

Mercantilist inequality: wealth and poverty in Stockholm, 1650–1750[†]

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This article describes and analyses social structure, poverty, wealth, and economic inequality in Stockholm from 1650 to 1750. We begin by establishing the social structure, using census data and other sources. To study wealth and poverty, the main sources are a complete record of the wealth tax of 1715, comprising 17,782 taxpayers, and a total of 1,125 probate inventories sampled from the years 1650, 1700, and 1750. These provide detailed and sometimes surprising insights into the living standards of both the poor and the rich. Stockholm in this period was a starkly unequal city, with the top decile of wealth holders owning about 90 per cent of total wealth. We relate this inequality to mercantilist policies. The city was run as an oligarchy and the oligarchical political institutions engendered policies that were rigged for inequality. The case of Stockholm thus shows the need for the historical inequality literature to consider class and power relations to understand the determinants of inequality.

This article studies wealth, poverty, and inequality in the city of Stockholm from 1650 to 1750. This was a period when Stockholm's status as capital of the Swedish realm was consolidated and the city grew rapidly; it was the centre of bureaucracy and political power as well as an important hub of commerce on the Baltic. We have exceptionally rich sources for a study of inequality in the early modern period. From the wealth taxation of 1715, which affected everyone from the richest noble to the poorest servant, we have a full-count sample of 17,782 taxpayers in the city. We supplement this source with census data and other population statistics and with 1,125 probate inventories from 1650, 1700, and 1750 to provide a rich and dynamic perspective on living standards and inequality in this important European city.

Throughout this period Stockholm had extremely high levels of economic inequality. Its double role as trading hub and administrative centre meant that it combined the riches of merchants with those of estate-owning nobles living close to the Court. However, at the same time the city harboured a large class of soldiers, labourers, and other poor people, who struggled to get by. We will argue that the case of Stockholm shows the importance of the effect of politics and

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the state in understanding historical economic inequality. The country's economic and social policies were suffused with mercantilist dogma, whereby attitudes to the poor were harsh and repressive.¹ Oligarchical rule rigged the institutions to engender inequality, and succeeded: the wealthiest 10 per cent owned 86 to 94 per cent of total wealth. Several authors have recently highlighted the importance of politics and institutions for understanding historical inequality; we reinforce this point and show how the political economy shaped inequality.² Thus, the study of Stockholm from 1650 to 1750 has ramifications for the broader literature on historical inequality.

I. Power, wealth, and inequality

Sweden as a country and Stockholm as a city were both ruled in unequal fashion in the period studied here. At this time the Swedish political system was made up of a diet with representatives from the four estates (nobility, clergy, burghers, and farmers) and the monarchy, whose power waxed and waned. Power relations between the aristocracy and diet on the one hand and the Crown on the other fluctuated throughout the period.³ Carolingian absolutism under kings Charles XI and Charles XII from 1680 ended with the latter's death in battle in 1718, and was replaced by a period of very weak kings (as various candidates jostled to replace the childless Charles XII) and a strong diet, the so-called 'Age of Liberty'. However, for the poor and propertyless, who constituted an important share of the population, the shift between absolutism and oligarchical rule, as the nobles dominated the 'Age of Liberty', was not so momentous.⁴ As recent research has shown, farmers, as employers, were just as interested in lower wages as the nobles were.⁵

The city of Stockholm, like other cities in early modern Europe, was ruled politically as an oligarchy, by the economic elite.⁶ By the early seventeenth century, merchants dominated the city council and central positions such as that of mayor. Over the seventeenth century, the Crown became more and more involved in city affairs. The Crown aimed for a break with the 'merchant's oligarchy' in the rule of the city; from the 1630s, more learned and professional bureaucrats were appointed by the Crown.⁷ Bureaucrats and merchants would share power.

¹ Unger, *Makten och fattigdomen*, pp. 30–3; cf. Ling, *Konsten att försörja sig*, p. 15; Snare, 'Work'.

² See, for example, Piketty, *Capital in the twenty-first century*; Bengtsson, Missiaia, Olsson, and Nummela, 'Unequal poverty'; Bengtsson, Missiaia, Olsson, and Svensson, 'Wealth inequality'; Gómez León and de Jong, 'Inequality in turbulent times'; Alfani and di Tullio, *Lion's share*.

³ As pointed out by Anderson, *Lineages*, p. 185.

⁴ See Florén, 'Karl X Gustav'; Dahlgren, 'Karl XI'; and Lindgren, 'Karl XII', for insightful analyses of power relations under the three kings ruling from 1654 to 1718. Rystad, *Karl XI*, also provides details on the power struggles during the time of this king. On the period after 1718 and especially the transition from absolutism to parliamentary power, see Roberts, *Age of liberty*. The possibilities of political influence for the lower classes, including farmers, are explored in various ways by Sennefelt, *Politikens hjärta*; Scherp, 'De ofrälse och makten'; and Hallenberg and Holm, *Man ur huse*. On the living of propertyless labourers, cf. Lindström and Mispelaere, 'Interdependent living'.

⁵ See Andersson, 'Husbönderna, statsmakten och klasskampen'.

⁶ For exemplary studies of European cities, see Friedrichs, *Urban society*; Soliday, *Community in conflict*; Amelang, *Honored citizens of Barcelona*; Cowan, *Urban patriciate*; Burke, *Venice and Amsterdam*; Schultz, *Berlin*. On Swedish towns, see Stadin, *Småstäder*; Andersson, *Stadens dignitärer*.

⁷ Ericson, *Borgare och byråkrater*, pp. 333–4. The wider administrative reforms of the state in the 1610s, 1620s, and 1630s are discussed by Glete, *War and the state*, pp. 174–8.

Recent research has highlighted the importance of politics and institutions for inequality. For example, in their study of the Republic of Venice, Alfani and di Tullio put forward the hypothesis that ‘during the early modern period, the main cause of inequality growth across Europe was the rise of the fiscal-military state’.⁸ In Piketty’s analysis, politics and economic inequality are always intertwined.⁹ Another important recent study of historical inequality is Malinowski’s and van Zanden’s analysis of Poland in 1578, which highlights the importance of exploitative feudal relations for understanding early modern inequality.¹⁰ They find that the rural sector in Poland was more unequal than the urban sector, and explain this with reference to the use of serfdom in agriculture and the exploitation of serfs by landlords. While our study is of the urban sector, the two studies overlap in pointing to the influence of economic regulation and class structures on inequality.

We follow up on these arguments by studying an early modern city in a strong state. In seventeenth- and eighteenth-century Europe, states intervened in and regulated the economy in manifold ways, in a mode which we may summarize as ‘mercantilist’; we define mercantilism, following Heckscher, as a stage in the history of economic policy when the state was at the centre, and when maintaining social order was a key aim of policy.¹¹ Regulating trade, rewarding monopolies and oligopolies, regulating crafts and guilds, and using forced labour as a run-of-the-mill punishment: these were all standard policies in Stockholm in the period we study.¹² During this period the Swedish state strengthened its capacity and control over its territory;¹³ this state capacity could of course be used to control the population in the mercantilist spirit. In that sense, it is no accident that a Swede, in the shape of Eli Heckscher, created one of the classic studies of mercantilism. Famously, mercantilist policies regulated trade, and Sweden is a good example of that: in the period under study, the rulers explicitly wanted to concentrate trade and manufactures in the capital.¹⁴ As much as 50 to 70 per cent of Swedish exports, especially iron, but also copper, tar, and pitch, left through Stockholm.¹⁵ Stockholm’s role as the capital of the realm was generally strengthened in the period, as, like trade, state administration was also a growing sector. Notably, the population of the city grew from 35,000 in 1650 to 52,000 in 1700 and 66,000 in 1750; that is, nearly doubling in a hundred years.¹⁶

The regulation of the economy had important implications for inequality of incomes and wealth, as the possibilities for making one’s living were tightly circumscribed depending on one’s social standing. In this sense, the state, as in

⁸ Alfani and di Tullio, *Lion’s share*, p. 18.

⁹ Piketty, *Capital and ideology*.

¹⁰ Malinowski and van Zanden, ‘Income and its distribution’.

¹¹ On the complexity of defining mercantilism, see Heckscher, *Merkantilismen*, pp. 1–12. Magnusson, *Merkantilism*, ch. 9, in the most recent Swedish study of mercantilism, emphasizes the boosting of industry as a key aspect of Swedish mercantilism, but also that it was as much about power and the overall social order as about economics.

¹² On the political economy of merchants and burghers in seventeenth-century Stockholm, see studies by Lindberg and Ågren, which both stress the importance of politically awarded monopolies; Lindberg, ‘Mercantilism and urban inequalities’; Ågren, *Köpmannen i Stockholm*.

¹³ See Hallenberg, *Kungen, fogdarna och riket*; Glete, *War and the state*.

¹⁴ Sandberg, *I slottets skugga*, pp. 382–3; Magnusson, *Sveriges ekonomiska historia*, pp. 159, 178.

¹⁵ On bureaucracy and politics, see Ericson, *Borgare och byråkrater*; Sandberg, *I slottets skugga*. On trade, see Müller, *Merchant houses of Stockholm*, pp. 50–1; Samuelsson, *De stora köpmanshusen*.

¹⁶ Lilja, ‘Stockholms befolkningsutveckling’.

the analysis of the Venetian Republic by Alfani and di Tullio, is very closely related to unequal economic outcomes. This is what we refer to as ‘mercantilist inequality’: high inequality shaped by state regulation. The political economy thinking of the period was suffused with the idea that people should be rewarded according to their social standing. We have discussed the regulation of trade and crafts, but the regulation of labour is at least as important. Swedish rulers employed a so-called ‘policy of low wages’: in the mercantilist spirit, maximum wages were regulated in detail to keep employers’ costs down.¹⁷ Wage increases were forbidden in Sweden, punishable by fines, and the fines were twice as high if the pay rise had been preceded by demands from the workers. Furthermore, work was mandatory for those who did not own property; unemployment was punishable by forced labour or, for men, conscription into the army.¹⁸ Poor relief in seventeenth-century Stockholm was downright repressive, with the double aim of keeping order—that is, minimizing the troublesome results of poverty, begging and the like—and putting the poor to work in workhouses. A workhouse was established in the seventeenth century to handle the growing mass of paupers, and to provide cheap labour for the Crown’s manufacturing needs.¹⁹ Forced labour was used particularly in the navy, whose main base was in the capital. As one historian concluded, ‘until the 19th century, the history of coercive measures directed at the laboring poor reflected ruling class needs for servants, soldiers, and workers’.²⁰

These policies all had important ramifications for economic inequality, as they aimed to reinforce the social distance between the classes, and ensure that subordinate groups did not grow too wealthy. Product markets, labour markets, and incomes were thoroughly regulated, to maintain the social order and its hierarchy of status, in the spirit of mercantilism. In our study of the economic resources of seventeenth- and eighteenth-century Stockholm residents, we will return to these policy processes—which ultimately stemmed from the oligarchical, unequal distribution of political power and influence over policymaking—to explain the patterns of poverty, wealth, and inequality that we find.

