' wheat prices twice a year (in the months of May and November) from 1602 to 1782 for Dresden in *Taler* and *Groschen* per *Dresdner Scheffel*.[89] The average of each calendar year was used for this article. Hunger's data represents the only source for Dresden within the CPI, accounting for 15.73% of the datapoints. Additionally, wheat prices from the St. Georgen–Hospital in Leipzig recorded by Elsas in *Pfennig* by *Dresdner Scheffel* from 1702 to 1820 were considered.[90,91] These are the prices the hospital paid for one *Dresdner Scheffel*. Sales, if dated, were done annually and usually after harvest. No prices were recorded for 1758.

To assess the reliability of the prices, the source data were compared with primary evidence from the *Konsumentenverzeichnis* issued by the *Commerziendeputation*. The *Konsumentenverzeichnis* reports annual average wheat prices per *Dresdner Scheffel* (in *Taler* and *Groschen*) for selected years, though fewer years and on a less granular basis than data recorded by Elsas, Hunger or Dittmann. Numbers are reported for the years 1765–1770, 1771–1773, 1775, 1776, 1777, 1781–1784 and 1785–1790.[92] These average wheat prices were mainly used for taxation purposes. The prices listed in the *Konsumentenverzeichnis* were converted following the same procedure used for the wheat prices of Elsas, Hunger and Dittmann to g.Ag/hl. The archival prices were then compared against the corresponding values (or averaged values for multi–year periods) from each of the three data sources for each period, the results are summarised in Table 5.

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[89] Hunger, *Kurze Geschichte Der Abgaben, Besonders Der Konsumtions– Und Handels–Abgaben in Sachsen*, 127–73.
[90] Elsas, *Umriss Einer Geschichte Der Preise Und Löhne in Deutschland*, Zweiter Band–Teil A, 258–59, 519–521.
[91] Elsas uses *Denar*, a synonym for *Pfennig*. Prices were originally recorded in *Denar* per *Leipziger Scheffel* before 1714, but Elsas converted them to *Denar* per *Dresdner Scheffel* for his dataset.
[92] HStA Dresden, Geheimes Kabinett, 10026/ Loc. 0056/01, 'Konsumentenlisten Und Getreidepreise', Fol. 126, 132, 140, 152, 158, 163, 166.

Table 5: Comparison of Wheat Price Data Sources with Archival Records (% Deviation)

Years	**Archival Price (g.Ag/hl)**	**Dittmann**	**Hunger**	**Elsas**
1765–1770	42.70	–5.72%	–18.52%	–29.08%
1771–1773	87.99	–0.01%	2.76%	26.77%
1775	40.76	–8.24%	–25.28%	17.15%
1776	35.58	–12.97%	–4.28%	13.10%
1777	34.94	4.74%	–2.64%	–13.59%
1781–1784	41.41	4.40%		–4.45%
1785–1790	46.58	–14.22%		–20.51%
Average difference in %		**–4.57%**	**–9.59%**	**–1.51%**

Note: Hunger's price series ends in 1782; blanks indicate periods with no available data.

When comparing the archival source to the three datasets, Elsas figures show closest alignment (average difference: –1.51%), while Hunger's more limited series displays larger variations (–9.59% average) and Dittmann's data shows moderate differences (–4.57% average). Notably, Hunger's dataset lacks coverage for the period 1781–1790 entirely. Given the variation between individual sources and their incomplete coverage listed in Table 5, the annual average of the prices sourced from Dittmann, Hunger and Elsas was used for the CPI.

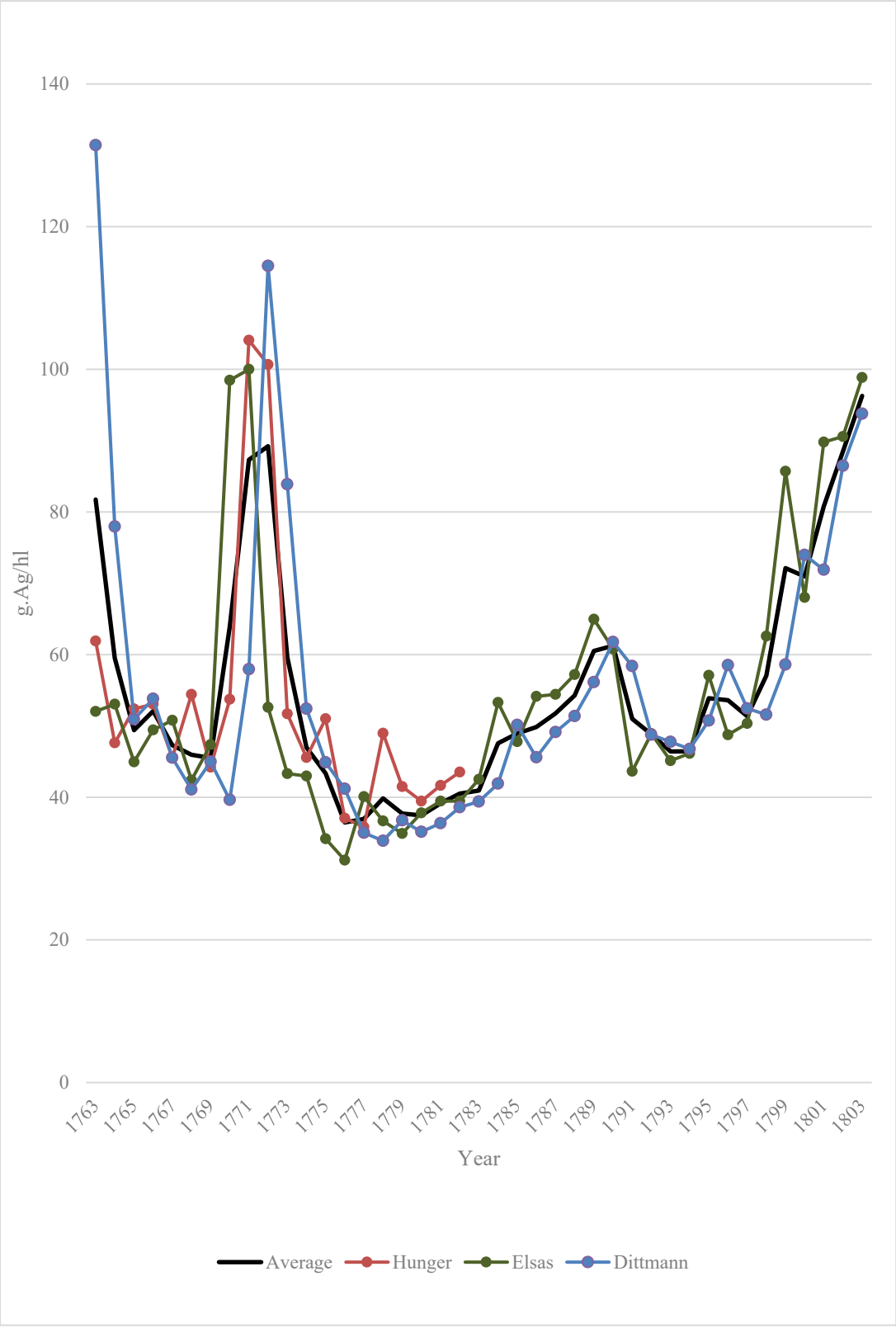
Wheat prices in 18th century Saxony were highly volatile and can be attributed primarily to three factors: the Seven Years' War (1756–1763), which caused major price spikes; the widespread crop failure of 1771/1772, which led to increased grain prices across Europe; and the renewed political and economic instability after 1790 during the uprisings and Napoleonic Wars. As shown in Figure 1, the peaks after the end of the Seven Years' War, 1771/1772 and then beginning of 19th century are also clearly visible when plotting the price data. Dittmann notes that wheat prices in Leipzig rose to exceptionally high levels around the first issuance of *Kassenbillets*, i.e. by 102% from 1770/1771 to 1771/1772, with similar jumps in rye (+97%), barley (+147%), and oats (+153%).[93] Similar impacts on prices and their

[93] Dittman, *Die Getreidepreise in der Stadt Leipzig im XVII., XVIII. und XIX.*, 17.

reasonings were also noted for other regions, e.g., Hinterpommern.[94] The price highs in 1771 and 1772 are still referred to even by the end of the century[95].

[94] Häse, *Versuch Über Das Steigen Der Preise von Allen Grundstükken, Besonders Der Landgüter in Hinterpommern*, 26–46.
[95] *Allgemeine Literatur–Zeitung*, 'Staatswissenschaften'.

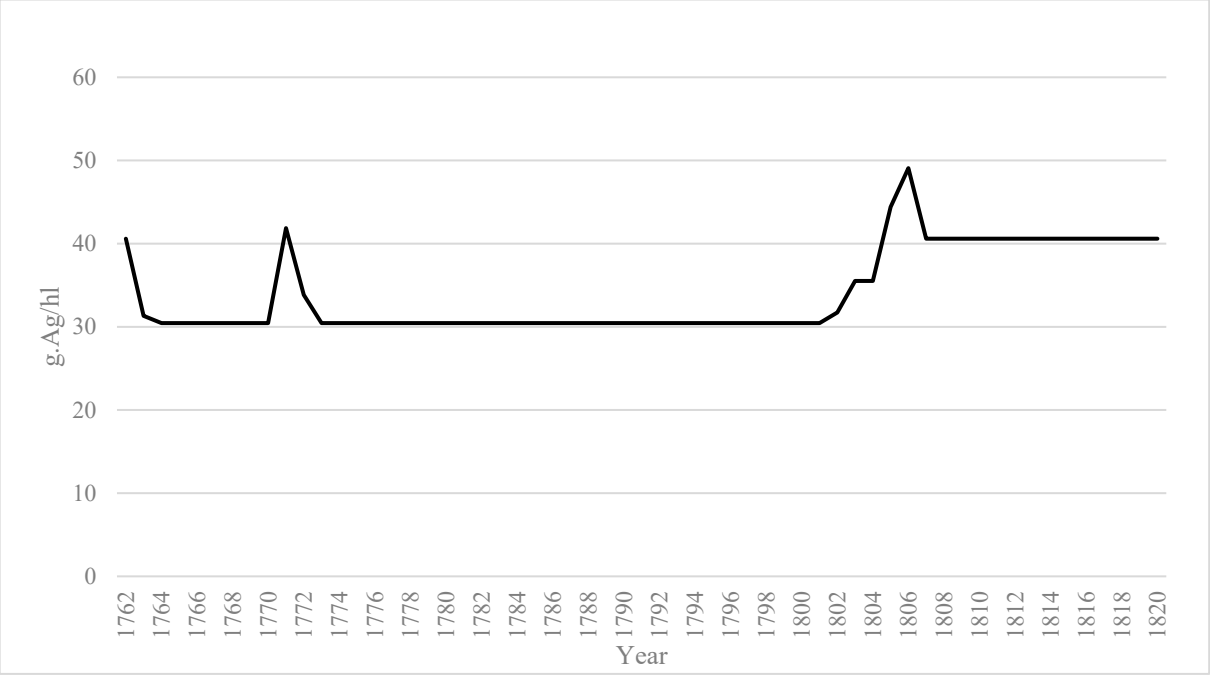
Figure 1: Wheat Prices from Three Sources (Dittmann, Hunger, Elsas) and Combined Average, Leipzig/Dresden, 1763–1803 (g.Ag/hl)



4.1.2 Beer

Beer prices, weighted at 10% in the consumer price index, were recorded by Elsas from the *Leipzig Intelligenzblätter* between 1762 and 1820.[96] Annual averages were calculated from earliest monthly price quotations, with original prices in *Denar* per *Kanne* converted to g.Ag/hl for comparability. Figure 2 exhibits that the beer price series is remarkably stable compared to wheat prices, although it confirms the same price peaks seen in the wheat data around the famine (1771/1772) and the Napoleonic Wars. The standard rate of six *Denar* per *Kanne* (28.94 g.Ag/hl) remained virtually unchanged through 1802, showing only minor fluctuations during the grain crises of 1771/1772 and the early 19th century. The only major disruption occurred before the period in the focus of this analysis, during the monetary crisis of the early 1620s when prices peaked at 72 *Denar* (twelve times normal levels) before returning to the standard.[97] Given this price consistency, 1772 serves as an appropriate base year without requiring multi–year averaging.