We conclude this section with a comment on our selection of Stockholm as a case study, and the potential to generalize based on Stockholm’s experience. Is there reason to believe that Stockholm is atypical of early modern European cities? We think not. As discussed above, the oligarchical rule of the city was quite typical of European cities of the time. The same is true of the mercantilist ideas and policies, which Swedish writers and rulers imported from England, Holland,

¹⁷ On the policy of low wages, see, for example, Nyström, *Stadsindustriens arbetare*, pp. 338–43; Montgomery, *Svensk socialpolitik*, pp. 23, 38. Runefelt, *Hushållningens dygder*, pp. 215–24, criticizes Heckscher’s, Montgomery’s, and Unger’s arguments about the ‘policy of low wages’, stating that writings on the political economy of seventeenth-century Sweden argue less for the poverty of the population than one would expect. However, it must be pointed out that Runefelt only studies economic discourse, not policy, and that the stated motives and actual effects of policies can diverge. So, for example, Runefelt’s argument that the poorhouse in Stockholm was less explicitly motivated by the rulers’ desire to keep wages low is not so relevant for our investigation, where we are more interested in the real consequences of the policies.

¹⁸ From 1577 men who refused service could be forcibly recruited into the army; from 1635, when Sweden was in the midst of the Thirty Years’ War, this was true for any unemployed person. Westerståhl, *Svensk fackföreningsrörelse*, p. 9; Ling, *Konsten att försörja sig*, p. 18; Snare, ‘Work’, pp. 62–4.

¹⁹ Utterström, *Fattig och föräldralös*. On the use of forced labour for the navy, see Ling, *Konsten att försörja sig*, p. 31. On the wider supply of ‘poor relief’, see Johanson, *Fattiga och tiggare*, esp. p. 27.

²⁰ Snare, ‘Work’, p. 103.

and Germany.²¹ The repressive treatment of the poor was also typical of western European states in general.²² Thus, while we focus on one city, we believe that our case study has something more general to contribute to the discussion of preindustrial inequality; there are good grounds to believe that the mechanisms described here as deepening inequality were present in other cities too, even if they may have been implemented more strictly in Stockholm than in some other cities.

II. Data and approach

To estimate inequality, we need to know the social structure of the society being studied. In any society there will be relatively poor people and relatively wealthy ones, but we need to know how many are in each group. To reconstruct the social class structure in early modern Stockholm we use a number of different sources. For 1750, we use the population census of 1754, and for 1650 we mainly rely on existing literature with its numerous calculations for various groups (all explained in detail in online appendix S1). For 1715, the social structure is calculated from our full-count taxation sample.

Our source for wealth, poverty, and inequality in 1715 is the taxation lists from the 1715 wealth tax. This is quite an outstanding source for the time. Unlike all previous taxes which had been class-specific or had included exemptions for certain estates or social groups, the wealth tax of 1715 was explicitly intended to apply to every Swede, from the wealthiest nobleman to the poorest maid. They should all pay 1 per cent (later 2 per cent) of their wealth in tax. The reason for this extraordinary measure was the dire straits of Swedish state finances in the 1710s, after a hundred years of almost uninterrupted warfare.²³ A special authority, *Kontributionsrånteriet* (literally: contribution tax authority), was established and was active from 1712 to 1718, collecting wealth tax for the three years 1713, 1715, and 1716. It is clear from the general principles of the regulation that the taxation would be based on the public self-declaration of property in real estate and movables. This declared wealth was then post-checked with neighbours, after which adjustments upwards could take place if someone had understated their wealth.²⁴

This taxation source has previously been used to study inequality by Söderberg et al.²⁵ They sampled 402 taxpayers, while we have sampled each taxpayer, yielding a very rich dataset for Stockholm in 1715. The taxation lists are organized by parish and quarter, and for each adult they state the name, title or occupation, wealth in real estate, and wealth in movables.²⁶ In some cases where the person was unable to pay tax the reason is also stated, such as ‘refugee’ from Swedish provinces at

²¹ On the imports of European ideas, see, for example, Heckscher, *Svenskt arbete och liv*, pp. 144–8; Johannisson, *Det mätbara samhället*, chs. 5–8; Karlsson, *Den jämlike undersåten*, pp. 57–77, who discusses especially the influence of German Cameralism. Heckscher, *Svenskt arbete och liv*, p. 145, argues that it was ‘outright western European Mercantilism which was expressed in Sweden’.

²² Cf. Snare, ‘Work’.

²³ Karlsson, *Den jämlike undersåten*.

²⁴ Herlitz, *Fordegenom och ränta*, pp. 76–86.

²⁵ Söderberg, Jonsson, and Persson, *Stagnating metropolis*, pp. 129–39.

²⁶ The exact population of Stockholm in 1715 is uncertain but as a result of the plague in 1710 it is clear that it was much lower than the estimated 52,000 in the year 1700. As much as a third to 40% of the population may have died, and a figure of around 40,000 inhabitants in 1715 seems reasonable given a fast recovery through in-migration. See Tallerud, ‘Pesten i Sverige’.

war, or simply 'destitute'. The total number of observations is 18,920, but one person could hold real estate at different locations in town; we have linked these properties to the owner to avoid double-counting. This linking reduced the number to 17,782 families and servants, of whom 16,178 have been used in this study.²⁷ Of special interest is a group of merchants who were taxed *sub rosa*, which meant that they did not have to reveal their movables and their value publicly.²⁸ This practice is problematic for us since it means that the value of movables is excluded from the taxation lists for these people. Since movables, including financial assets, were significant for the wealth of merchants, we have completed the information about their wealth by tracking these merchants in the probate inventory archives. In total, 158 Stockholm merchants were taxed *sub rosa*, of whom we have found 121 and entered the value of their movables into the database. The other 37 have been dropped from the analysis.

Our third set of sources are probate inventories. These are used both to look in detail at people's belongings and to capture wealth development over time, to go forward and backward from the very rich benchmark of 1715. The probate inventories are complete lists—with valuations—of households' belongings, made at the time of death. They were used to resolve outstanding debts, to divide inheritances, and to pay a small (0.125–0.25 per cent) tax, which funded poor relief.²⁹ Inventories were made mandatory in Sweden in 1734, but in Stockholm, probate frequency was quite good already by the mid-seventeenth century. This is because in the city, certain fees based on the size of a person's estate required a probate inventory (from 1685), and from 1667 it was also mandatory to provide an inventory for dividing inheritances.³⁰ While the rules were not always followed—and some inventories have probably been lost in the archives—this means that not only the wealthy were probated. The wealthier do make a disproportionate imprint in the sources (Söderberg et al. argue that 'the inventories are no doubt better suited to describing wealth than poverty'),³¹ but the inventories are nevertheless a surprisingly good basis for discussing the lower classes as well. About a third of the deceased in eighteenth-century Stockholm were probated, and as our dataset will show, while wealthier groups are overrepresented, quite a few soldiers and workers can be found.³² The Swedish probate inventories are very detailed, as we will see; in fact, seventeenth-century Stockholm inventories have recently been used to study

²⁷ The difference between the two numbers is due to the fact that in 1715 Stockholm hosted 1,324 war refugees, mostly from Finland and the Baltics, who were exempt from taxation. In addition, 55 persons were exempt from taxation because they were foreigners, 192 were wholly or partly taxed elsewhere in Sweden, and 37 were merchants taxed *sub rosa* that we could not find in other sources (more on the latter in the text).

²⁸ Karlsson, *Den jämlike undersåten*, pp. 167–8. The justification for this was that the merchants complained that their credit would be threatened if they were forced to declare their property publicly.

²⁹ For discussion of Swedish probate inventories, see, for example, Kuuse, 'Probate inventory'; Lindgren, 'Modernization'; Bengtsson et al., 'Wealth inequality'.

³⁰ Corin, 'Tiden 1667–1924', pp. 11–12. We might add that there are also hundreds, in some cases thousands, of probate inventories from the period before 1734 from other Swedish cities such as Varberg, Malmö, and Ystad. These could be used for further studies of living standards and inequality.

³¹ Söderberg et al., *Stagnating metropolis*, pp. 93–4.

³² On probate frequency: Söderberg et al., *ibid.*, pp. 93–4, find a third for adult men in 1790. Lili-Ann Aldman (personal communication) has calculated the probate frequency in Stockholm in 1700 as 38.4%, on the basis of painstaking ongoing research that compares the church death books with the probates.

Table 1. *The social structure in Stockholm, 1650, 1700, and 1750, and the social distribution of the probate samples (%)*

Class	1650		1700		1750	
	Real	Probates	Real	Probates	Real	Probates
1 Nobility	2	1	2	1	2	12
2 Higher civil and military servants	5	13	7	11	8	13
3 Merchants	4	10	3	9	3	7
4 Artisans and middle class	19	35	21	54	23	37
5 Soldiers	8	12	7	7	6	5
6 Workers and lower-ranking civil servants	60	29	58	18	56	26
7 Impoverished	2	0	2	0	2	0
	100	100	100	100	100	100

Note: Real denotes our estimated social structure of the total Stockholm population. Probates denotes the distribution of the probate sample within the same social classification. Workers and lower-ranking civil servants include maids and male unskilled servants. *Sources:* Real shares: see online app. S1. Wealth data: probate inventories from Stockholms rådhusrätt archive, housed at the Stockholm City Archives (Stockholms Stadsarkiv, SSA), National Archive Code: SE/SSA/0145a. 1:a avdelning (Justitiekollegium, Förmyndarkammaren), section F1A, vols. 56, 57, 58, 59; Svea Hovrätt archive, housed at the Swedish National Archives (Riksarkivet, RA) in Stockholm, National Archive Code: SE/RA/420422, ser. E VIII b Bouppteckningar 1670–1849.

bourgeois fashion during this period.³³ We will not go into this level of detail, but will use some of the detailed information for our own purposes.

In 1650 and 1700, the probate inventories have a further representation problem: they almost wholly lack nobles, who at this point were exempt from the need to provide an inventory. This will give a downward bias to our estimates of inequality and wealth in these years, but, as discussed above, our 1715 estimate and the 1750 sample avoid this problem. For this reason, we can triangulate the estimates to get a good picture of inequality in seventeenth- and eighteenth-century Stockholm. The four samples taken together, and combined with the new estimates of the social structure of the city, give a comprehensive view of poverty, wealth, and inequality in Stockholm over a hundred years.

Probate inventories from Stockholm are archived in the Stockholms rådhusrätt (City Court) archive. We have located 585 inventories from Stockholm from the years 1699–1701, which in our sample represent 1700. From the period 1645–55, which represents 1650, we have 187 inventories, and for 1750, we have 353 inventories, including 42 from the nobility; a total of 1,125 inventories.

III. Stockholm, 1650–1750

Our data and calculation of the social structure in Stockholm are shown in table 1.³⁴ The columns headed ‘Real’ convey the actual social structure, while the columns headed ‘Probates’ represent the social structure of our probate inventories samples. A comparison of the two columns for a year shows, not surprisingly,

³³ Andersson, ‘Swedish burghers’ dress’.

³⁴ The class scheme combines Marx’s emphasis on the ownership of the means of production and Weber’s emphasis on education and market position. Such a scheme works quite well for capturing the social differences in early modern cities. Schultz, *Berlin*, pp. 38–9, 77–95, uses a corresponding scheme in her analysis of Berlin, as does Friedrichs, *Urban society*, in his study of Nördlingen. For further discussion of the classification, see online app. S1. See also Fynn-Paul, ‘Let’s talk about class’, on class in early modern cities and the need to combine economic and political-institutional distinctions.

Table 2. *Social classes in Stockholm 1715, distribution, and average wealth in daler kopparmynt*

	<i>Social class</i>	<i>Share (%)</i>	<i>Average wealth (dkm)</i>	<i>Multiples of the average</i>
1	Nobility	2.2	38,868	40.48
2	Higher civil and military servants	7.3	4,587	4.78
3	Merchants	3.6	35,022	36.47
4	Artisans and middle class	20.5	1,659	1.73
5	Soldiers	8.6	84	0.09
6a	Workers and lower-ranking civil servants	24.2	146	0.15
6b	Maids	23.8	45	0.05
6c	Male unskilled servants	5.5	63	0.07
6d	Other servants	1.7	123	0.12
7	Poor	0.5	21	0.02
8	No title	2.1	459	0.48
	TOTAL	100	960	1.00

Source: Wealth tax registers 1715 for Stockholm. Stockholm City Archives, Överståthållarämbetet för uppbořdsärenden, Karl XII:s kontributionsarkiv, G2:5-6.

that the wealthier groups are over-represented in the probates. For example, merchants constitute a larger share of the samples (10, 9, and 7 per cent) than of the actual population (4, 3, and 3 per cent). Artisans constitute a third to a half of the probate samples. Poorer groups are under-represented, but by no means absent. Among the civilian workers, some recurring jobs are, for example, carpenters, day labourers, ship builders, chefs, maids, transport workers (*åkare*), iron transporters (*järnbärare*), fishmongers (*sillpackare*), and janitors (*vaktmästare*) (see online appendix table S2). By our definition, workers constituted 56–60 per cent of the population of the city, while they made up 18–29 per cent of the probate samples. These 18–29 per cent are then used to represent the 56–60 per cent. The share of those who were officially poor (impoverished) was quite low compared to many other cities in Europe—for example, Verona in 1558, where 45 per cent of households were classified as poor or assigned the lowest possible wealth in the *estimo*.³⁵ However, as we shall see, the fate of destitution was *de facto* shared by a large part of the working population in Stockholm.

The 1715 taxation database is more comprehensive than the probate samples, as it includes every adult in the city. For this reason, we begin our inequality analysis in the year 1715. Table 2 shows wealth per social group in 1715. To simplify comparisons by social group, the right column presents the average wealth of the group as related to the average wealth of the entire city population, which was 960 *daler kopparmynt* (daler copper coins; hereafter dkm). Table 2 paints a picture of a very unequal town: the average wealth of a Stockholm noble was 23 times higher than that of an artisan and 266 times higher than a worker or lower-ranking civil servant.³⁶ The nobles and the merchants were the richer groups, with a smaller ‘middle class’ of civil and military servants and artisans. However, large shares

³⁵ See the discussion in Alfani and di Tullio, *Lion's share*, p. 64, building on previous research by Paola Lanaro.

³⁶ There were parallel currencies in Sweden in this period, and we measure wealth in dkm. We use exchange rates from Edvinsson, ‘Foreign exchange rates’, tab. 5.22, to convert the Swedish sums into British pounds (£) to facilitate international comparisons (see below). Edvinsson’s exchange rates for the dkm begin in 1658. In 1658, 17.49 dkm would buy one British pound; by 1700, 27.08 dkm were equal to one pound; by 1715, the number was 27.97; and in 1750 the exchange rate had deteriorated further, so that 43.53 dkm equalled one pound.

Table 3. *Inequality in Stockholm, 1715*

	<i>Gini coefficient</i>	<i>Top decile share (%)</i>	<i>Top percentile share (%)</i>
Real estate	95.5	97.3	73.1
Movables	96.0	96.0	87.2
All assets	94.5	93.7	62.3

Sources: See tab. 2.

Table 4. *The distribution of net wealth: Stockholm, 1650, 1700, and 1750*

	<i>Gini</i>	<i>Top 10%</i>	<i>Top 1%</i>
1650	85.7	80.2%	26.3%
1700	89.1	84.6%	41.5%
1750	93.2	90.3%	56.7%

Source: See tab. 1.

of the population had very few assets; this was the case for large groups such as soldiers (8.6 per cent of the population), workers and civil servants (24.2 per cent), and maids (23.8 per cent).

We continue with calculating overall inequality. Table 3 shows the Gini coefficient and top shares, and figure 2 the Gini indexes as Lorenz curves. As could already be gleaned from table 2, Stockholm in 1715 was an exceedingly unequal economy. The overall Gini coefficient is as high as 0.95, which is well above the highest level of inequality ever previously observed on a national level in Sweden, around the year 1900.³⁷ The top decile held a 93.7 per cent share of total wealth. Interestingly enough, while inequality in real estate ownership was high, it was even higher for movables. This is in spite of the fact that 83 per cent of the inhabitants in Stockholm owned movables and only 20 per cent owned real estate (the dotted line in figure 1 does not start to move until 0.8). Ownership of real estate could be found among all social classes but with a proportionally lower share among the workers, not including journeymen, apprentices, and servants, (26.7 per cent), as compared to, for example, among the artisans and the middle class (39.9 per cent) and among the merchants (53.8 per cent). But the figures are mainly driven by extremely high concentrations of movable assets among the very richest, as can be seen by the shape of the grey Lorenz curve in figure 1. It is also confirmed by the top 1 per cent's share of movables, shown in table 3. While they held 62.3 per cent of all the wealth in Stockholm, they held 87.2 per cent of the movable assets.³⁸ Studies of the Swedish elite of this period have shown that members of this group held large values in movables such as jewels, paintings, expensive furniture, and weapons.³⁹

³⁷ Bengtsson et al., 'Wealth inequality', pp. 780–1.

³⁸ An example of the relatively widespread ownership of real estate is the inventory of the sailor Michael Bertilsson Walmo from 1701. His gross wealth was 243 dkm, of which 4 dkm were accounted for by a coffer, 1 dkm was a bench, 2 dkm three chairs, 7 dkm five plates of tin, 20 dkm a brown cloth coat and trousers, 2 dkm a pewter for beer (*temstop*), 6 dkm a bearskin hat, and 200 dkm a house in Kvarngränd in the southern district. As can be seen, he owned very little, but he did own a house which accounted for 82% of his gross wealth.

³⁹ Magnus Gabriel de la Gardie is said to have been the wealthiest man in Swedish history, in relation to the standards of his time. When his Makalös palace was confiscated by the Crown in 1686, an inventory of his belongings was made, because they were sold off to strengthen the Crown's finances. The inventory includes jewels

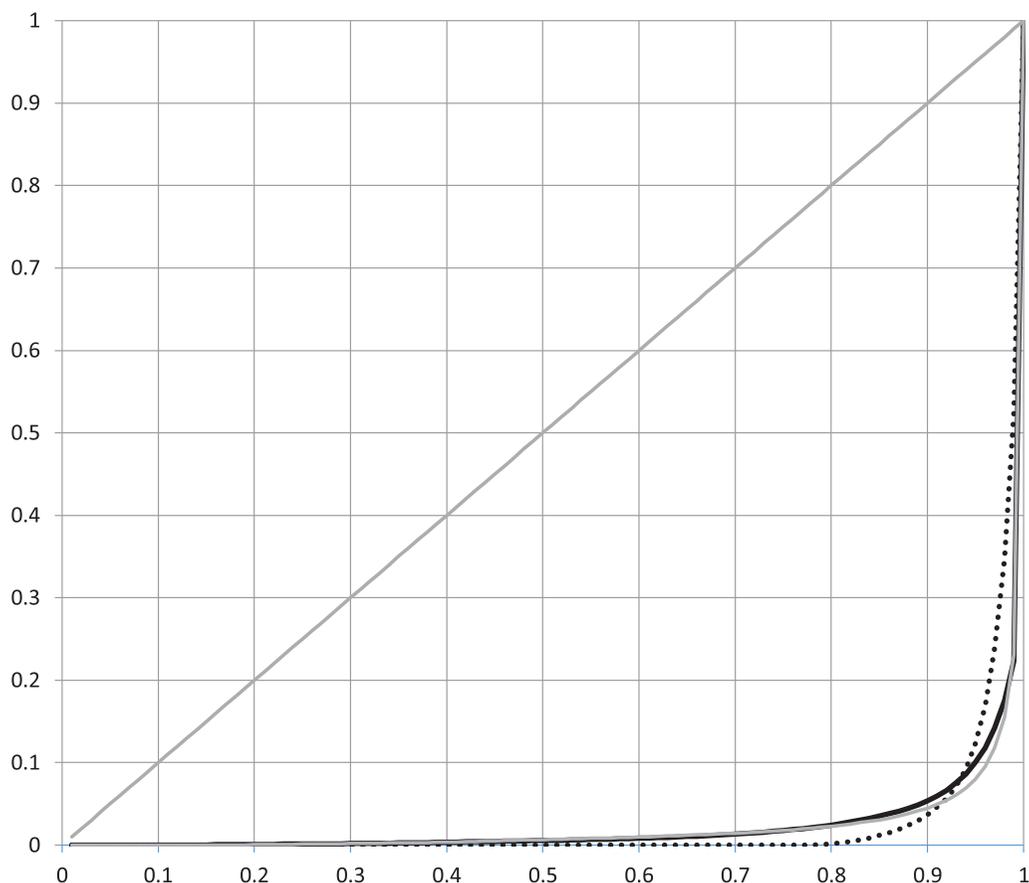


Figure 1. *Inequality in 1715, Lorenz curves*
 [Colour figure can be viewed at wileyonlinelibrary.com]

Notes: Black curve: all assets; dotted curve: real estate; grey curve: movables. The diagonal grey represents an absolute equal society, with a Gini coefficient of 0. A line following the lower and right axis represents a society where one person owns all the assets, with a Gini coefficient of 1.