Figure 2: Beer Prices in Leipzig, 1762–1820 (g.Ag/hl)



[96] Elsas, *Umriss Einer Geschichte Der Preise Und Löhne in Deutschland*, Zweiter Band–Teil A, 311–13, 535–36.
[97] Elsas, *Umriss Einer Geschichte Der Preise Und Löhne in Deutschland*, Zweiter Band–Teil A, 313.

4.1.3 Fuel

To account for fuel costs, prices for wood (weighted at 10%) were sourced from St. Georgen–Hospital records in Leipzig covering 1712 to 1799, as documented by Elsas.[98] The hospital records, likely reflecting contemporary market rates, included prices both with and without additional costs. Since these additional costs are not further specified but would affect consumer expenditure, prices including all costs were used in this paper.

Prices were originally recorded in *Denar* per *Ratsklafter*, which Elsas identifies as equivalent to the *Leipziger Klafter*.[99] For comparability with other goods and wages, prices were converted to g.Ag/hl using the conversion rate of approximately 30.33 hectolitres per *Klafter*. As wood prices also seem quite stable in relation to wheat prices, also here 1772 was used as the base year without averaging multiple years. The data series includes one peak of wood prices, which was identified at the end of the research period (1798) as shown in Figure 3.

[98] Elsas, *Umriss Einer Geschichte Der Preise Und Löhne in Deutschland*, Zweiter Band–Teil A, 320, 323, 536–39.
[99] Elsas, *Umriss Einer Geschichte Der Preise Und Löhne in Deutschland*, Zweiter Band–Teil A, 36.

Figure 3: Wood Prices in Leipzig, 1730–1798 (g.Ag/hl)

4.2 Income

To evaluate how much income was available and how price changes affected different households, 75 income data points for 22 occupations were compiled and standardised to g.Ag/year per person.[100] The income represents five different employers: a Cobalt Blue Factory in Niederpfannenstiel (5.33% of 75 datapoints), a Porcelain manufactory in Nymphenburg (13.33%), an unnamed mine in Saxony (4.00%), and the St. Johannis-Hospital (1.33%) and St. Georgen–Hospital (76.00%) in Leipzig. Occupations have been grouped into four sectors: Industrial, Professional, Domestic, and Mining. When translating some occupations into English, the original meaning may not be fully conveyed, so the original German term for each occupation is included in brackets and italics in this chapter. For data points which were recorded for a span of years instead of per year, the midpoint year was used to prevent one wage observation from appearing as multiple data points and to ensure honest representation of data precision. For example, wages recorded for '1773–1779' were attributed to 1776. This enabled temporal comparison while acknowledging the imprecise dating typical of

[100] Income was given in *Gulden*, *Taler* and *Denar* (*Pfennig*).

historical employment records. Judging from midpoint years, 46 out of 75 incomes fall between 1763 and 1803. Table 6 summarises the data used for income analysis; full occupational wage data is presented in Appendix Table A.2. Incomes have been annualised for comparison, typically assuming continuous employment, which likely does not reflect actual labour patterns. Weekly wages were annualised using a 52–week assumption, which likely overstates actual earnings, as many workers lacked uninterrupted employment. Where sources provided minimum and maximum wages for certain occupations, averages were calculated for this article. However, the pattern is consistent: higher–skilled roles received higher wages and were held by fewer individuals, while lower–wage roles were more numerous. This is confirmed also by contemporary perspectives, such as those of Weber, who suggested that excessive earnings could diminish workers' motives.[101] Occupational structures were shaped by access to education and social privilege, meaning the income data tends to capture differentiation at the upper end of the distribution, rather than reflecting broader averages.[102]

[101] Weber, *Deutsches Wirtschaftsleben*, 12.
[102] Henning, *Handbuch Der Wirtschafts– Und Sozialgeschichte Deutschlands*, 1: 926.

Table 4: Annual Incomes by Sector,1720–1820 (g.Ag)

Sector	**Data Points**	**Period**	**Range of Annual Income (g.Ag)**	**Average Annual Income (g.Ag)**
Industrial[103]	14	1730–1793	876.96–5998.41	2476.79
Professional[104]	37	1700–1820	438.48–2543.18	1302.96
Domestic[105]	21	1700–1820	103.29–210.47	174.05
Mining[106]	3	1787	684.04–1026.04	823.37
Overall	**75**			1186.79 (67.67 Taler)
Median				876.96 (50.00 Taler)

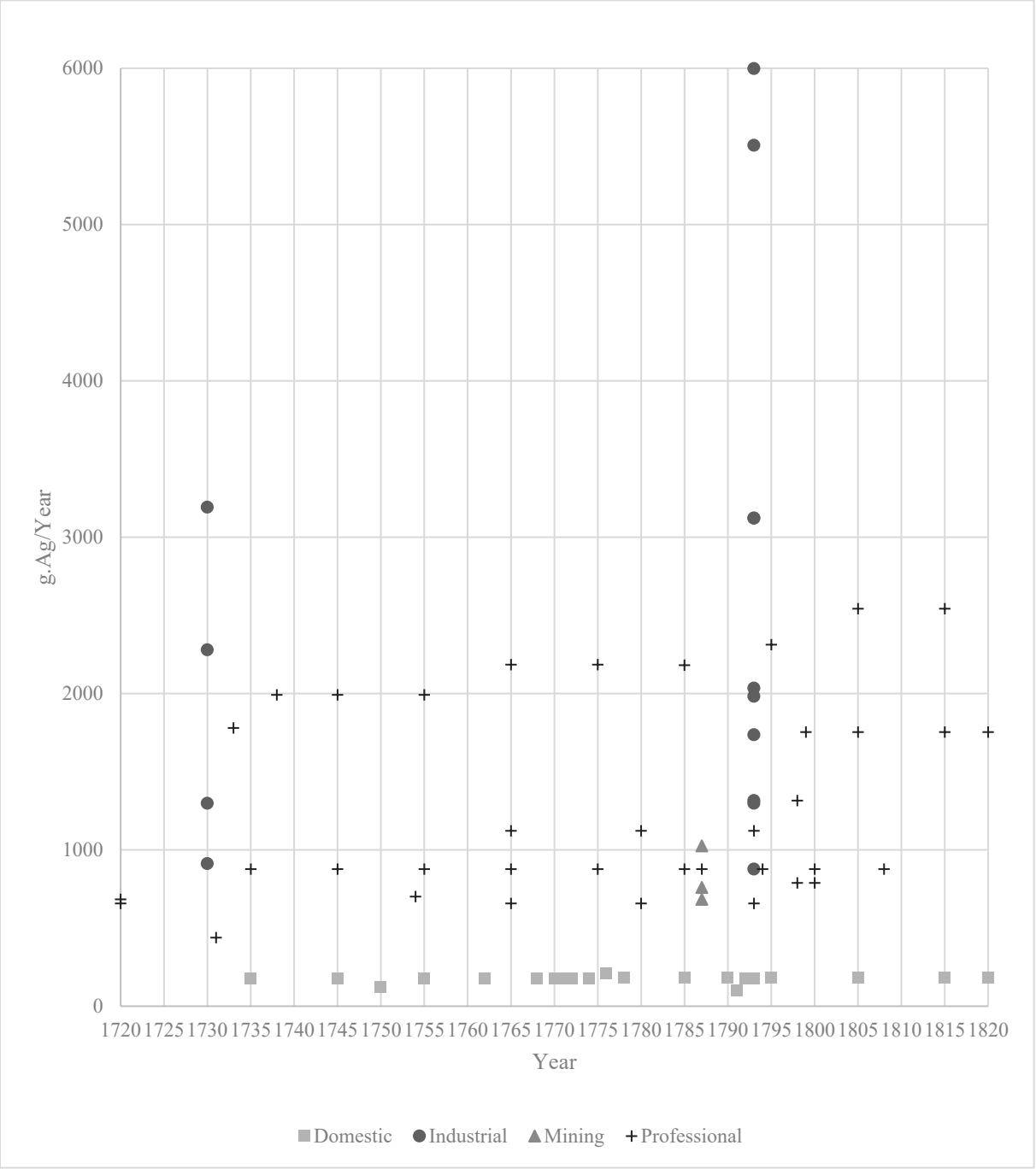
Note: Two occupations within the industrial sector (Shift Supervisor [*Schichtmeister*] and Dye Master [*Farbmeister*]) received additional small payments for specific tasks, which likely increased the income gap compared to lower wage workers but were not specified and are therefore not included.

[103] Henning, *Handbuch Der Wirtschafts– Und Sozialgeschichte Deutschlands*, 1: 925.
[104] Elsas, *Umriss Einer Geschichte Der Preise Und Löhne in Deutschland*, Zweiter Band–Teil A, 626, 631–32, 634.
[105] Elsas, *Umriss Einer Geschichte Der Preise Und Löhne in Deutschland*, Zweiter Band–Teil A, 598–600.
[106] von Wagner, *Ueber Die Chursächsische Bergwerksverfassung*, 71–72.

Figure 4 plots the income data, which makes it apparent that there is a significant wage hierarchy in this dataset. Highest earners (Supervisor [*Inspektor*] in the Nymphenburg Porcelain Manufactor, 5998.41 g.Ag/year) earned 58 times more than the lowest earners (Maid [*Magd*] in St. Georgen–Hospital Leipzig, 103.29 g.Ag/year). The lowest paid occupations in this dataset are domestic workers such as cooks and maids (*Köchin* and *Magd*), the highest earners are industrial and professional occupations such as bookkeepers (*Buchhalter*), priests (*Pfarrer*) and supervisors (*Schichtmeister* and *Inspektor*). Generally speaking, one *Taler* represented approximately the weekly salary of a miner (*Knechte* and *Bergschmiede*); However, for the miners in this dataset, this is not precisely the case.[107] According to Henning, the 52 *Taler* earned by the lowest group in 1730 would correspond to approximately 72 Taler in 1793 in terms of purchasing power.[108]

[107] Metasch, 'Papiergeld und Banknoten in Sachsen 1772 bis 1936', 17.
[108] Henning, *Handbuch Der Wirtschafts– Und Sozialgeschichte Deutschlands*, 1: 925.