Sources: Calculations based on wealth tax dataset; see discussion in section II. The sources are in the Stockholm City Archives, Överståthållarämbetet för uppbörsärenden archive, National Archive Code SE/SSA/0031, ser. 01 Karl XII:s kontributionsarkiv, files G2:5–6.

The 1715 taxation was unique and provides a snapshot of wealth and inequality. For a dynamic perspective, let us now extend our view to the years 1650, 1700, and 1750, making use of the samples from probate inventories. Here we adjust the sample by the actual shares of the population of the different social groups, as in the columns ‘Real’ in table 1.⁴⁰

worth 41,304 dkm and weapons worth 4,877 dkm; it reached a total of 78,579 dkm, not counting outstanding loans, and the value of the palace itself. The inventory is reproduced in Axel-Nilsson, *Makalös*, pp. 253–75.

⁴⁰ We adjust the sample for social class as follows. We start with the most overrepresented group as nominator and expand all the other classes by cloning the individuals until their class’s real share of population is reached. In this way, the importance of the sampled individuals is weighted according to the degree of over/underrepresentation of their class.

Inequality was markedly persistent over time. According to the estimates based on our probate samples, the Gini coefficient of wealth grew from 85.7 in 1650 to 89.1 in 1700 and 93.2 in 1750. The almost complete lack of nobles in 1650 and 1700 implies that inequality is underestimated here: compare the 1700 probate-based Gini estimate of 89.1 with the 1715 tax-based Gini estimate of 94.5. Compare, further, the probate-based estimates, where the wealthiest tenth of the population held 80.2 per cent of wealth in 1650, 84.6 per cent in 1700, and 90.3 per cent in 1750, with the 1715 taxation-based estimate, of 93.7 per cent. However, if we remove the nobles from our 1750 probate sample, the estimated Gini only falls from 93.2 to 91.2.⁴¹ Thus, the underestimation effect in 1650 and 1700 is not likely to be very large. Inequality was growing weakly and this trend continued from 1700 to 1715. Alfani has argued that inequality increased in early modern Europe, and our results give some support to this view, as the Gini and top decile's share of wealth grew from 1650 to 1750, but we would place more emphasis on what was actually a rather small change over time.⁴²

The high and stable level of inequality is, we argue, an indicator of the persistence of the anti-poor policies and mercantilism, both of which benefited the rich and punished the poor. A very large share of the population—soldiers, workers, servants, and journeymen—were poor. This created a situation of 'bottom-driven' inequality; even when the nobles are left out of the equation, Stockholm had a severely unequal economy. The large inequality of wealth was, as far as the available data reveal, also mirrored in very great inequalities of income. Data are very scarce but Jansson has collected scattered information from the 1640s to the 1670s. This indicates that labourers such as guards in 1650 earned 70 daler silver coins (dsm) per year, day labourers 74 daler silver coins (with the optimistic assumption of 250 working days), while journeymen earned 80–100 dsm and masters 160–200 dsm. Smaller-scale hawfers and salt fish sellers earned about the same as the master craftsmen, while larger merchants could earn 7,500–15,000 dsm a year, around 50 times the income of a master craftsman and about 140 times what a labourer earned.⁴³ Thus, the very large differences between groups that we find in the tax and probate data are also found in incomes data.

Financial wealth constituted a large share of assets, and debts were very important in Stockholm at this time.⁴⁴ Among our 586 individuals in the 1700 sample, total gross wealth was 3.6 million dkm, and total debt was 1.82 million dkm, making debts as a share of gross wealth equal to a rather high 50.2 per cent. This is probably related to the fact that probates in part were made to resolve outstanding debts, so the indebted should be over-represented in the sample as compared to the population. However, in the context of Stockholm we might still cite the study of the German town of Wildberg in 1602–1700 by Ogilvie et al.: 'in this less-developed economy everyone borrowed'.⁴⁵ The great extent of lending indicates that it was possible to make a considerable sum by being a

⁴¹ If we left out the nobility in 1750, the Gini stops at 91.2, the richest decile share at 86.9, and percentile 48.2.

⁴² See Alfani, 'Rich'.

⁴³ Jansson, *Bördor och bärkraft*, pp. 62–73. Here we have only discussed differences between groups; as pointed out by Söderlund, *Hantverkarna*, pp. 87–99, 261–2, a group like that of craftsmen was far from homogeneous.

⁴⁴ Ericsson and Winton, 'Market for government debt', show that financial markets in Sweden were surprisingly sophisticated by the 1710s.

⁴⁵ Ogilvie, Küpker, and Maegraith, 'Household debt'.

creditor; indeed, ongoing work by Pihl shows the existence of such rentiers in late seventeenth-century Stockholm, similar to the moneylenders of Venice and Amsterdam.⁴⁶ We will return to this issue in our discussion of the wealthy, but, to give only one example, 40 per cent of the wealth of one of the wealthiest persons in Stockholm in 1700, Petter Minder, consisted of claims and investments (103,000 dkm). With a standard yield of 6 per cent on loans, this could be a significant source of income, representing about 30 times the yearly income of a 1670s master craftsman.⁴⁷

IV. The poor

To put the relative distribution of wealth into perhaps a more comprehensive discussion of living standards, we need to move into the details of the probate inventories and look at people's assets. We have found that a large share of the Stockholm population were poor, but what does 'poor' mean in this context? Dorothea Pärssdotter, who was married to Johan, a sailor in the royal navy, and left him and an eight-year-old daughter when she died in 1700, provides an example. Pärssdotter's summarized gross wealth was 22.25 dkm, quite comparable to the 21 dkm of the poor in 1715 (cf. table 2.) Her inventory listed 14 items, among them pillows (6.25 dkm), an old quilt (3 dkm), bed linen (1.33 dkm), one 'small corner cabinet' (1.33 dkm), seven copper pots (1.16 dkm), and a hat (1 dkm). To summarize, Dorothea Pärssdotter, a poor Stockholm resident, in 1700, had some clothes, some bed linen, a few pieces of (poor) furniture, and some kitchen utensils. This is close to the bare minimum for survival. Obviously Dorothea and her husband did not own a house, but when she died they owed 13 dkm in rent to their landlord.

The inventory of the sailor Erich Carlsson Båte provides another example. It contains 12 items, totalling 18.33 dkm, of which the most valuable is a quilt worth 2 dkm. In all, bed linen accounts for more than one-third of his wealth. Almost every item is described as 'old', as in '1 old blue coat', 2 dkm; '1 pair old trousers', 1 dkm; and '1 old pipe', 1 dkm. This indicates a depressed living standard comparable to that of other poor urban dwellers throughout Europe.⁴⁸ An example from our 1650 sample is the maid Brita Matsdotter. She was originally from Småland in the south of Sweden and her last year had been spent as a servant in a burgher's house. Her clothing was superior to that of the sailor's wife: in total, she had 18 items, worth 49 dkm. She also had a coffer (3 dkm), some small coins (4 dkm), and a claim for half a year's salary from her employer (20 dkm).

Thus, from probates we conclude that poor people, whose belongings summed up to values of on average about 20 daler kopparmynt (comparable to the poor with 21 dkm in the 1715 sample; see table 2), did own some things, but not a lot, and that their old and tattered belongings were not worth much. People evaluated as poor in 1715 can also be found among those with other titles or occupations than

⁴⁶ Pihl, 'Learning'; Burke, *Venice and Amsterdam*.

⁴⁷ Amelang, *Honored citizens of Barcelona*, pp. 73–4, argues that 'identification with a rentier existence was a long-standing attribute of the Catalan nobility' of the sixteenth century. There is little indication of such deep financialization of the Stockholm elite in our period, but the probate inventories do reveal quite a liquid credit market and some specialized informal bankers.

⁴⁸ Jütte, *Poverty and deviance*, pp. 78–80.

'poor', and it is likely that many of these others had the same material standard as Dorothea Pärsson or Erich Carlsson Båte. Compared to Anna Guintes, a poor Amsterdam resident probated in 1740 and studied by McCants, the poor discussed here were worse off: less bed linen, and none of the more advanced consumer goods, such as paintings and a mirror, such as Guintes owned.⁴⁹ Braudel once argued that the poor in early modern Europe essentially owned nothing.⁵⁰ In Stockholm, this seems to have been the case; the labourers studied here are worse off not only compared to the Amsterdam resident studied by McCants, but also compared to the labourers of seventeenth- and eighteenth-century Britain in the sophisticated investigation by Muldrew.⁵¹

The picture of low living standards given by the taxation lists, the probates, and the poorhouse archives is reinforced by research on wage labour in Stockholm in this period. In an important study, Söderberg maps wage rates for building labourers in Stockholm since late medieval times. Before the nineteenth century, wage rises were cyclical rather than linear and cumulative. In our period, wage rates did grow in the late seventeenth century, which Söderberg explains by increasing demand for labour as the administrative and military sectors expanded in these decades.⁵² However, 1650 had been a historical low point for real wages, and the real wage, expressed in consumption baskets, was the same in Stockholm in 1750 as it had been in 1540, 1570, or 1620.⁵³ In the second half of the eighteenth century, real wages fell further. More qualitative work argues that soldiers and lower-ranking civil servants in the seventeenth and early eighteenth centuries were poorly and irregularly paid: one wage could not support a family, and periodically, as around 1713, very hard times struck and very few wages were paid out at all.⁵⁴

The finding that Stockholm labourers were poor in a European perspective, as indicated by our comparisons with probate studies by McCants and Muldrew, is corroborated by a comparison of real wages in northern Europe. According to van Bochove's comparative study, real wages for labourers in Stockholm during the years 1650 to 1750 were significantly lower than those in the Western Netherlands, Antwerp, or London, and also lower than those in Gdansk or Copenhagen.⁵⁵ It makes sense that poorly paid workers and soldiers accumulated little, were poor when they had to pay the wealth tax in 1715, and left very meagre inventories of their belongings when they passed away.