Figure 4: Annual Incomes by Sector, 1720–1820 (g.Ag/year)



Several datapoints were omitted for this analysis: Income for weaver (*Weber*) was given in *Denar* per *Elle* of woven material. The data only included information on how many *Elle* per year were produced in total but not by how many workers. Income for carpenters (*Zimmerleute*) was given on a per day basis, with higher

wages in summertime. The data was later omitted as there was no precise estimate on how many days the carpenters worked, so it could not be annualised. One report from 1849 documented printers (*Drucker*) earning 10 *Taler* per week (520 *Taler* per year, 3120.39 g.Ag/year), working 13 to 14 days per month.[109] However, this data point was omitted from the final analysis, as it was part of a fictional account and therefore possibly not a real income figure.

Income data coverage varies across the study period, with some years lacking wage observations. While Elsas documented wages for more occupations than used here, this analysis extracts only entries from 1730 onwards, excluding several categories outside the 1772 focus period: threshers (*Drescher*), unskilled workers (*Ungelernte Arbeiter*), gravediggers (*Totengräber*), 'wages of women' (refers to various tasks done by women, *Frauenlöhne*), and estate managers (*Hofmeister* and *Schirrmeister*).[110] Data gaps were partially addressed using supplementary sources from mining and manufacturing records. Elsas converted most incomes retrospectively into *Gulden* to ensure comparability with earlier entries, even though the accounting system had already shifted to *Taler* fifteen years. As this was not relevant for this research scope, these were converted to *Taler*. The geographic scope remains limited to mainly Leipzig, as most datapoints are derived from the city's two oldest hospitals and may not reflect broader regional wage patterns or private sector employment conditions.[111] It is possible that people held multiple occupations or received non–monetary benefits for their work (e.g.,

[109] 'Das Kassenbillet', 21.
[110] Elsas, *Umriss Einer Geschichte Der Preise Und Löhne in Deutschland*, Zweiter Band–Teil A, 589–90, 592–93, 598–600, 626, 631–32, 634.
[111] The Georgen–Hospital was founded in 1212, while the Johannis–Hospital was first mentioned in documents in year 1278.

clothes, food) and the data used for this analysis therefore may not be comprehensive.

5. Results

This chapter summarises whether *Kassenbillets* were practical for different income levels by evaluating three factors in the article period (1763–1803): Price volatility of basic consumption as well as individual goods, income distributions and practicability of denominations. The analysis tested whether the design of *Kassenbillets* (of which one *Taler* was the smallest denomination) aligned with actual consumption patterns and income levels. The findings reveal that *Kassenbillets* were severely constraint in their utility. Prices were highly volatile, identical consumption baskets varied by over 200% in cost during the period analysed, wheat prices fluctuated by over 150%. Incomes were inadequate for at least one fourth, as those earned less than the annual silver equivalents for the essential consumption (26.09%). More than half earned less than one *Taler* per month, so even the smallest denomination of *Kassenbillets* was not useable at all for primary expenses (57.33%). This strengthens the argument that *Kassenbillets* were designed by and for elites and had less significance as a medium of exchange for the broader society.

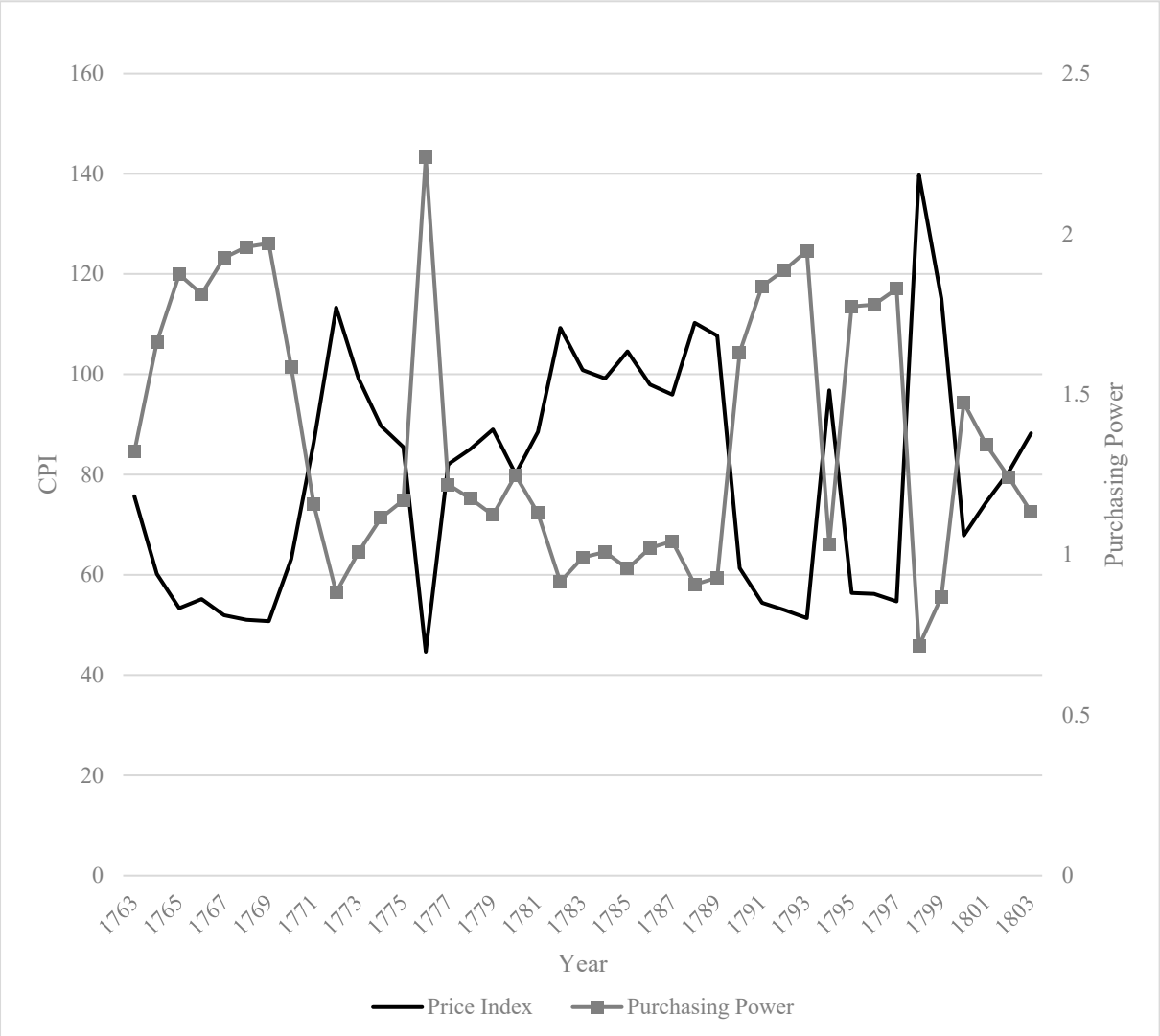
5.1 Price Volatility

Price volatility presents a fundamental challenge for functional paper currency. If prices are highly volatile, fixed denominations become either too large or too small for practical use. The denomination structure of *Kassenbillets* was only changed in the higher values in the course of their lifespan (see Table 1), the three smallest denominations (one, two and five *Taler*) were kept throughout their circulation period. The CPI reveals severe economic instability, where prices at the highest index point (139.70 in 1798) were 212.81% above their lowest point (44.66 in 1776) as illustrated in Figure 5. The overall peak in 1798 resulted primarily from a spike

in wood prices to 4.05 g.Ag/hl. Given wood's high consumption volume, this surge significantly impacted the index, while wheat prices remained comparatively stable at 57.10 g.Ag/hl (only marginally above the 1763–1803 average of 55.47 g.Ag/hl). The following year (1799) saw wheat prices surge to 72.19 g.Ag/hl, creating a secondary crisis pattern at 115.04 index points. Another high of 113.33 index points in 1772 was also driven primarily by wheat prices rising to 89.31 g.Ag/hl. In contrast to these peaks, 1776 saw the lowest point with the index, likely reflecting agricultural recovery and exceptional harvests following the failed harvest in 1771/1772. The CPI (primary axis) shows extreme volatility, while the purchasing power index (secondary axis) moves in the opposite direction

.

Figure 5: Consumer Price Index and Purchasing Power, 1763–1803



Note: Base year = 113.33 (Wheat: 5–year average 1770–1774; Beer, Wood: 1772).

The peaks in the price index series correspond to the famine of 1771/1772 and the Napoleonic Wars, which were a series of conflicts across Europe starting in 1792 until the beginning of the 19th century, suggesting that economic instability intensified rather than diminished over time. Overall, the trend shows large fluctuations in purchasing power but a relatively stable average over the period. These findings are especially striking compared to somewhat fixed wages, which did not increase as much as prices did.

The data reveal that the cost in g.Ag of identical consumption baskets tripled (3.14) between the lowest point (1776) and highest point (1798) as summarised in Table 5. Wheat prices varied by over 150% between the lowest and highest price.[112] The average price for essential consumption is 302.31 g.Ag. The complete year–by–year consumer price index values, including component prices for wheat, beer, and wood, are provided in Appendix Table A.3.

Table 5: Commodity Prices (g.Ag/hl), Consumer Price Index and Basket Costs (g.Ag/year), 1772, 1776, 1798

Year	Wheat	Beer	Wood	Index Points	Cost of Basket
1772	89.31	33.85	1.54	**113.33**	**428.39**
1776	36.50	30.45	0.00	**44.66**	**168.83**
1798	57.10	30.45	4.05	**139.70**	**528.11**

Note: Prices listed as zero indicate that there was no data available for this year.

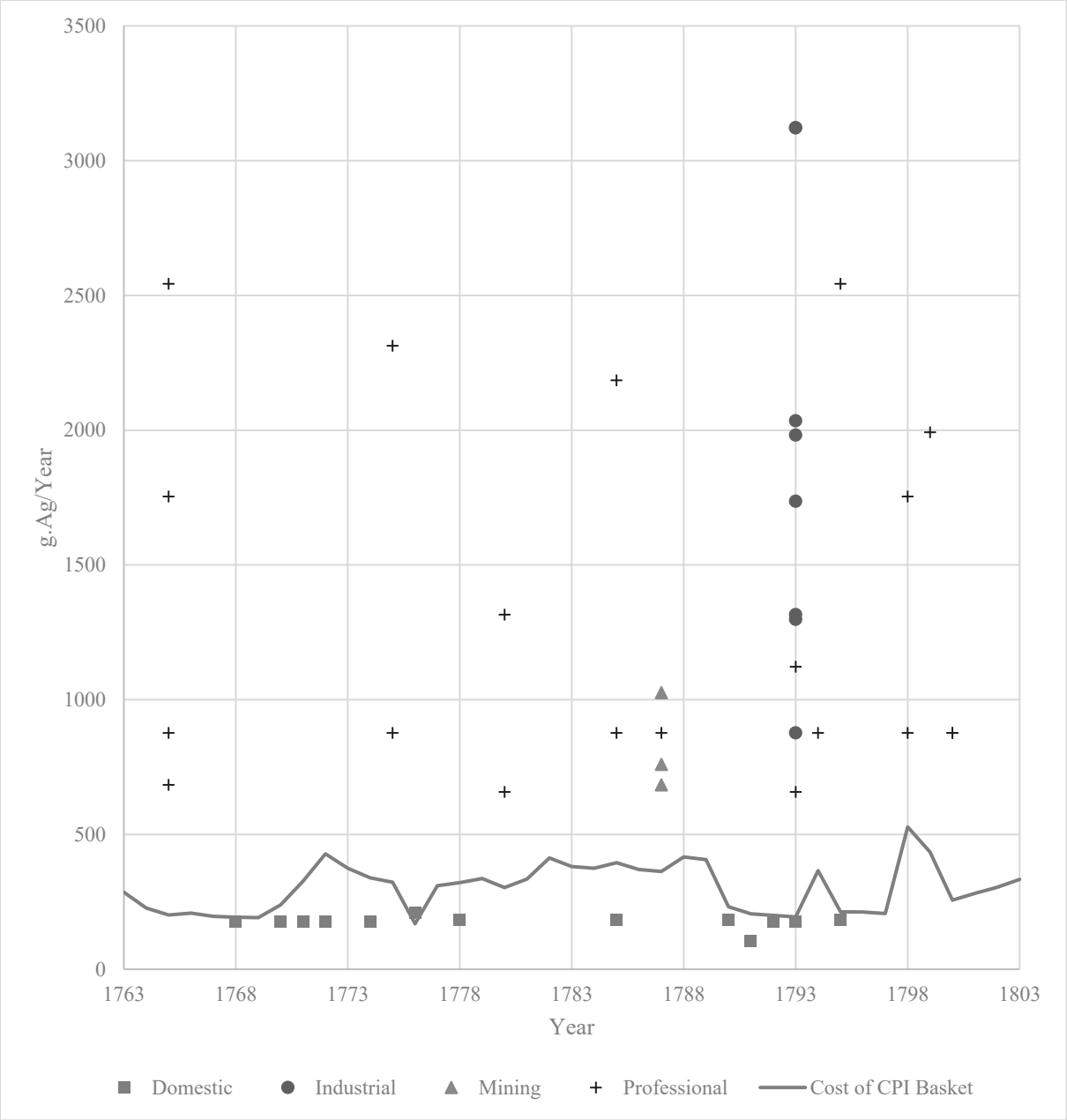
The consumer basket cost in 1798 therefore surpassed even the 1771/1772 famine period when the index reached 113.33. Note that this already stands 13.33% above the base of 100 (making it the third highest index number across the article period) due to inflated wheat prices relative to the five–year average used as the wheat base price

5.2 Spreads of Incomes

Annual incomes of domestic workers remain consistently below the silver–equivalent threshold required for essential consumption per year except for one datapoint in 1776, where the price of annual consumption (g.Ag) reaches its low (as visible in Figure 6). This relates to 26.67% of all incomes in the dataset (20 out of 75).

[112] 1776: 36.50 g.Ag/hl, 1803: 96.36 g.Ag/hl. Difference: 164.00%

Figure 6: Annual Incomes and Consumption Basket Costs,1763–1803 (g.Ag)



More than half of wages (57.33%) are below one *Taler* per week (43 out of 75). This confirms that structural wage inadequacy persisted even during favourable price conditions. The two top incomes in the data (5998.41 and 5507.31 g.Ag/year) were excluded from Figure 6 to help with visibility. The 58:1 wage ratio between highest and lowest earners in the list created dramatically different experiences during specific crisis periods. The data's median of 50 *Taler* annually aligns precisely with

contemporary estimates by Hunger.[113] Yet despite this documented understanding that the average Saxon earned less than one *Taler* per week, the authorities maintained the minimum denomination of one *Taler*.

Using actual silver equivalents for the CPI basket instead of index points, the impact becomes more quantifiable, which is summarised in Table 6. For the highest earner in the dataset (Industrial supervisors, 5998.41 g.Ag/year) the consumption basket cost equivalent to 428.39 g.Ag in 1772 represented less than 10% of their annual income (7.14%). *Kassenbillets* for them remained highly practical, as they could afford bigger expenses except for basic goods. At the lowest wage data available (domestic workers earning 103.29 g.Ag annually), the same basket exceeded their annual income by 314.74%.[114] The highest price of the essential good basket (528.11 g.Ag in 1798) exceeded their annual income by as much as by 411.29%.[115] For the domestic workers in the data, *Kassenbillets* were essentially unusable for daily transactions given that their income was insufficient to cover basic needs. Even during the 1776 recovery period, the domestic workers earning 103.29 g.Ag annually faced consumption basket costs equivalent to 168.83 g.Ag (163.45% of their income). When considering the average domestic worker wage of 174.05 g.Ag annually, the consumption basket still cost over double their income (213.72% in 1772 and 263.46% in 1798). This meant that for those, paper bills held little practical value when basic expenses so drastically exceeded their earning capacity.

[113] Hunger, *Kurze Geschichte Der Abgaben, Besonders Der Konsumtions– Und Handels–Abgaben in Sachsen*, 118–19.
[114] 314.74% is derived from ([428.39 – 103.29]/103.29).
[115] The basket therefore costs 511.29% of annual income (528.11/103.29) and exceeded income by 411.29% ([528.11 – 103.29]/103.29).

Table 6: Sectoral Incomes and Basket Costs as Percentage of Income. 1772, 1798 (g.Ag)

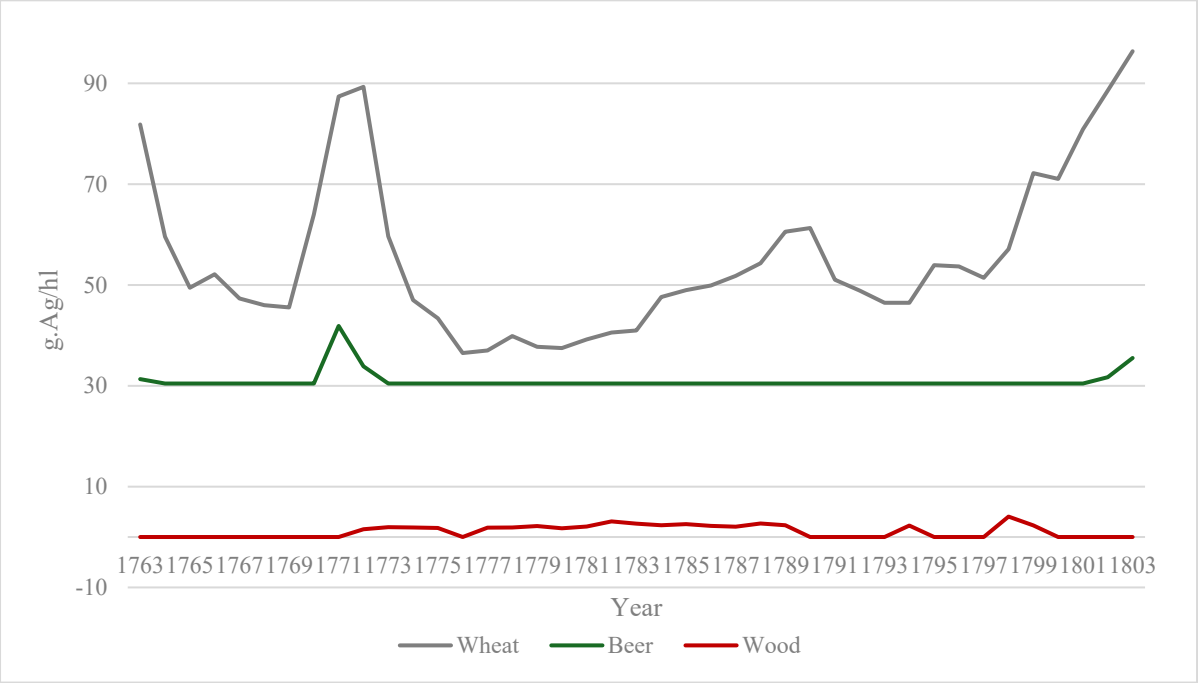
Sector	**Average Annual Wage**	**Basket Cost (1772)**	**Percentage of Income**	**Basket Cost (1798)**	**Percentage of Income**
Industrial	2476.79	428.39	17.30%	528.11	21.32%
Professional	1302.96		23.66%		29.16%
Domestic	174.05		213.72%		263.46%
Mining	823.37		52.03%		64.14%

5.3 Impact by Commodity type

While crisis periods revealed denomination problems across all commodities, the differential impact by commodity type merits separate analysis. Wheat, beer and wood have very different price patterns, as displayed in Figure 7. These patterns significantly impact the index because annual consumption quantities vary dramatically between goods (wheat: 2.54 hl, beer: 2.5 hl, wood: 75.83 hl), amplifying the effect of wood price spikes despite the low cost per hl.

Beer prices remained remarkably stable at approximately 30.45 g.Ag/hl from 1763–1802, with only brief spikes to 41.87 g.Ag/hl in 1771 and 33.85 g.Ag/hl in 1772. This stability meant that beer purchases posed fewer challenges, the annual beer requirements of 2.5 hectolitres consistently cost around 4.34 *Taler* throughout most of the period. Regarding wood prices, the prices per hl are the lowest out of the three goods in question and peaked at 4.05 g.Ag/hl in 1798 (307.11 g.Ag/year or 17.51 *Taler*). However, here the quantities are the highest. This created the overall index peak of 139.73 in 1793 but affected household budgets differently than wheat crises. Households could potentially reduce heating, substitute fuel types, or defer wood purchases in ways not possible with grain.