The relatively meagre living standards for the lower classes of Stockholm is also mirrored in the set-up of the social policy of the time. In her book on the poor of Stockholm, Unger compares the poor laws and the organization of poor relief in Stockholm, London, Amsterdam, and Paris and comes to the conclusion that the organization was less effective in Stockholm. This was due to the lack of a

⁴⁹ McCants, 'After-death inventories', p. 15. McCants also describes this as 'a fairly sizable inventory'.

⁵⁰ Braudel, *Capitalism*, p. 204.

⁵¹ Muldrew, *Food*. Whittle characterized Muldrew's findings with a striking title to her review of Muldrew's book: Whittle, 'Prosperous labourers?'

⁵² Söderberg, 'Long-term trends', pp. 461–3.

⁵³ Gary, *Work*, p. 56.

⁵⁴ Lennersand, Mispelaere, Pihl, and Ågren, 'Gender', pp. 186–91. Söderlund, *Hantverkarna*, p. 381, argues that distress was also widespread in craftsmen's homes in eighteenth-century Stockholm.

⁵⁵ van Bochove, 'Economic consequences', p. 76. His comparison builds upon empirical research by Allen, 'Great divergence'. The Stockholm real wages are found to be higher than those in three cities: Augsburg (but not in 1650–74), Leipzig, and Strasbourg. For further discussion of Stockholm real wages, see Gary, *Work*, pp. 53–5.

tax for poverty relief (except for the small amounts that came from the probate inventory taxes), less developed poor laws, and the lesser resources of churches and charitable organizations. Unger relates the lower ambition of poor relief in Stockholm to a growing social distance between the new elite and the poor in the seventeenth century, and a relatively harsher attitude to the poor in Stockholm, compared to the other cities.⁵⁶

This information taken together gives us a comprehensive picture of the living standards of Stockholm workers and the poor in the seventeenth and eighteenth centuries. According to our social structure estimates (table 1), about 62 to 68 per cent of the early modern Stockholm population were soldiers or workers. Not all of them were as poor as Dorothea Pärsson or Erich Carlsson Båte, but the sources do suggest that a large share of the population had a poor material standard of living.⁵⁷

V. The rich

We have learnt something about the living standards of the poor, which supplements our findings on the overall distribution of wealth. Let us now turn to the rich. Who grew rich in mercantilist Stockholm? Since, by design, the 1715 tax list includes all the wealthiest, we begin there; the 20 wealthiest individuals are shown in table 5.

A striking comparison, that shows how unequal the city was, is that the merchant Michael Hising alone owned a fortune that was equal to the total wealth of 87 per cent of the Stockholmers taken together. Among the super-rich, eight are nobles (Sparre, Hildebrand, Funck, Kruus, Fleming, Piper, Königsmarck, and Gyllenstierna) but Hildebrand had made his fortune as merchant in the city and had recently been ennobled. Twelve were non-noble merchants. If we expand the list to the 50 richest, 32 were merchants. Earlier research has underestimated the position of the Stockholm merchants during the later years of the Era of Great Power.⁵⁸ Söderberg et al., using the same sources but a small sample and ignoring the fact that several merchants were taxed *sub rosa* (see section II), found that nobles dominated Stockholm's wealth in 1715: only one merchant made it to their top 10 list, while the rest were nobles. They concluded that a significant change in this respect occurred during the eighteenth century, earlier characterized by Heckscher as a century of the merchants.⁵⁹ However, our study shows that the merchants were on top already in 1715, in the time of Carolingian absolutism. Previous research has emphasized, to a great degree, that Stockholm around 1700 was a royal capital and

⁵⁶ Unger, *Makten och fattigdomen*, pp. 254–75.

⁵⁷ It would be interesting to compare these calculations to those from other early modern cities, but comparisons are complicated by the fact that 'poverty' is a relative and somewhat nebulous concept. Arkell, 'Incidence', argues that the proportion of poor people, defined as those exempt from paying the hearth tax, in late seventeenth-century London, was 25%, while Baer, 'Stuart London's standard', found that London in 1638 had about 30–40% in poverty inside the city—within the walls—and around 45% outside the walls. The question is of course whether and how such definitions of poverty based on tax exemption can be reconciled with the more direct estimates made here.

⁵⁸ The period 1611–1721 when the Swedish Empire was a European great power.

⁵⁹ Söderberg et al., *Stagnating metropolis*, pp. 133–4; Heckscher, *Svenskt arbete och liv*, p. 257.

Table 5. *The top 20 wealthiest individuals in Stockholm, 1715*

<i>Title or occupation</i>	<i>Name</i>	<i>Real estate (dmk, current prices)</i>	<i>Total wealth (dmk, current prices)</i>
Merchant	Michael Hising	0	2,236,680
Spice merchant	Henrik Schröder	9,990	1,561,372
Lieutenant-general, Ambassador, Baron	Erik Sparre	143,499	1,343,499
Merchant, mill owner	Johan Claesson	3,012	1,268,012
Merchant	Olof Apelroth	390	1,121,016
Merchant, Chamberlain, Right Honourable	Henrik Jakob Hildebrand	36,000	846,000
Right Honourable, Madam	Elisabeth Funck	238,368	841,527
Royal counsellor, President, Count	Britta Kruus, Wredes' widow	108,585	753,585
Merchant	Jakob Feif	0	619,209
Baron, Colonel	Magnus Fleming	456,639	597,999
Merchant, wholesaler	Johan Wier	0	587,549
Merchant, agent	Bernt von Scheven	36,150	502,275
Countess	Christina Piper	90,000	461,040
Merchant	Carl Grill	0	424,079
Merchant	Verner Groen Gerdtsen	11,280	381,780
Countess	Beata Elisabeth Königsmarck	78,000	363,195
Merchant	Anders Roselius	0	355,787
Merchant	Abraham Grill	41,925	351,895
Merchant	Jan Spalding	6,667	317,814
Royal counsellor, Count	Carl Gyllenstierna	124,170	310,170

Source: See tab. 2.

a city of bureaucrats;⁶⁰ the results here indicate that this strength of bureaucracy did nothing to hinder the growth of great merchant fortunes. The nobles held a larger share of their wealth in real estate, 25 per cent, while the merchants' wealth typically consisted of cash, balances, shares, and movables, but only 1.4 per cent was in real estate.

We now turn from the 1715 taxation to the probate inventory samples from 1650, 1700, and 1750. Table 6 shows the wealthy elite in these years—but again, we must recall that in the first two years nobles are missing. Where do the fortunes come from? Who are the wealthy? In 1650, in the absence of nobles, the wealthiest are all merchants, burghers, and artisans. Here, as in 1700, German names (such as Jerke, Gere, Hess, Hartig, and Ratken) are frequent, which is indicative of the strong foreign component in seventeenth-century Stockholm. Combining a position in city government/the magistracy with merchant activity was not unusual, as indicated by the wealthiest individual Johan Persson, both a magistrate (*rådman*) and a merchant.⁶¹ The 1700 list, like the 1650 one, is dominated by merchants: six of the 10 are merchant households. One is a master artisan—a rope maker. The final one, and indeed the wealthiest of them all, is a manufacturer, more specifically

⁶⁰ For example, Jansson, *Bördor och bärkraft*, complains that there were too many bureaucrats and too few entrepreneurs; and Ericson, *Borgare och byråkrater*, emphasizes the Crown's breaking of the 'merchant oligarchy' in the city council.

⁶¹ He is discussed in Unger, *Makten och fattigdomen*, p. 105, as a prominent merchant and mayor. In the small town of Arboga, the town council dominated the wealth list at the beginning of the eighteenth century, but by less when it ended. The confluence of political power and wealth was typical of the earlier period, while at the end of the eighteenth century, Andersson (*Stadens dignitärer*, pp. 84–90, 98–104) argues in her study of Arboga, entrepreneurship and trade were so profitable that holding local political office was no longer so important for the economic elite.

Table 6. *Ten wealthiest individuals in Stockholm, probated in 1650, 1700, and 1750*

<i>Name</i>		<i>Occupation/title of individual or spouse</i>	<i>Gross wealth (dmk, annual prices)^a</i>	<i>Debts (dmk, annual prices)^a</i>
1650				
Johan	Persson	Legislative official, merchant	104,711	0
Ingrid	Hansdotter	Mayor	76,849	4,315
Jöran	Jerke	Pewterer	57,954	8,753
Baltzar	Gere	Malter	28,648	25,533
Elisabeth	Hess	Flayer	25,576	1,537
Anders	Hartig	Brewer, grain merchant	22,154	12,058
Peter	Ratken	Merchant	16,029	11,249
Henrik	Henriksson	Custom clerk	15,316	0
Erik	Andersson	Assessor at the court of appeal	14,745	8,323
Märta	Knutsdotter	Pot moulder	14,509	15,570
1700				
Petter	Minder	Manufacturer	249,000	10,061
Britta	Åkesdotter Folcker	Merchant	150,170	938
Petter	Räf	Merchant	102,273	140,911
Michel	Bader	Naval gun officer, artisan	75,658	91,374
Johan	Nyman	Master rope maker	84,593	90,031
Johan	Dahlström	Merchant	79,660	102,822
Didrich	von der Listh	Merchant	78,788	7,328
Johan Adam	Kalkberner	Merchant	68,506	428
Juliana	Fült	Matron, hawser manager	66,463	10,697
Catharina	Meistens	Merchant	58,620	18,786
1750				
Johan Gabriel	Sack	Baron	3,392,763	86,259
Johan	Claesson	Merchant	1,621,291	91,799
Eleonora M.	Wachtmeister	Countess	1,296,463	126,346
Carl Gustav	Spens	Count, marshal of the court	643,764	0
Arvid	Hägerflycht	Governor	594,236	12,088
Anna Sophia	von Fersen	Countess	476,820	15,466
Elisabeth	Wrangel (von Rosen)	Baroness	367,232	11,059
Carl	Iserhielm	Attorney-general	340,833	301,375
Carl	Cronstedt	Baron, President	338,866	49,196
Maria Sophia	Stierncrona	Countess	335,754	115,440

Note: The consumer price index was stable from 1650 to 1700 but increased by 48% from 1700 to 1750; Edvinsson and Söderberg, 'Evolution of Swedish consumer prices'.

Sources: See tab. 1.

a tobacco manufacturer. He, Petter Minder, as well as the naval gun officer, the hawser manager's wife, and two of the merchants, has a German name. Three of the 10, the naval gun officer and artisan Michael Bader, merchant Johan Dahlström, and merchant Petter Räf, actually have negative net wealth, because of their large debts.

In 1750, four of the richest were born nobles (Sack, Wachtmeister, Wrangel, and Stierncrona). In all these cases a substantial part of their wealth consisted of rural landed estates outside Stockholm. Beside the nobles, almost all of the richest were merchants.

Thus, we can conclude that the wealthiest Stockholm residents in the years 1650–1750 became rich through owning estates, and/or being merchants, or perhaps manufacturers. Burke argued that a typical rich Amsterdam citizen in 1700 invested half his fortune in bonds, 32 per cent in stocks, 12 per cent in houses, and only 6 per cent in land, down from 30 per cent in 1600.⁶² The Stockholm elite was certainly more agrarian-based than this; the 20 wealthiest in 1750 held on average 31 per cent of their wealth as rural real estate.⁶³ Similarly, Soliday argued that in eighteenth-century Frankfurt the aristocrats were less wealthy (but more politically powerful) than the merchants.⁶⁴ Stockholm appears to have been less burgher-dominated than important Continental cities—but more so than the previous Swedish literature has stated, as we have shown in our analysis of the 1715 ‘rich list’ above. The wealthy elite of seventeenth- and eighteenth-century Stockholm was a heady mix of merchants, magistrates, nobles, and estate owners—and each wealthy individual could combine these various roles in different ways, as in the case of the magistrate-merchant Johan Persson or the merchant-nobleman Henrik Jakob Hildebrand.

So we know the assets and activities through which the richest became rich. But how rich could one become in seventeenth- and eighteenth-century Stockholm? How do they compare, from a European perspective? Stockholm was a central trading hub in the Baltic, but of course not a European or global city on the level of Amsterdam or London. This might easily have limited the wealth-building possibilities. For comparison, the absolutely wealthiest members of the elite in 1660s London are said to have held more than £10,000 each on average,⁶⁵ and it has been said that in the 1710s, no man worth less than £15,000 could realistically run for high office in London.⁶⁶ Our 1715 database, which includes the whole economic elite, is the most reliable comparison here. In that year, the top 14 individuals had more than £15,000; led by merchant Michel Hising, whose wealth corresponded to £80,000. Thus, while we cannot provide here a purchasing power parity or cost of living-adjusted estimate of relative wealth, we conclude that Swedish mercantilist trade did create some fortunes that would rank alongside the highest in Europe.⁶⁷

VI. Stockholm in an international perspective

Figure 2 compares the inequality in Stockholm in 1715 and 1750, our two years with the most precise estimates, to that of European and American cities studied in previous research. The extant literature suggests three obvious hypotheses on

⁶² Burke, *Venice and Amsterdam*, p. 65; see *ibid.*, pp. 62–9, for the wider discussion.

⁶³ The inclusion of rural estates affects the overall inequality pattern, but only on the margin. If we exclude all real estate outside Stockholm from the 1750 sample, the total Gini declines from 93.2 to 92.4.

⁶⁴ Soliday, *Community in conflict*, p. 235.

⁶⁵ Grassby, ‘Personal wealth’, p. 226

⁶⁶ Rogers, ‘Money, land and lineage’, p. 439.

⁶⁷ None of our 1700 probated Stockholm residents would qualify as highest ranking in London, since the richest person, the manufacturer Petter Minder, was worth only £9,222. In the 1750 sample, Sack’s wealth in 1750 corresponded to £77,941, so he would have been a rich man in the London of his time. Claesson and Wachtmeister also would have qualified above the £15,000 cut-off point, while Spens is just below it. However, of course, the probate samples are limited to those individuals who died in the benchmark year, and therefore is less encompassing than the 1715 sample.

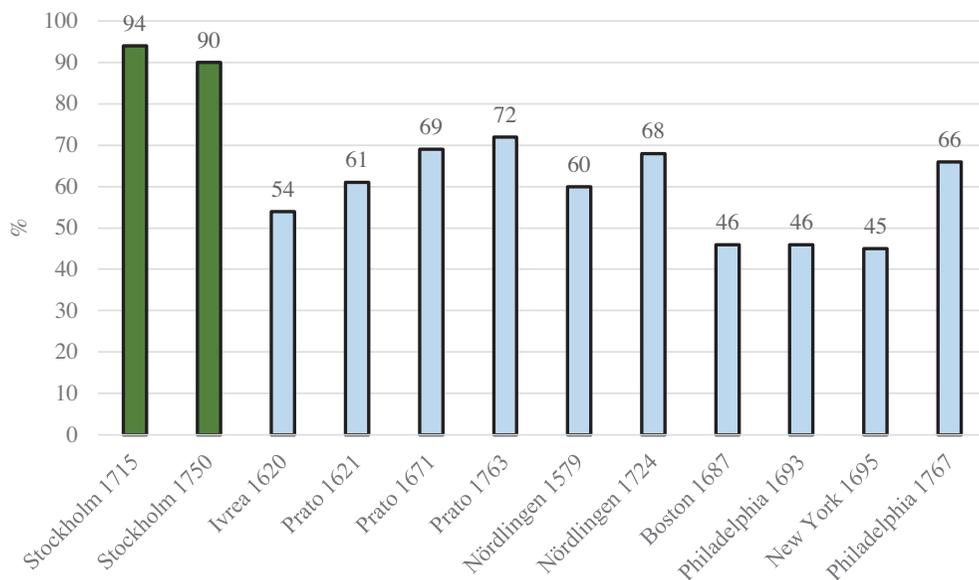


Figure 2. *The top decile's share of gross wealth: Stockholm from an international perspective*
 [Colour figure can be viewed at wileyonlinelibrary.com]

Sources: Ivrea: Alfani, 'Wealth inequalities', tab. 2. Prato: Alfani and Ammanati, 'Long-term trends', p. 1093, tab. 4. Nördlingen: Friedrichs, *Urban society*, pp. 106, 122. American cities: Nash, 'Urban wealth', tab. 1.

variations in inequality between cities. The first is that larger cities should be more unequal: they have more diverse local economies and should allow for a sharper development of wealth at the top end.⁶⁸ The second is that wealthier cities should be more unequal.⁶⁹ The third is that cities with more rapid economic growth should see increasing inequality.⁷⁰

The most striking finding for Stockholm in the years 1650–1750 is that inequality is high and stable. Concentration barely changes over the 100-year period.⁷¹ This speaks against the assumption that inequality is first and foremost driven by economic growth. The average wealth for a Stockholm household in 1650, 1700, and 1750, according to our estimates, was 2,699, 3,241, and 6,298 dkm.⁷² In real terms (1700 prices), this becomes 2,699, 3,241, and 4,255 dkm, or an increase of 158 per cent over a hundred years. In spite of this growth, it is still striking that Stockholm basically was as unequal in 1650 as in 1750. The very high inequality

⁶⁸ Cf. Ryckbosch, 'Economic inequality'.

⁶⁹ In a very influential analysis, Milanovic, Lindert, and Williamson, 'Pre-industrial inequality', point to a relationship between wealth and inequality: richer economies can be more unequal, since, in poor economies, high inequality in the end will lead to the poor starving to death. Stockholm in this period was not a very wealthy city, but still highly unequal.

⁷⁰ van Zanden, 'Tracing the beginning'. Cf. the discussion in Alfani and di Tullio, *Lion's share*, p. 11.

⁷¹ Indeed, the levels of inequality here are very similar to those found for Swedish cities in 1850 and 1900. See Bengtsson et al., 'Wealth inequality'.

⁷² For this comparison we have left out the nobility in 1750. Average and median diverge significantly. Median (gross) wealth in the Stockholm population was 200 dkm in 1650, 243 dkm in 1700, and 75 dkm in 1750.

in this relatively poor town also speaks against the second hypothesis, Stockholm's being poor and unequal.

When it comes to comparing cities, the American cities of Boston (1687), Philadelphia (1693), and New York (1695) look quite equal by comparison, but this may be a statistical artefact stemming from a lack of controls in these studies of poverty among non-taxpayers.⁷³ The Italian cities of Ivrea and Prato studied by Alfani also lack information on poorer segments of the population in the data; with a consistent methodology for adjusting for the social structure, such as the one employed in this article, the differences between Stockholm and the American and Italian cities would probably seem smaller. Instead looking at Gini coefficients, a measure which has been calculated for more cities, the inequality in Stockholm is maintained. The Gini coefficient for the whole population of Stockholm in 1715 is 0.94. This can be compared with the results reported by van Zanden: 0.79 in Florence in 1427; around 0.75 in Lyons (1545), Dresden (1488 and 1502), Freiburg (1445), Konstanz (1450), Norwich (1525), and Leiden (1498); and 0.66 in Augsburg in 1498 and 0.89 in 1604.⁷⁴ Of these eight European cities, only Augsburg in 1604 has a degree of wealth concentration like Stockholm's.

We have argued that the Stockholm case is interesting not only in itself, but also for a wider understanding of early modern inequality. But Stockholm appears to have been more unequal than the comparison cities. How can we square these facts? As we have emphasized, the policies in place in Stockholm were largely inspired by the greater and more important European states: mercantilist ideas from Britain, France, and Holland; and poor laws from Britain, Holland, and elsewhere.⁷⁵ The impact of Luther's teaching was common to all Lutheran states. We argue that Stockholm in this sense should not be seen as an aberration from the European norm, but rather as an unusually full implementation of harsh poor laws and mercantilist policies.⁷⁶ Unger argues that poor relief was less ambitious in Stockholm in this period than in comparable cities like London or Amsterdam.⁷⁷ Furthermore, the strictness of Swedish mercantilism may also have been a case not only of distribution between rich and poor, but also of centralization of the country's wealth in the capital city. The Crown pursued a strong pro-Stockholm policy in this period, concentrating trade and state administration in the capital,⁷⁸ and this has implications for inequality estimates for the city, as many of the country's richest were concentrated there.⁷⁹ Thus comparing Stockholm to non-capital cities might accentuate Stockholm's mercantilist inequality more than a

⁷³ See Warden, 'Inequality and instability', for discussion.

⁷⁴ van Zanden, 'Tracing the beginning', pp. 645–9.

⁷⁵ On economic policy generally, see Heckscher, *Sveriges ekonomiska historia*, pp. 672–703. The 1715 wealth tax which we use was explicitly influenced by German Cameralism and other Continental schools of economic thinking: Karlsson, *Den jämlike undersåten*, pp. 57–8. On poor laws and inspiration from Holland, England, and Germany, see Snare, *Work, war*, pp. 92–3, 130.

⁷⁶ See Enflo and Missiaia, 'Malthus', for a similar view of the Swedish state's immense focus on the capital, Stockholm, and the city's protected position. Their regional GDP estimations for 1571 and 1750 show that this resulted in higher regional inequality, mainly caused by relatively higher growth in Stockholm compared to other regions in Sweden.