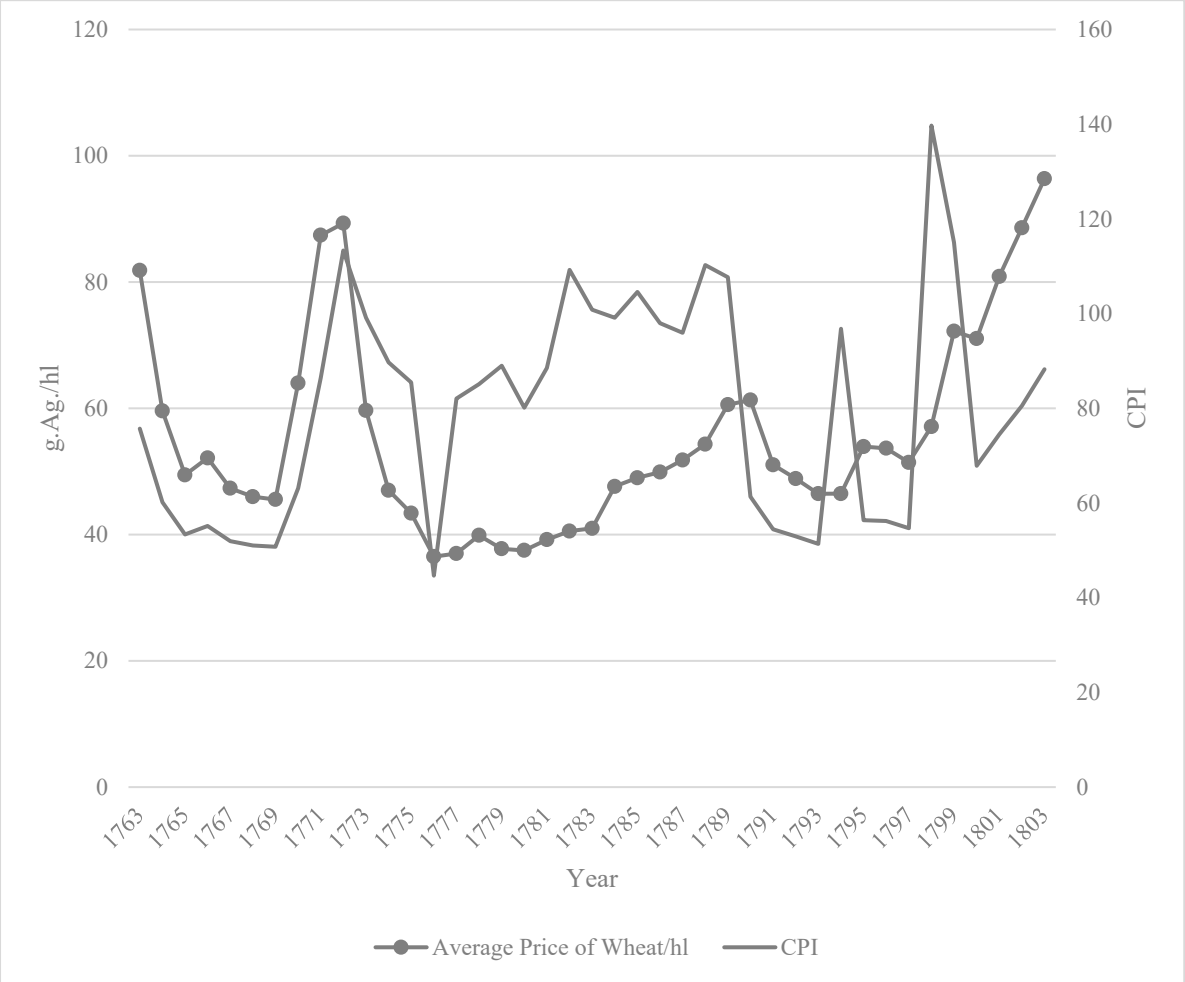
Figure 7: Price Trends of Wheat, Beer, and Wood, 1763–1803 (g.Ag/hl)



Wheat price fluctuations proved most critical for *Kassenbillet* usability because grain purchases had very low elasticity of demand and overall, the highest price per hl. Figure 8 compares wheat price movements (primary axis) with the overall CPI (secondary axis), which confirms that wheat prices drove the early crisis period in 1771/1772, while other commodities dominated later peaks. The 1771/1772 wheat crisis shows both lines moving together, with average wheat prices reaching 88.36 g.Ag/hl. The annual wheat requirements of 2.54 hectolitres in 1772 cost approximately 226.85 g.Ag or 12.93 *Taler*. For workers earning a wage of one *Taler* weekly (52 *Taler* annually), wheat alone consumed one fourth of income (24.87%), before accounting for beer, fuel, housing, or other expenses. The smallest *Kassenbillet* denomination of one *Taler* could purchase only 0.20 hectolitres of wheat in 1772, which is roughly the quantity needed per month (0.21 hl). By the end of the century, wheat prices reached 72.19 g.Ag/hl (index 115.04) in 1799, requiring 10.29 *Taler* for annual grain needs or one fifth (19.79%) on an income of one *Taler* per week. While slightly less severe than 1772, this still created genuine affordability crises for those earning far below one *Taler* per week.

In 1776, wheat prices collapsed to 36.50 g.Ag/hl (index 44.66), reducing annual grain costs to just 5.20 *Taler* or 10.00% of an income of one *Taler* weekly. As a result, even at the lowest price point in the data, each note of one *Taler* could only buy 0.48 hectolitres of wheat (18.90% of annual consumption required). In contrast, the 1798 overall index peak of 139.70 occurred when wheat prices were more moderate at 57.10 g.Ag/hl, indicating that wood price spikes drove this later crisis.

Figure 8: Wheat Prices Compared to Overall CPI, 1763–1803



5.4 Practicability of Kassenbillets

The patterns in price movements and income spreads indicate that *Kassenbillets* were rather impractical for daily economic life. The extreme economic volatility as

shown on the index and the insufficient incomes made the *Kassenbillets* largely unusable for most Saxon workers. Foremost, the impact of price volatility hugely depends on commodity types. Wood purchases were potentially the most suitable for large denominations, as it could be purchased seasonally in large quantities (116.93 g.Ag or 6.67 *Taler* for annual consumption). Annual beer costs remained consistently around 1.74 *Taler*, but only making the smallest denominations occasionally practical for bulk purchases. Wheat purchases were the most problematic for currency usability because they were frequent, subject to extreme price volatility and had low elasticity of demand. A one *Taler* note in 1776 could purchase 0.48 hl of wheat (18.90% of annual consumption), around two months of wheat consumption. In comparison, the same bill could only buy 0.20 hl in 1772 (7.87%, less than one month's consumption).

In addition, prices showed persistent volatility with increasingly severe peaks (1798: 139.70) after the famine. As a result, the CPI indicates that Saxon economic conditions became more volatile rather than more stable during the *Kassenbillet* circulation period. The crises of 1771/1772 (indices 86.42–113.33) proved most problematic for daily *Kassenbillet* usage. Even recovery periods like 1776 proved temporary, with prices trending upward over the long term. The consistency with which lower income workers fell below affordability thresholds across different crisis types (driven by wheat in 1772, driven by wood in 1798) confirms structural rather than cyclical economic problems.

6. Conclusion

This paper set out to test the frequently repeated claim that *Kassenbillets* represented Germany's first 'successful' paper money by examining their practical utility for everyday transactions. Unlike previous literature that relied on circular assertions about longevity equating to success, this article tried to quantify their practical functionality with a particular focus on their early issuance.

To address this gap, a consumer price index for Leipzig and Dresden (1763–1803) and wage data across 22 occupations were analysed based on whether *Kassenbillet* actually served the needs of different social strata. The method involved standardising all prices and calculating the cost of an annual consumption basket comprising wheat, beer, and wood. This basket's cost was then compared against annual wages ranging from 103.29 g.Ag for domestic workers to 5998.41 g.Ag for industrial supervisors, a 58:1 ratio that confirms the extreme inequality of Saxony's society in the 18th century.

The findings demonstrate that the 'success' was decidedly class specific. The results confirm that, while the denominations were basically aligned with consumption needs, they were not suitable for the lowest paid segments of society and not usable for daily purchases. The analysis revealed three critical problems: First, extreme price volatility made any fixed denomination structure problematic (as well as fixed incomes), with the consumer price index ranging from 44.66 (1776) to 139.70 (1798), a variation of over 200% and wheat prices varying by over 150% in this article.[116] Second, structural wage inadequacy meant that 26.09% of all incomes between 1763 and 1803 fell below the cost of basic consumption, regardless of currency design. Third, the denomination structure systematically excluded lower income populations. More than half of documented wages (43 of 75 observations) fell below one *Taler* weekly, making even the smallest *Kassenbillet* denomination impractical for their daily transactions (and contemporary authors being well aware of these low average incomes). During the 1772 famine, wheat prices reached 89.31 g.Ag/hl and the annual consumption basket cost 428.39 g.Ag, which represented 7.14% of income for the highest earners but exceeded the income of lowest paid domestic workers by 314.74%. Even during the favourable conditions of 1776, when the index dropped to its lowest point, domestic workers earning 103.29 g.Ag annually faced basket costs of 168.83 g.Ag, still 63.45% above

[116] 1776: 36.50 g.Ag/hl, 1803: 96.36 g.Ag/hl. Difference: 164.00%

their income. For these workers, *Kassenbillets* were not only impractical but entirely irrelevant for basic consumption.

The evidence strongly supports the state theory of money over the barter theory and acts as an additional argument. Unlike commodity theories that emphasise money's emergence from barter relationships, the *Kassenbillets* were created by sovereign edict to address state fiscal needs in the aftermath of the Seven Years' War. The initial edict required that fees of two *Taler* or more be paid at least 50% in *Kassenbillets*. However, this requirement did not apply to private transactions between individuals. This was not money emerging organically from market exchange, but rather a state–imposed monetary instrument designed to finance public debt while economising on precious metals – as predicted by the state theory.

Ironically, the *Kassenbillets* were replaced in 1873 not because of inherent weaknesses but because of Germany's unification. When the German Empire formed in 1871, monetary fragmentation (33 note–issuing banks and various currencies) conflicted with Prussia's determination to impose monetary unity. With the aim to gradually eliminate the fragmentation of many different coins circulating across the various states, the *Preußische Bank* was initially intended to be the central bank for the Empire under the leadership of Ludwig Bamberger.[117] The *Preußische Bank* was eventually transformation into the *Reichsbank* in 1876 rather than the creation of a purely state–controlled central bank with a monopoly on issuing notes.[118] The new *Reichsbank* received preferential privileges, including branching rights across the Empire in exchange for providing free treasury services to the Reich.[119] The *Kassenbillets* thus

[117] *A Financial History of Western Europe*, 119, 126.
[118] Helfferich, *Die Reform des deutschen Geldwesens nach der Gründung des Reiches. 1, Geschichte der deutschen Goldreform*, 278.
[119] Helfferich, *Ausgewählte Reden Und Aufsätze Über Geld– Und Bankenwesen von Ludwig Bamberger*, 72.

survived multiple wars and crisis and one famine but could not survive German unification. This further suggests that they were rather relying on Saxony's autonomy rather than pure functionality.

Drawing direct lessons for modern monetary policy from the *Kassenbillet* experience requires caution. Today's Western monetary systems operate within fundamentally different parameters: strict currency borders rather than the porous boundaries of 18th century, electronic payments alongside physical currency, central bank operations instead of direct state emission, and social safety nets that did not exist in the Electorate of Saxony. The challenges of designing central bank digital currencies or implementing monetary policy in developing economies occur in contexts far removed from early modern Saxony. Nevertheless, two insights bridge these historical differences. First, successful monetary innovation requires more than technical design and state authority, it demands careful attention to ordinary incomes and expenses and typical transaction behaviour. Second, the impact of extreme price volatility on currency functionality remains relevant for economies experiencing high inflation.