⁷⁷ Unger, *Makten och fattigdomen*, pp. 254–75.

⁷⁸ Cf. Ericson, *Borgare och byråkrater*; Sandberg, *I slottets skugga*; Müller, *Merchant houses of Stockholm*; Samuelsson, *De stora köpmanshusen*.

⁷⁹ As far as we know, the residential patterns of the Swedish nobility have not been studied in a comparative context. The investigation here has shown that there was a significant presence of nobles in Stockholm in our studied period; on the other hand, our estimates without nobles (see section III) show that their exclusion does

comparison with other contemporary capital cities (for which data are lacking at this point) would have done. However, with the estimates currently available, these are the only comparisons that we can make.

Furthermore, with or without the comparisons, what is clear from our study is that in this militarist and mercantilist time, the capital city of Stockholm created some great fortunes from trading and state administration, but also much poverty, for sailors, soldiers, ship builders, hawkers, and other workers who struggled to get by.⁸⁰ As poor men, women, and children toiled in the workhouses of the city to provide the navy with cheap materials and to maintain social order, they might not have been surprised to learn that Stockholm in this period was a deeply unequal city. However, for the inequality literature, we might all need reminding that such regulations of labour and the right to earn incomes in different ways profoundly influence the degree of inequality in a society.⁸¹

VII. Conclusions

Stockholm in the seventeenth and eighteenth centuries was a deeply unequal city-economy. To a large degree this depended upon the income structure generated by an active military-fiscal state which paid its sailors, soldiers, and ship builders a pittance, while privileged merchants and nobles could build great fortunes. Our research, then, reinforces the argument of Alfani and di Tullio that historical inequality research must consider politics and the state to a much greater extent than hitherto, and rely less for explanation on economic growth and external shocks.⁸² This study also follows Malinowski and van Zanden in shedding light on feudalism—if we may invoke this rather nebulous term as a portmanteau for seventeenth- and eighteenth century regulations of the economy in the name of social order—as a factor shaping historical inequality.⁸³ The strong and competent Swedish state, which was also represented locally on Stockholm's city council, greatly influenced the distribution of incomes and wealth, in a way which reminds us of the classical view expressed by Adam Smith, and carried forward by Karl Marx, that the state was 'defense of the rich against the poor'.⁸⁴

Previous research has found that the wealthiest 10 per cent held about 70 per cent of Swedish wealth in 1750, and that this share grew at a rather even pace until the early twentieth century, when the top decile's share reached about 90 per cent.⁸⁵ The results here suggest that Stockholm, the capital of the country, was significantly more unequal than the country as a whole in the early modern

not lower estimated inequality that much. The concentration of merchants was probably even more important. Further, inequality was to a large degree 'bottom-driven', caused by the very large share of the city population who were extremely poor.

⁸⁰ Cf. the accounts in Nyström, *Stadsindustriens arbetare*; Utterström, *Fattig och föräldralös*; Unger, *Makten och fattigdomen*, among others.

⁸¹ On the regulation of entrepreneurship and corporations, cf. Heckscher, *Sveriges ekonomiska historia*; Lindberg, 'Mercantilism and urban inequalities'; Ågren, *Köpmannen i Stockholm*.

⁸² Of course, this is not a completely original argument. Lindert and Williamson, *Unequal gains*, p. 12, argue that politics is one of six basic factors—along with demography, education policy, trade, finance, and technical change—that shape economic inequality. The contribution here is rather to specify some ways in which feudal and mercantilist policies could do so.

⁸³ Malinowski and van Zanden, 'Income and its distribution'.

⁸⁴ Smith, cited in Claeys, *Marx*, p. 98.

⁸⁵ Bengtsson et al., 'Wealth inequality'.

period: there was a concentration of poor people and rich people side by side in the capital. This is in line with previous research on historical inequality.⁸⁶ It also corresponds with the fact that Stockholm as the capital was seriously privileged by policy in this period, in terms of trade regulations.⁸⁷ Thus, we cannot draw too wide conclusions about inequality in the country as a whole from the study of Stockholm. Our results indicate that at the top, great fortunes grew among merchants and nobles, which implies a top-driven inequality. However, in the countryside, recent research indicates that stratification among farmers was fairly constant, and proletarianization only took off after 1750.⁸⁸ Various aspects of inequality may have developed in different directions in the period: urban–rural inequalities most likely grew with the mercantilist privileges of the cities, and at the top, inequality grew, but at the centre and bottom of the distribution, tendencies are less clear.⁸⁹

The wider Swedish perspective on inequality pre-1750 must be left for future research, and would require further archival work. For now, let us conclude that this study of Stockholm from 1650 to 1750 provides a fascinating case study of inequality which is at once modern and capitalist, and early modern and ‘mercantilist’. We believe that this study of Stockholm, which has given detailed insights into the social structure of the city, the material living conditions of the poor, as well as the road to riches for merchants and nobles, highlights the need for research on historical economic inequality to consider the class structure as well as governing ideologies—formulated in the Stockholm case, for example, in the policy of low wages—to understand the resulting historical patterns of inequality.⁹⁰

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Footnote references

- Ågren, K., *Köpmannen i Stockholm: Grosshandlars ekonomiska och sociala strategier under 1700-talet* (Uppsala, 2007).
- Alfani, G., ‘Wealth inequalities and population dynamics in early modern northern Italy’, *Journal of Interdisciplinary History*, 40 (2010), pp. 513–49.
- Alfani, G., ‘The rich in historical perspective: evidence for preindustrial Europe (ca. 1300–1800)’, *Cliometrica*, 11 (2017), pp. 321–48.
- Alfani, G. and Ammanati, F., ‘Long-term trends in economic inequality: the case of the Florentine state, c. 1300–1800’, *Economic History Review*, 70 (2017), pp. 1072–102.
- Alfani, G. and di Tullio, M., *The lion’s share: inequality and the rise of the fiscal state in preindustrial Europe* (Cambridge, 2019).
- Allen, R. C., ‘The great divergence in European wages and prices from the middle ages to the First World War’, *Explorations in Economic History*, 38 (2001), pp. 411–47.
- Amelang, J. S., *Honored citizens of Barcelona: patrician culture and class relations, 1490–1714* (Princeton, NJ, 1986).
- Anderson, P., *Lineages of the absolutist state* (2013 edn.).
- Andersson, E. I., ‘Swedish burghers’ dress in the seventeenth century’, *Costume—Journal of the Costume Society*, 51 (2017), pp. 171–89.
- Andersson, G., *Stadens dignitärer: den lokala elitens status och maktmanifestation i Arboga 1650–1770* (Stockholm, 2009).

⁸⁶ See, for example, van Zanden, ‘Tracing the beginning’; Ryckbosch, ‘Economic inequality’.

⁸⁷ Enflo and Missiaia, ‘Malthus’; Heckscher, *Sveriges ekonomiska historia*; Magnusson, *Merkantilism*.

⁸⁸ Lindström, ‘Distribution and differences’. For discussion of proletarianization in the countryside after 1750 and its implications for inequality, see Bengtsson et al., ‘Wealth inequality’, pp. 783–6.

⁸⁹ A new project has unearthed about 1,200 rural probate inventories for the 1680–1720 period, which is earlier than those that have previously been studied, and we will use these to study material living standards and inequality in this period and compare them to the late eighteenth and late nineteenth centuries. This will shed new light on the issues discussed here.

⁹⁰ On ideology and inequality, cf. Piketty, *Capital and ideology*.

- Andersson, M., 'Husbönderna, statsmakten och klasskampen', *Arbetshistoria*, 173/4 (2020), pp. 50–8.
- Arkell, T., 'The incidence of poverty in England in the later seventeenth century', *Social History*, 12 (1987), pp. 23–47.
- Axel-Nilsson, G., *Makalös: Fältherren greve Jakob de la Gardies hus i Stockholm* (Stockholm, 1984).
- Baer, W. C., 'Stuart London's standard of living: re-examining the Settlement of Tithes of 1638 for rents, income, and poverty', *Economic History Review*, 63 (2010), pp. 612–37.
- Bengtsson, E., Missiaia, A., Nummela, I., and Olsson, M., 'Unequal poverty and equal industrialization: Finnish wealth, 1750–1900', *Scandinavian Economic History Review*, 67 (2019), pp. 229–48.
- Bengtsson, E., Missiaia, A., Olsson, M., and Svensson, P., 'Wealth inequality in Sweden, 1750–1900', *Economic History Review*, 71 (2018), pp. 772–94.
- van Bochove, C. J., 'The economic consequences of the Dutch: economic integration around the North Sea, 1500–1800' (Ph.D. thesis, Utrecht Univ., 2008).
- Braudel, F., *Capitalism and material life, 1400–1800* (Glasgow, 1974).
- Burke, P., *Venice and Amsterdam: a study of seventeenth-century elites* (2nd edn., Cambridge, 1994).
- Claeys, G., *Marx and marxism* (2018).
- Corin, C.-F., 'Tiden 1667–1924', in C.-F. Corin and C. Rundquist, eds., *Stockholms förmyndarkammare 1667–1956. Minnesskrift* (Stockholm, 1956), pp. 7–65.
- Cowan, A. F., *The urban patriciate: Lübeck and Venice 1580–1700* (Cologne, 1986).
- Dahlgren, S., 'Karl XI', in A. Florén, S. Dahlgren, and J. Lindegren, eds., *Kungar och krigare: Tre essäer om Karl X Gustav, Karl XI och Karl XII* (Stockholm, 1992), pp. 81–149.
- Edvinsson, R., 'Foreign exchange rates in Sweden 1658–1803', in R. Edvinsson, T. Jacobson, and D. Waldenström, eds., *Historical monetary and financial statistics for Sweden: exchange rates, prices, and wages, 1277–2008* (Stockholm, 2010), pp. 238–90.
- Edvinsson, R. and Söderberg, J., 'The evolution of Swedish consumer prices, 1290–2008', in R. Edvinsson, T. Jacobson, and D. Waldenström, eds., *Historical monetary and financial statistics for Sweden: exchange rates, prices and wages, 1277–2008* (Stockholm, 2010), pp. 412–52.
- Enflo, K. and Missiaia, A., 'Between Malthus and the industrial take-off: regional inequality in Sweden, 1571–1850', *Economic History Review*, 73 (2020), pp. 431–54.
- Ericson, L., *Borgare och byråkrater: Omvandlingen av Stockholms stadsförvaltning 1599–1637* (Stockholm, 1988).
- Ericsson, P. and Winton, P., 'The market for government debt in Sweden, c. 1715–1760', paper presented at the Economic History Society conference, Keele Univ. (April 2018).
- Florén, A., 'Karl X Gustav', in A. Florén, S. Dahlgren, and J. Lindegren, eds., *Kungar och krigare: Tre essäer om Karl X Gustav, Karl XI och Karl XII* (Stockholm, 1992), pp. 11–80.
- Friedrichs, C. R., *Urban society in an age of war: Nördlingen, 1580–1720* (Princeton, NJ, 1979).
- Fynn-Paul, J., 'Let's talk about class: towards an institutionalist typology of class relations in the cities of pre-modern Europe (c. 1200–c. 1800)', *Urban History*, 41 (2014), pp. 582–605.
- Gary, K., *Work, wages and income: remuneration and labor patterns in Sweden 1500–1850* (Lund, 2018).
- Glete, J., *War and the state in early modern Europe: Spain, the Dutch Republic and Sweden as fiscal-military states, 1500–1660* (2002).
- Gómez León, M. and de Jong, H. J., 'Inequality in turbulent times: income distribution in Germany and Britain, 1900–50', *Economic History Review*, 72 (2019), pp. 1073–98.
- Grassby, R., 'The personal wealth of the business community in seventeenth-century England', *Economic History Review*, 2nd ser., XXIII (1970), pp. 220–34.
- Hallenberg, M., *Kungen, fogdarna och riket: Lokalförvaltning och statsbyggande under tidig Vasatid* (Stockholm/Stehag, 2001).
- Hallenberg, M. and Holm, J., *Man ur huse: hur krig, upplopp och förhandlingar påverkade svensk statsbildning under tidigmodern tid* (Lund, 2016).
- Heckscher, E., *Merkantilismen: ett led i den ekonomiska politikens historia. Första delen* (Stockholm, 1931).
- Heckscher, E., *Sveriges ekonomiska historia från Gustav Vasa. Första delen, andra boken: Före frihetstiden* (Stockholm, 1936).
- Heckscher, E., *Svenskt arbete och liv från medeltiden till nutiden* (Stockholm, 1941).
- Herlitz, L., *Jordegendom och ränta: Omfördelningen av jordbrukets merprodukt i Skaraborgs län under frihetstiden* (Gothenburg, 1974).
- Jansson, A., *Bördor och bärkraft: Borgare och kronotjänare i Stockholm 1644–1672* (Stockholm, 1991).
- Johanson, U., *Fattiga och tiggare i Stockholms stad och län under 1700-talet: Studier kring den offentliga fattigvården under frihetstiden* (Stockholm, 1984).
- Johannisson, K., *Det mätbara samhället: Statistik och samhällsdröm i 1700-talets Europa* (Stockholm, 1988).
- Jütte, R., *Poverty and deviance in early modern Europe* (Cambridge, 1994).
- Karlsson, Å., *Den jämlike undersåten: Karl XII:s förmögenhetsbeskatning 1713* (Uppsala, 1994).
- Kuuse, J., 'The probate inventory as a source for economic and social history', *Scandinavian Economic History Review*, 22 (1974), pp. 22–31.

- Lennersand, M., Mispelaere, J., Pihl, C., and Ågren, M., 'Gender, work, and the fiscal-military state', in M. Ågren, ed., *Making a living, making a difference: gender and work in early modern European society* (Oxford, 2017), pp. 179–201.
- Lilja, S., 'Stockholms befolkningsutveckling före 1800: metoder och förklaringar', *Historisk Tidskrift*, 115 (1995), pp. 304–37.
- Lindberg, E., 'Mercantilism and urban inequalities in eighteenth-century Sweden', *Scandinavian Economic History Review*, 55 (2007), pp. 1–19.
- Lindegren, J., 'Karl XII', in A. Florén, S. Dahlgren, and J. Lindegren, eds., *Kungar och krigare: Tre essäer om Karl X Gustav, Karl XI och Karl XII* (Stockholm, 1992).
- Lindert, P. H. and Williamson, J. G., *Unequal gains: American growth and inequality since 1700* (Princeton, NJ, 2016).
- Lindgren, H., 'The modernization of Swedish credit markets, 1840–1905: evidence from probate records', *Journal of Economic History*, 62 (2002), pp. 810–32.
- Lindström, J., 'Distribution and differences: stratification and the system of reproduction in a Swedish peasant community 1620–1820' (Ph.D. thesis, Uppsala Univ., 2008).
- Lindström, J. and Mispelaere, J., 'Interdependent living: labouring families and the Swedish mining industry in the late seventeenth century', *History of the Family*, 22 (2017), pp. 136–55.
- Ling, S., *Konsten att försörja sig: kvinnors arbete i Stockholm 1650–1750* (Stockholm, 2016).
- McCants, A., 'After-death inventories as a source for the study of material culture, economic well-being, and household formation among the poor of eighteenth-century Amsterdam', *Historical Methods: A Journal of Quantitative and Interdisciplinary History*, 39 (2006), pp. 10–23.
- Magnusson, L., *Sveriges ekonomiska historia* (Stockholm, 1997).
- Magnusson, L., *Merkantilism: Ett ekonomiskt tänkande formuleras* (Stockholm, 1999).
- Malinowski, M. and van Zanden, J. L., 'Income and its distribution in preindustrial Poland', *Cliometrica*, 11 (2017), pp. 375–404.
- Milanic, B., Lindert, P. H., and Williamson, J. G., 'Pre-industrial inequality', *Economic Journal*, 121 (2011), pp. 255–72.
- Montgomery, A., *Svensk socialpolitik under 1800-talet* (2 edn.; Stockholm, 1951).
- Muldrew, C., *Food, energy and the creation of industriousness: work and material culture in agrarian England, 1550–1780* (Cambridge, 2011).
- Müller, L., *The merchant houses of Stockholm, c. 1640–1800: a comparative study of early-modern entrepreneurial behaviour* (Uppsala, 1998).
- Nash, G. B., 'Urban wealth and poverty in pre-Revolutionary America', *Journal of Interdisciplinary History*, 6 (1976), pp. 545–84.
- Nyström, P., *Stadsindustriens arbetare före 1800-talet* (Stockholm, 1955).
- Ogilvie, S., Kूपker, M., and Maegraith, J., 'Household debt in early modern Germany: evidence from personal inventories', *Journal of Economic History*, 72 (2012), pp. 134–67.
- Pihl, C., "'Learning to bring dead capital to life": the Riksbens Ständers Bank and the credit market in seventeenth-century Sweden', *Continuity and Change*, 34 (2019), pp. 209–30.
- Piketty, T., *Capital in the twenty-first century* (Cambridge, Mass., 2014).
- Piketty, T., *Capital and ideology* (Cambridge, Mass., 2020).
- Piketty, T., Postel-Vinay, G., and Rosenthal, J.-L., 'Wealth concentration in a developing economy: Paris and France, 1807–1994', *American Economic Review*, 96 (2006), pp. 236–56.
- Roberts, M., *The age of liberty: Sweden 1719–1772* (Oxford, 1986).
- Rogers, N., 'Money, land and lineage: the big bourgeoisie of Hanoverian London', *Social History*, 4 (1979), pp. 437–54.
- Runefelt, L., 'Hushållningens dygder: Affektlära, hushållningslära och ekonomiskt tänkande under svensk stormaktstid' (Ph.D. thesis, Stockholm Univ., 2001.)
- Ryckbosch, W., 'Economic inequality and growth before the industrial revolution: the case of the Low Countries (fourteenth to nineteenth centuries)', *European Review of Economic History*, 20 (2016), pp. 1–22.
- Rystad, G., *Karl XI* (Lund, 2001).
- Samuelsson, K., *De stora köpmanshusen i Stockholm 1730–1815: En studie i den svenska handelskapitalismens historia* (Stockholm, 1951).
- Sandberg, R., *I slottets skugga: Stockholm och kronan 1599–1620* (Stockholm, 1991).
- Scherp, J., 'De ofrälse och makten: En institutionell studie av riksdagen och de ofrälse ståndens politik i maktodelningsfrågor 1660–1682' (Ph.D. thesis, Stockholm Univ., 2013).
- Schultz, H., *Berlin 1650–1800: Sozialgeschichte einer Residenz* (2nd rev. edn., Berlin, 1992).
- Sennefelt, K., *Politikens hjärta: Medborgarskap, manlighet och plats i frihetstidens Stockholm* (Stockholm, 2012).
- Snare, A., 'Work, war, prison, and welfare: control of the laboring poor in Sweden' (Ph.D. thesis, Univ. of California—Berkeley, 1977).
- Söderberg, J., 'Long-term trends in real wages of labourers', in R. Edvinsson, T. Jacobson, and D. Waldenström, eds., *Exchange rates, prices, and wages, 1277–2008* (Stockholm, 2010), pp. 453–78.
- Söderberg, J., Jonsson, U., and Persson, C., *A stagnating metropolis: the economy and demography of Stockholm, 1750–1850* (Cambridge, 1991).

- Söderlund, E., *Hantverkarna. Andra delen: Stormaktstiden, Frihetstiden och Gustavianska tiden* (Stockholm, 1949).
- Soliday, G. L., *A community in conflict: Frankfurt society in the seventeenth and early eighteenth centuries* (Hanover, NH, 1974).
- Stadin, K., *Småstäder, småborgare och stora samhällsförändringar: borgarnas sociala struktur i Arboga, Enköping och Västerвик under perioden efter 1680* (Uppsala, 1979).
- Stadin, K., *Stånd och genus i stormaktstidens Sverige* (Lund, 2004).
- Tallerud, B., 'Pesten i Sverige 1710–13 påminde om digerdöden', *Läkartidningen*, 107 (2010), pp. 929–32.
- Unger, C., *Makten och fattigdomen: fattigpolitik och fattigvård i 1600-talets Stockholm* (Stockholm, 1996).
- Utterström, G., *Fattig och föräldralös i Stockholm på 1600- och 1700-talen* (Umeå, 1978).
- Warden, G. B., 'Inequality and instability in eighteenth-century Boston: a reappraisal', *Journal of Interdisciplinary History*, 6 (1976), pp. 585–620.
- Westerståhl, J., *Svensk fackföreningsrörelse: Organisationsproblem, verksamhetsformer, förhållande till staten* (Stockholm, 1945).
- Whittle, J., 'Prosperous labourers?', *History Workshop Journal*, 76 (2013), pp. 311–18.
- van Zanden, J. L., 'Tracing the beginning of the Kuznets Curve: Western Europe during the early modern period', *Economic History Review*, XLVIII (1995), pp. 643–64.

Supporting information

Additional supporting information may be found online in the Supporting Information section at the end of the article.

S1. Estimating the social structure of Stockholm in 1650, 1700, and 1750, and 1715