Perhaps most importantly, this article demonstrates the risk of uncritically accepting claims of monetary 'success' without defining metrics or providing empirical evidence. The *Kassenbillets* were simultaneously a success (in long–term circulation and potentially elite commerce) and a failure (as they were practically unusable for lower incomes), meaning that monetary innovations can have dramatically different impacts across social classes. By moving beyond simple success/failure binaries to examine the practical mechanics of monetary innovation, this article contributes to the understanding of how new forms of money win or fail to gain popular acceptance. Future research could extend this approach to other early modern paper money experiments and introduce further metrics on assessing 'success'. The fragmented nature of available data on the *Kassenbillets* makes it rather difficult to establish basic facts about circulation

volumes and exchange rates. Additionally, examining private paper money issuance would provide a fuller picture of how paper money functioned and circulated. The example of *Kassenbillets* serves as a great example on how financial instruments can be perceived as successful yet fail to serve the needs of ordinary people.

Archival Sources and Bibliography

Primary Sources

Codex Augusteus, Oder Neuvermehrtes Corpus Juris Saxonici. Forts. 2, Abth. 2. Heinsius, 1806. https://digital.staatsbibliothek–berlin.de/werkansicht?PPN=PPN638114365&PHYSID=PHYS_0238&DMDID=DMDLOG_0001.

Friedrich August I., Sachsen. 'Jhrer Chur–Fürstl. Durchl. zu Sachßen, [et]c. [et]c. Edict wegen derer, bey Dero Cassen, auszugebenden und anzunehmenden Cassen–Billets'. Edikt. Dresden, 6 May 1772. https://opendata.uni–halle.de//handle/1981185920/62904.

Hauptstaatsarchiv Dresden. Geheimes Kabinett, 10026/Loc. 000483/03, 'Die wegen der zu kreierenden *Kassenbillets* verordnete Kommission'. Unpublished manuscript.

Hauptstaatsarchiv Dresden. Geheimes Kabinett, 10026/Loc. 000483/04, 'Die wegen der zu kreierenden *Kassenbillets* verordnete Kommission, ingleichen des königlich–preußischen Geheimen Kommerzienrat Wurmb Projekt zu Anlegung eines Staatskontors'. https://www.archiv.sachsen.de/archiv/bestand.jsp?guid=58a6cd71–cfad–43cc–b6f8–e77740322e7b.

Hauptstaatsarchiv Dresden. Geheimes Kabinett, 10026/Loc. 00056/01, 'Konsumentenlisten und Getreidepreise'. https://www.archiv.sachsen.de/archiv/bestand.jsp?guid=758cddc3–d80c–4b6b–bdad–e36051bfac23&_ptabs=%7B%22%23tab–digitalisat%22%3A1%7D#digitalisat.

Secondary Sources

Allgemeine Literatur–Zeitung (Halle). 'Staatswissenschaften'. 19 July 1798. No. 219 Edition.

Beermann, Johannes. 'Sachsen als Vorreiter und Innovationstreiber im Geldwesen'. Opening Speech for the Book Launch 'Sachsens Silber, Gold und Geld', Dresden, 2022. https://www.bundesbank.de/de/presse/reden/sachsen–als–vorreiter–und–innovationstreiber–im–geldwesen–901598.

Brown, E.H. Phelps, and Sheila V. Hopkins. 'Seven Centuries of the Prices of Consumables, Compared with Builders' Wage–Rates'. *Economica*, no. Vol. 23, No. 92 (1956): 296–314.

Busse, Friedrich Gottlieb von. *Kenntnisse Und Betrachtungen Des Neuern Münzwesens Für Deutsche.* Crusius, 1796. https://www.digitale–sammlungen.de/de/view/bsb11929685?q=sachsen&page=58,59.

Däbritz, Walther. *Die Staatsschulden Sachsens in Der Zeit von 1763 Bis 1837.* B.G. Teubner, 1906.

'Das Kassenbillet'. In *Der Rastatter Hinkende Bote: Landkalender Auf Das Jahr Nach Christi Geburt 1849*. Rastatt, 1849. https://dl.ub.uni–freiburg.de/diglit/rastatter_hinkende_bote_1849.

Dittman, Otto. *Die Getreidepreise in der Stadt Leipzig im XVII., XVIII. und XIX.: Jahrhundert: ein Beitrag zur Geschichte des Preisebewegung, etc*. Duncker & Humblot, 1889. https://books.google.de/books/about/Die_Getreidepreise_in_der_Stadt_Leipzig.html?id=M_wRe7SlUDkC&redir_esc=y.

Elsas, M.J. *Umriss Einer Geschichte Der Preise Und Löhne in Deutschland*. Zweiter Band–Teil A. A.W. Sijthoff, 1940.

Geldmuseum der Österreichischen Nationalbank. *Österreichische Geldgeschichte*. Österreichische Nationalbank, 2020. https://www.oenb.at/dam/jcr:d8e98a25–eea2–4229–bd50–35ff41c6e7d0/oesterreichische_geldgeschichte_flipbook_2.pdf.

Häse, Georg Friedrich. *Versuch Über Das Steigen Der Preise von Allen Grundstükken, Besonders Der Landgüter in Hinterpommern*. Hendes, 1798. https://digital.staatsbibliothek–berlin.de/werkansicht/?PPN=PPN702964670.

Helfferich, Karl, ed. *Ausgewählte Reden Und Aufsätze Über Geld– Und Bankenwesen von Ludwig Bamberger*. 3. Aufl. Guttentag, 1900.

Helfferich, Karl. *Die Reform des deutschen Geldwesens nach der Gründung des Reiches. 1, Geschichte der deutschen Goldreform*. Duncker & Humblot, 1898.

Henning, Friedrich–Wilhelm. *Das Vorindustrielle Deutschland 800 Bis 1800*. F. Schöningh, 1974.

Henning, Friedrich–Wilhelm. *Handbuch Der Wirtschafts– Und Sozialgeschichte Deutschlands*. Vol. 1. F. Schöningh, 1991.

Hudson, Michael. 'Origins of Money and Interest: Palatial Credit Not Barter'. In *Handbook of the History of Money and Currency*. Springer, 2020. https://ebookcentral.proquest.com/lib/londonschoolecons/detail.action?docID=6133773.

Hunger, Johann Gottfried. *Kurze Geschichte Der Abgaben, Besonders Der Konsumtions– Und Handels–Abgaben in Sachsen*. Gerlach, 1783. https://www.digitale–sammlungen.de/de/view/bsb10019208?q=%28Kurze+Geschichte+der+Abgaben,+besonders+der+Konsumtions–+und+Handelsabgaben+in+Sachsen%29&page=136.

Jässing, Carl F. *Alphabetisches Promptuarium Der Ältern, Neuern Und Neusten Sächsischen Gesetze Des Codex Augusteus Dessen Drei Fortsetzungen Und Der Amtlichen Sammlungen von 1818 Bis Mit 1838*. Verlags–Comptoirs, 1839. https://www.digitale–sammlungen.de/de/view/bsb10509798?q=cassen&page=28,29.

Jobst, Clemens, and Hans Kernbauer. *The quest for stable money: Central banking in Austria, 1816–2016*. 2016. https://www.campus.de/buecher–

campus–verlag/wissenschaft/geschichte/the_quest_for_stable_money–10258.html.
Keller, Katrin. 'Saxony: Rétablissement and Enlightened Absolutism'. *German History* 20, no. 3 (2002): 309–31. https://doi.org/10.1191/0266355402gh259oa.
Kindleberger, Charles P. *A Financial History of Western Europe*. Routledge, 2015.
Klein, Kurt. 'Österreichs Bevölkerung 1754–1869'. *Mitteilungen Der Österreichischen Geographischen Gesellschaft* 113 (1971): 34–62.
Klotzsch, Johann Friedrich. *Versuch einer chursächsischen Münzgeschichte: von den ältesten, bis auf jetzige Zeiten*. Stössel, 1780. https://www.digitale–sammlungen.de/de/view/bsb11251918?page=1.
Krüger, Johann Friedrich. *Vollständiges Handbuch Der Münzen, Masse Und Gewicht Aller Länder Der Erde*. G. Basse, 1830. https://books.google.de/books/about/Vollst%C3%A4ndiges_handbuch_der_m%C3%BCnzen_mass.html?hl=de&id=iro2AAAAMAAJ&redir_esc=y.
Merkel, Dankegott Immanuel. *Erdbeschreibung von Kursachsen Und Den Jetzt Dazu Gehörenden Ländern*. Dresden–Friedrichstadt, 1804. https://www.digitale–sammlungen.de/en/view/bsb10020535?q=kassenbillets&page=75.
Metasch, Frank. 'Moderne Formen Staatlicher Geldschöpfung. Die Erfolgreiche Einführung von Papiergeld in Sachsen 1772.' *Dresdner Hefte*, no. 114 (2013): 72–81.
Metasch, Frank. 'Papiergeld und Banknoten in Sachsen 1772 bis 1936'. *Sächsische Heimatblätter* 65, no. 1 (2019): 14–24.
Müller, Christian. 'Die Königlich Sächsischen Cassenbillets Gemäß Gesetz Vom 16.04.1840'. *Freiberger Münzblätter*, no. 22 (2013): 9–21.
National–Zeitung Der Deutschen (Gotha). 'Staatsgegebenheiten'. 1807. 18th edn.
Noback, Christian, and Friedrich Noback. *Vollständiges Taschenbuch Der Münz–, Maass– Und Gewichts–Verhältnisse, Der Staatspapiere, Des Wechsels– Und Bankwesens Und Der Usanzen Aller Länder Und Handelsplätze*. Vol. 1. Brockhaus, 1851. https://www.digitale–sammlungen.de/de/view/bsb10710466?q=guldenfuss&page=520,521.
Noback, Christian, and Friedrich Noback. *Vollständiges Taschenbuch Der Münz–, Maass– Und Gewichts–Verhältnisse, Der Staatspapiere, Des Wechsels– Und Bankwesens Und Der Usanzen Aller Länder Und Handelsplätze*. Vol. 3. Brockhaus, 1851. https://www.digitale–sammlungen.de/de/view/bsb10292442?page=45.
Pick, Albert. *Papiergeld Lexikon*. Mosaik Verlag GmbH, 1978.
Praun, Georg Septimus Andreas von, Erik Erici Sparre, and Phillipp Gustav Anjou. *Gründliche Nachricht von Dem Münzwesen Insgemein, Insbesondere Aber von Dem Teutschen Münzwesen Älterer Und Neuerer Zeiten*. 3rd edn. Weygandsche Buchhandlung, 1784.
Röder, Philipp Ludwig Hermann. *Geographisches Statistisch–Topographisches Lexikon von Obersachsen Und Der Ober– Und Niederlausiz*. Stettin, 1801.

https://www.digitale–sammlungen.de/en/view/bsb10020192?q=kassenbillets&page=274.
Roscher, Wilhelm. *System Der Volkswirthschaft*. 4. Auflage. Band IV. System der Finanzwissenschaft. Verlag der J. G. Cotta'schen Buchhandlung, 1894.
Sächsische Landeszentrale für politische Bildung. 'Europa im Bann Napoleons und die Koalitionskriege'. Accessed 20 August 2025. https://www.slpb.de/themen/geschichte/1789–bis–1871/deutschland/europa–im–bann–napoleons–und–die–koalitionskriege.
Schirmer, Uwe. 'Der Bevölkerungsgang in Sachsen zwischen 1743 und 1815'. *Vierteljahrschrift für Sozial– und Wirtschaftsgeschichte* 83. Band, no. Heft 1 (1996): 25–58.
Schlechte, Horst. *Die Staatsreform in Kursachsen 1762–1763: Quellen zum kursächsischen Retablissement nach dem siebenjährigen Kriege*. Rütten und Loening, 1958.
'Schreiben Aus Dresden Vom 14. Februar 1784'. *Politisches Journal Nebst Anzeige von Gelehrten Und Andern Sachen* 1, no. 3 (1784): 231–34.
Schrötter, Friedrich Frhr V. *Wörterbuch Der Münzkunde*. De Gruyter, 1930. http://archive.org/details/in.ernet.dli.2015.70242.
Sneedorff, Frederik. *Briefe eines reisenden Dänen, geschrieben im Jahr 1791 und 1792 während seiner Reise durch einen Theil Deutschlands, der Schweiz und Frankreichs*. Frommannischen Buchhandlung, 1793. https://books.google.de/books/about/Briefe_eines_reisenden_D%C3%A4nen_geschriebe.html?id=ofsOAAAAQAAJ&redir_esc=y.
Stöver, Johann H. *Historisch–Statistische Beschreibung Der Staaten Des Teutschen Reichs*. Benjamin Gottlob Hoffmann, 1785. https://www.digitale–sammlungen.de/en/details/bsb11250219.
Uebele, Martin, and Tim Grünebaum. 'Food Security, Harvest Shocks, and the Potato as Secondary Crop in Saxony, 1792–1811'. *GGDC Researc Memorandum* No. 129 (2013).
Unger, Richard W. *Beer in the Middle Ages and the Renaissance*. University of Pennsylvania Press, 2004. JSTOR. http://www.jstor.org.lse.idm.oclc.org/stable/j.ctt3fj2zx.
Velde, François R. 'Experiments with Paper Money'. In *Handbook of the History of Money and Currency*. Springer, 2020. http://ebookcentral.proquest.com/lib/londonschoolecons/detail.action?docID=6133773.
Volckart, Oliver. *The Silver Empire: How Germany Created Its First Common Currency*. Oxford Academic, 2024. https://academic.oup.com/book/56084/chapter–abstract/442699470?redirectedFrom=fulltext.
Vries, Jan de. 'Between Purchasing Power and the World of Goods: Understanding the Household Economy in Early Modern Europe'. In *Consumption and the World of Goods*. Routledge, 1992.

Wagner, Thomas von. *Ueber Die Chursächsische Bergwerksverfassung*. Beer, 1787. https://www.digitale–sammlungen.de/en/view/bsb10292725?q=loehne&page=188,189.
Walburg, Reinhold. 'Wertstabiles Papiergeld im 18. Jahrhundert'. In *Glanzstücke aus der Numismatischen Sammlung*, vol. 2. Deutsche Bundesbank, 2015. https://www.bundesbank.de/de/startseite/glanzstuecke–aus–der–numismatischen–sammlung–607316.
Weber, Adolf. *Deutsches Wirtschaftsleben*. 3rd edn. Druck & Humbolt, 1949.
Wilcke, Friedrich W. *Über Entstehung, Behandlung Und Erwehrung Der Armuth*. Johann Jacob Gebauer, 1792. https://www.digitale–sammlungen.de/en/view/bsb10767592?page=,1.
Wuttke, Robert. *Sächsische Volkskunde*. Friedrich Brandstätter, 1903. http://digital.slub–dresden.de/id1725962195/206.

Appendix

A.1. Population Distribution by Administrative District in the Electorate of Saxony, 1755–1792

Region	**1755**	**1772**	**1790**	**1792**
Electoral District (*Kurkreis*)	116,491	109,857	125,805	127,809
Thuringian District (*Thüringischer Kreis*)	165,056	168,045	178,531	184,599
Meissen District (*Meißnischer Kreis*)	289,318	289,689	270,993	273,178
Leipzig District (*Leipziger Kreis*)	206,438	196,912	215,867	222,355
Erzgebirge District (*Erzgebirgischer Kreis*)	303,177	278,884	394,166	400,218
Vogtland District (*Vogtländischer Kreis*)	89,884	61,705	80,658	82,360
Neustadt District (*Neustädtischer Kreis*)		32,277	35,492	35,680
Henneberg (*Henneberg*)	19,406	–	30,674	39,731
Diocese of Merseburg (*Stift Merseburg*)	65,433	37,019	39,174	30,811
Diocese of Naumburg–Zeitz (*Stift Naumburg–Zeitz*)		27,377	21,573	22,142
Upper Lusatia (*Oberlausitz*)	263,400	259,175	303,575	294,425
Lower Lusatia (*Niederlausitz*)	105,785	104,922	106,998	116,114
Citizens Under Ecclesiastical Jurisdiction	33,336	27,700	24,072	13,496
Citizens Under Military Jurisdiction	37,562	39,044	50,522	49,742
Sum	**1,695,026**	**1,632,606**	**1,878,100**	**1,892,660**

A.2. Annual Wages by Occupation and Employer in Grams of Silver, 1700–1820

Industry	Occupation	Year	Midpoint Year for Analysis	Employer	Minimum Wage	Maximum Wage	Unit	Min Wage in Taler	Max Wage in Taler	Average in Taler	Average in Taler per Year	in g.Ag per Year	Frequency in original data
Domestic	Cooks	1773–1779	1776	St. Georgen–Hospital	864.00	864.00	Denar	3.00	3.00	3.00	12.00	210.47	per quarter
Domestic	Maids	1777–1779	1778	St. Georgen–Hospital	648.00	864.00	Denar	2.25	3.00	2.63	10.50	184.16	per quarter
Domestic	Maids	1780–1789	1785	St. Georgen–Hospital	648.00	864.00	Denar	2.25	3.00	2.63	10.50	184.16	per quarter
Domestic	Maids	1790	1790	St. Georgen–Hospital	648.00	864.00	Denar	2.25	3.00	2.63	10.50	184.16	per quarter
Domestic	Cooks	1800–1809	1805	St. Georgen–Hospital	864.00	864.00	Denar	3.00	2.50	2.75	10.50	184.16	per quarter
Domestic	Cooks	1790–1799	1795	St. Georgen–Hospital	864.00	864.00	Denar	3.00	2.50	2.75	10.50	184.16	per quarter
Domestic	Cooks	1810–1819	1815	St. Georgen–Hospital	864.00	864.00	Denar	3.00	2.50	2.75	10.50	184.16	per quarter
Domestic	Cooks	1820	1820	St. Georgen–Hospital	864.00	864.00	Denar	3.00	2.50	2.75	10.50	184.16	per quarter
Domestic	Maids	1771–1776	1774	St. Georgen–Hospital	576.00	864.00	Denar	2.00	3.00	2.50	10.00	175.39	per quarter
Domestic	Maids	1792	1792	St. Georgen–Hospital	720.00	720.00	Denar	2.50	2.50	2.50	10.00	175.39	per quarter
Domestic	Maids	1793	1793	St. Georgen–Hospital	720.00	720.00	Denar	2.50	2.50	2.50	10.00	175.39	per quarter

Domestic	Cooks	1730–1739	1735	St. Georgen–Hospital	720.00	720.00	Denar	2.50	2.50	2.50	10.00	175.39	per quarter
Domestic	Cooks	1740–1749	1745	St. Georgen–Hospital	720.00	720.00	Denar	2.50	2.50	2.50	10.00	175.39	per quarter
Domestic	Cooks	1750–1759	1755	St. Georgen–Hospital	720.00	720.00	Denar	2.50	2.50	2.50	10.00	175.39	per quarter
Domestic	Cooks	1760–1764	1762	St. Georgen–Hospital	720.00	720.00	Denar	2.50	2.50	2.50	10.00	175.39	per quarter
Domestic	Cooks	1767–1769	1768	St. Georgen–Hospital	720.00	720.00	Denar	2.50	2.50	2.50	10.00	175.39	per quarter
Domestic	Cooks	1770	1770	St. Georgen–Hospital	720.00	720.00	Denar	2.50	2.50	2.50	10.00	175.39	per quarter
Domestic	Cooks	1771	1771	St. Georgen–Hospital	720.00	720.00	Denar	2.50	2.50	2.50	10.00	175.39	per quarter
Domestic	Cooks	1772	1772	St. Georgen–Hospital	720.00	720.00	Denar	2.50	2.50	2.50	10.00	175.39	per quarter
Domestic	Maids	1700–1799	1750	St. Johannis–Hospital	2016.00	2016.00	Denar	7.00	7.00	7.00	7.00	122.77	Annually
Domestic	Maids	1791	1791	St. Georgen–Hospital	648.00	200.00	Denar	2.25	0.69	1.47	5.89	103.29	per quarter
Industrial	Inspector/ Supervisor	1793	1793	Nymphenburg Porcelain Manufactor	342.00	342.00	Taler	342.00	342.00	342.00	342.00	5998.41	Annually
Industrial	Bookkeeper	1793	1793	Nymphenburg Porcelain Manufactor	314.00	314.00	Taler	314.00	314.00	314.00	314.00	5507.31	Annually
Industrial	Shift supervisor	1730	1730	Niederpfannenstiel Cobalt Blue Factory	182.00	182.00	Taler	182.00	182.00	182.00	182.00	3192.13	Annually

Industrial	Master painter	1793	1793	Nymphenburg Porcelain Manufactor	178.00	178.00	Taler	178.00	178.00	178.00	178.00	3121.98	Annually
Industrial	Master modeler	1793	1793	Nymphenburg Porcelain Manufactor	178.00	178.00	Taler	178.00	178.00	178.00	178.00	3121.98	Annually
Industrial	Dye Master	1730	1730	Niederpfannenstiel Cobalt Blue Factory	130.00	130.00	Taler	130.00	130.00	130.00	130.00	2280.10	Annually
Industrial	Painter	1793	1793	Nymphenburg Porcelain Manufactor	116.00	116.00	Taler	116.00	116.00	116.00	116.00	2034.55	Annually
Industrial	Modeler	1793	1793	Nymphenburg Porcelain Manufactor	113.00	113.00	Taler	113.00	113.00	113.00	113.00	1981.93	Annually
Industrial	Turner	1793	1793	Nymphenburg Porcelain Manufactor	99.00	99.00	Taler	99.00	99.00	99.00	99.00	1736.38	Annually
Industrial	Kiln worker	1793	1793	Nymphenburg Porcelain Manufactor	75.00	75.00	Taler	75.00	75.00	75.00	75.00	1315.44	Annually
Industrial	Stoker	1730	1730	Niederpfannenstiel Cobalt Blue Factory	74.00	74.00	Taler	74.00	74.00	74.00	74.00	1297.90	Annually
Industrial	Mill worker	1793	1793	Nymphenburg Porcelain Manufactor	74.00	74.00	Taler	74.00	74.00	74.00	74.00	1297.90	Annually
Industrial	Worker	1730	1730	Niederpfannenstiel Cobalt Blue Factory	52.00	52.00	Taler	52.00	52.00	52.00	52.00	912.04	Annually

Industrial	Woodshed worker	1793	1793	Nymphenburg Porcelain Manufactor	50.00	50.00	Taler	50.00	50.00	50.00	50.00	876.96	Annually
Mining	Master mine blacksmith	1787	1787	Unnamed mine in Saxony	27.00	27.00	Groschen	1.13	1.13	1.13	58.50	1026.04	Weekly
Mining	Mine hands/Laborers	1787	1787	Unnamed mine in Saxony	20.00	20.00	Groschen	0.83	0.83	0.83	43.33	760.03	Weekly
Mining	Mine blacksmith	1787	1787	Unnamed mine in Saxony	18.00	18.00	Groschen	0.75	0.75	0.75	39.00	684.03	Weekly
Professional	Priest	1800–1809	1805	St. Georgen–Hospital	274 fl. 6 gr.	57 fl. 3 gr.	Gulden	240.00	50.00	145.00	145.00	2543.18	Annually
Professional	Priest	1810–1819	1815	St. Georgen–Hospital	274 fl. 6 gr.	57 fl. 3 gr.	Gulden	240.00	50.00	145.00	145.00	2543.18	Annually
Professional	Priest	1790–1799	1795	St. Georgen–Hospital	255 fl. 15 gr.	45 fl. 15 gr.	Gulden	223.75	40.00	131.88	131.88	2312.98	Annually
Professional	Priest	1760–1769	1765	St. Georgen–Hospital	227 fl. 13 gr.	57 fl. 3 gr.	Gulden	199.17	50.00	124.58	124.58	2185.09	Annually
Professional	Priest	1770–1779	1775	St. Georgen–Hospital	227 fl. 13 gr.	57 fl. 3 gr.	Gulden	199.17	50.00	124.58	124.58	2185.09	Annually
Professional	Priest	1780–1789	1785	St. Georgen–Hospital	255 fl. 15 gr.	28 fl. 12 gr.	Gulden	223.75	25.00	124.38	124.38	2181.44	Annually
Professional	Priest	1737–1738	1738	St. Georgen–Hospital	227 fl. 13 gr.	32 fl.	Gulden	199.17	28.00	113.58	113.58	1992.16	Annually
Professional	Priest	1740–1749	1745	St. Georgen–Hospital	227 fl. 13 gr.	32 fl.	Gulden	199.17	28.00	113.58	113.58	1992.16	Annually
Professional	Priest	1750–1759	1755	St. Georgen–Hospital	227 fl. 13 gr.	32 fl.	Gulden	199.17	28.00	113.58	113.58	1992.16	Annually
Professional	Priest	1730–1736	1733	St. Georgen–Hospital	200 fl.	32 fl.	Gulden	175.00	28.00	101.50	101.50	1780.23	Annually

Professional	Barbers	1798–1799	1799	St. Georgen–Hospital	114 fl. 6 gr.	114 fl. 6 gr.	Gulden	100.00	100.00	100.00	100.00	1753.92	Annually
Professional	Barbers	1800–1809	1805	St. Georgen–Hospital	114 fl. 6 gr.	114 fl. 6 gr.	Gulden	100.00	100.00	100.00	100.00	1753.92	Annually
Professional	Barbers	1810–1819	1815	St. Georgen–Hospital	114 fl. 6 gr.	114 fl. 6 gr.	Gulden	100.00	100.00	100.00	100.00	1753.92	Annually
Professional	Barbers	1820	1820	St. Georgen–Hospital	114 fl. 6 gr.	114 fl. 6 gr.	Gulden	100.00	100.00	100.00	100.00	1753.92	Annually
Professional	Barbers	1796–99	1798	St. Georgen–Hospital	57 fl. 3 gr.	114 fl. 6 gr.	Gulden	50.00	100.00	75.00	75.00	1315.44	Annually
Professional	Barbers	1760–69	1765	St. Georgen–Hospital	32 fl.	114 fl. 6 gr.	Gulden	28.00	100.00	64.00	64.00	1122.51	Annually
Professional	Barbers	1770–89	1780	St. Georgen–Hospital	32 fl.	114 fl. 6 gr.	Gulden	28.00	100.00	64.00	64.00	1122.51	Annually
Professional	Barbers	1790–95	1793	St. Georgen–Hospital	32 fl.	114 fl. 6 gr.	Gulden	28.00	100.00	64.00	64.00	1122.51	Annually
Professional	Barbers	1800	1800	St. Georgen–Hospital	57 fl. 3 gr.	57 fl. 3 gr.	Gulden	50.00	50.00	50.00	50.00	876.96	Annually
Professional	Barbers	1777–1796	1787	St. Georgen–Hospital	57 fl. 3 gr.	57 fl. 3 gr.	Gulden	50.00	50.00	50.00	50.00	876.96	Annually
Professional	Barbers	1797–1819	1808	St. Georgen–Hospital	57 fl. 3 gr.	57 fl. 3 gr.	Gulden	50.00	50.00	50.00	50.00	876.96	Annually
Professional	Barbers	1730–1739	1735	St. Georgen–Hospital	57 fl. 3 gr.	57 fl. 3 gr.	Gulden	50.00	50.00	50.00	50.00	876.96	Annually
Professional	Barbers	1740–1749	1745	St. Georgen–Hospital	57 fl. 3 gr.	57 fl. 3 gr.	Gulden	50.00	50.00	50.00	50.00	876.96	Annually
Professional	Barbers	1750–1759	1755	St. Georgen–Hospital	57 fl. 3 gr.	57 fl. 3 gr.	Gulden	50.00	50.00	50.00	50.00	876.96	Annually
Professional	Barbers	1760–1769	1765	St. Georgen–Hospital	57 fl. 3 gr.	57 fl. 3 gr.	Gulden	50.00	50.00	50.00	50.00	876.96	Annually

Professional	Barbers	1770–1779	1775	St. Georgen–Hospital	57 fl. 3 gr.	57 fl. 3 gr.	Gulden	50.00	50.00	50.00	50.00	876.96	Annually
Professional	Barbers	1780–1789	1785	St. Georgen–Hospital	57 fl. 3 gr.	57 fl. 3 gr.	Gulden	50.00	50.00	50.00	50.00	876.96	Annually
Professional	Barbers	1790–1797	1794	St. Georgen–Hospital	57 fl. 3 gr.	57 fl. 3 gr.	Gulden	50.00	50.00	50.00	50.00	876.96	Annually
Professional	Doctors	1796–99	1798	St. Georgen–Hospital	45 fl. 15 gr.	57 fl. 3 gr.	Gulden	40.00	50.00	45.00	45.00	789.26	Annually
Professional	Doctors	1800	1800	St. Georgen–Hospital	45 fl. 15 gr.	57 fl. 3 gr.	Gulden	40.00	50.00	45.00	45.00	789.26	Annually
Professional	Barbers	1732–1776	1754	St. Georgen–Hospital	45 fl. 15 gr.	45 fl. 15 gr.	Gulden	40.00	40.00	40.00	40.00	701.57	Annually
Professional	Barbers	1700–1739	1720	St. Georgen–Hospital	32 fl.	57 fl. 3 gr.	Gulden	28.00	50.00	39.00	39.00	684.03	Annually
Professional	Doctors	1700–1739	1720	St. Georgen–Hospital	28 fl. 12 gr.	57 fl. 3 gr.	Gulden	25.00	50.00	37.50	37.50	657.72	Annually
Professional	Doctors	1760–69	1765	St. Georgen–Hospital	28 fl. 12 gr.	57 fl. 3 gr.	Gulden	25.00	50.00	37.50	37.50	657.72	Annually
Professional	Doctors	1770–89	1780	St. Georgen–Hospital	28 fl. 12 gr.	57 fl. 3 gr.	Gulden	25.00	50.00	37.50	37.50	657.72	Annually
Professional	Doctors	1790–95	1793	St. Georgen–Hospital	28 fl. 12 gr.	57 fl. 3 gr.	Gulden	25.00	50.00	37.50	37.50	657.72	Annually
Professional	Barbers	1730–1731	1731	St. Georgen–Hospital	28 fl. 12 gr.	28 fl. 12 gr.	Gulden	25.00	25.00	25.00	25.00	438.48	Annually

A.3. Consumer Price Index and Basket Costs in Grams of Silver 1763–1803

- Base year = 100: Wheat (5–year average 1770–1774); Beer and Wood (1772)
- All prices in g.Ag/hl (grams of silver per hectolitre). Zero values indicate no price data available for that year.
- Annual quantities: Wheat 2.54 hl, Beer 2.5 hl, Wood 75.83 hl

Year	Average Price Wheat g.Ag/hl	Beer g.Ag/hl	Wood g.Ag/hl	Index Points	Cost of Basket in g.Ag
1763	81.82	31.31	0.00	75.69	286.12
1764	59.58	30.45	0.00	60.17	227.45
1765	49.45	30.45	0.00	53.36	201.73
1766	52.13	30.45	0.00	55.16	208.53
1767	47.33	30.45	0.00	51.94	196.35
1768	45.99	30.45	0.00	51.04	192.95
1769	45.56	30.45	0.00	50.75	191.84
1770	63.99	30.45	0.00	63.13	238.66
1771	87.41	41.87	0.00	86.42	326.68
1772	89.31	33.85	1.54	113.33	428.39
1773	59.65	30.45	1.94	99.13	374.72
1774	47.01	30.45	1.89	89.71	339.11
1775	43.39	30.45	1.80	85.46	323.05
1776	36.50	30.45	0.00	44.66	168.83
1777	36.99	30.45	1.85	82.05	310.16
1778	39.88	30.45	1.90	85.11	321.74
1779	37.75	30.45	2.17	89.00	336.43
1780	37.49	30.45	1.73	80.13	302.90
1781	39.18	30.45	2.10	88.51	334.60
1782	40.55	30.45	3.08	109.25	412.98
1783	40.97	30.45	2.65	100.83	381.17
1784	47.62	30.45	2.34	99.14	374.75
1785	48.99	30.45	2.57	104.57	395.27
1786	49.89	30.45	2.21	97.96	370.32
1787	51.80	30.45	2.04	95.94	362.69
1788	54.31	30.45	2.67	110.24	416.73
1789	60.58	30.45	2.33	107.68	407.06
1790	61.30	30.45	0.00	61.32	231.82
1791	51.04	30.45	0.00	54.43	205.77
1792	48.86	30.45	0.00	52.97	200.24
1793	46.46	30.45	0.00	51.36	194.13
1794	46.47	30.45	2.26	96.80	365.91
1795	53.94	30.45	0.00	56.38	213.13

1796	53.66	30.45	0.00	56.19	212.42
1797	51.42	30.45	0.00	54.69	206.73
1798	57.10	30.45	4.05	139.70	528.11
1799	72.19	30.45	2.31	115.04	434.89
1800	71.03	30.45	0.00	67.86	256.54
1801	80.88	30.45	0.00	74.48	281.56
1802	88.57	31.72	0.00	80.49	304.26
1803	96.36	35.52	0.00	88.24	333.57