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Persistently egalitarian?
Swedish income inequality in
1613 and the four-estate
parliament

Martin Andersson & Jakob Molinder

Persistently egalitarian? Swedish income inequality in 1613 and the four-estate parliament

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Abstract

There is a widespread perception that present-day Nordic egalitarianism is the outcome of a long historical continuity, where the strong political position of peasant farmers and weak feudalism were marking characteristics of pre-industrial society. However, little empirical evidence so far exists on the distribution of income for the early modern period. In this paper, we draw on the schedule and individual assessments devised by the authorities to distribute the tax-burden associated with the Älvsborg ransom to estimate income inequality and the share of income accruing to top income earners and to different social groups in the Swedish realm (present-day Sweden and Finland) in 1613. Using this information, we are able to speak to several debates on pre-industrial distribution of income and historical inequality in the Nordic countries. We find that the income share of the richest one percent was 13 percent while the share of the top 0.01 percent stood at 2 percent. Sweden was characterized by a two-pronged social structure where a large share of income was held by the absolute top as well as by the peasants who made up the majority of the population, while the nobility, clergy, burghers and other middle-rank groups held relatively small income shares not least due to their small population numbers. This finding helps explain the relatively strong position of peasants as a fourth estate within the early modern Swedish parliament. While Sweden in the early seventeenth century was relatively equal compared to other contemporary societies, the egalitarian social structure was upended over the subsequent centuries resulting in vast economic and political inequality by the late nineteenth century. Thus, there is no apparent continuity between early modern equality and post-WW2 egalitarianism.

Keywords: inequality, income distribution, top incomes; Sweden, early modern period

JEL codes: D31, N13, N33

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1. Introduction

Today the Nordic countries are among the most equal societies in the world, but there is significant debate over the historical roots of its present-day egalitarianism. Is it the outcome of a longer historical continuity rooted in an egalitarian pre-modern society? Or is contemporary equality, to the contrary, a product of the strong labour organizations and social democratic parties of the twentieth century? This question has bearing on the discussion of the role of economic equality in producing inclusive political institutions, and ultimately, in generating the underpinnings for economic growth.

In influential theories in economics and political science, existing inequalities, and the relative economic position of different groups in society are thought to influence the design of institutions, which in turn provide the basis for economic progress and widely shared prosperity.¹ For example, according to the theoretical framework presented by Acemoglu and Robinson, inequality is a key factor in determining who holds political power and, in turn, in the design of economic institutions.² More inclusive institutions are conducive to economic growth and supports more egalitarian outcomes in the future. Thus, institutions are formed at critical junctures which shape subsequent developments.

The negotiation of the estate parliament in Sweden in the early seventeenth century constitutes such a formative moment for the design of political institutions. The estate parliaments that sprung up around Europe from the late Middle Ages have been viewed as an essential force in restraining the power of sovereigns, pushing them to negotiate with stakeholders in society.³ In their recent book, Acemoglu and Robinson argue that the interplay between state and society resulted in the strengthening of both sides, and ultimately in the negotiation of the type of inclusive institutions necessary for economic success. In their view, “the remarkable clustering of great charters, parliaments, and popular participation in politics”

¹ K. L. Sokoloff and S. L. Engerman “Institutions, factor endowments, and paths of development in the new world”, *Journal of Economic perspectives*, vol. 14, no. 3, p. 217–323, 2000; D. Acemoglu and J. A. Robinson “Persistence of power, elites, and institutions”, *American Economic Review*, vol. 98, no. 1, p. 267–293, 2008; B. Rothstein and E. M. Uslaner “All for all: Equality, corruption, and social trust”, *World Politics*, vol. 58, October, p. 41–72, 2005.

² D. Acemoglu and J. A. Robinson, “The rise and decline of general laws of capitalism”, *Journal of Economic Perspectives*, vol. 29, no. 1, p. 3–28, 2015.

³ J. L. Van Zanden, E. Buringh, and M. Bosker “The rise and decline of European parliaments, 1188–1789”, *The Economic History Review*, vol. 65, no. 3, p. 835–861, 2012, D. North and B. R. Weingast “Constitutions and commitment: the evolution of institutions governing public choice in seventeenth-century England”, *The Journal of Economic History*, vol. 49, no. 4, p. 803–832, 1989.

was decisive in “the emboldening of society and the increase in state capacity”.⁴ In Sweden, the estate parliament took a particularly inclusive form. It was unique in that it created a four-estate or “quaternary” political system in which, in addition to the king, the clergy and the burghers, the peasantry were included as a fourth estate.⁵ To raise taxes or to increase government spending, the state was forced to negotiate with the parliamentary representatives of the farmer class.

There is an extensive debate over the influence of Sweden’s inclusive early-modern institutions on subsequent socio-political developments. One view holds that the strong political position of peasant farmers, the lack of serfdom and weak feudalism led Sweden on a unique path to modernity. Lars Trädgårdh claims, for example, that democratization in the twentieth century should be seen as a generalization of the egalitarian political culture that were present in the local peasant assemblies.⁶ These have been studied by Eva Österberg, who stressed the continuity over the centuries of this political culture in the local societies, although admitting that they were generally only open to the wealthiest of the landed peasants.⁷ Rothstein & Uslaner uses Sweden’s purported pre-modern egalitarianism to generalize about the role equality and trust plays in the development of redistributive welfare states. They argue that: “[I]n the beginning of the modern era, the Scandinavian countries had a more equal social structure than the rest of Europe”.⁸ This is the reason, they claim, why Sweden and the other countries in Scandinavia developed comprehensive welfare states, as the historical persistence of egalitarianism and social trust paved the way for the later expansion of social safety nets.

Pushing back on this view, Erik Bengtsson argues that Sweden historically, to the contrary, was marked by massive inequalities in wealth, income, and political power.⁹ After the abolishment of the estate parliament in 1866, Sweden established a proprietary regime more extensive than in the rest of the Western world.¹⁰ Sweden’s franchise was among the most narrow in Europe, and at the local level votes were distributed according to income and

⁴ Acemoglu, Daron & Robinson, James A., *The narrow corridor: states, societies, and the fate of liberty*, Penguin Press, New York, 2019, p. 184.

⁵ T. Piketty (2020). *Capital and ideology*. Cambridge, Massachusetts: Belknap Press, an Imprint of Harvard University Press.

⁶ L. Trädgårdh, “Statist individualism: on the culturality of the Nordic welfare state,” in B. Stråth and Ø. Sørensen (ed.), *The cultural construction of Norden*, Oslo, Scandinavian University Press, 1997, p. 253–285.

⁷ E. Österberg, “Bönder och centralmakt i det tidigmoderna Sverige: konflikt – kompromiss – politisk kultur”, *Scandia*, vol. 55, no. 1, 1989, p. 73–95.

⁸ B. Rothstein and E. M. Uslaner “All for all”, p. 57.

⁹ E. Bengtsson “The Swedish Sonderweg in question: Democratization and inequality in comparative perspective, c. 1750–1920”, *Past & Present*, vol. 244, no. 1, 2019, p. 123–161.

¹⁰ T. Piketty (2020). *Capital and ideology*.

wealth.¹¹ In Bengtsson’s analysis, this extreme nineteenth-century inequality created its own counter-hegemony in the form of popular movements united in the struggle for suffrage reform. These associations provided the basis for the ascendancy of the Social Democratic party as the leading political force from the 1930s, and while in power, the party manufactured post-war Swedish egalitarianism by raising taxes on the rich, reigning in the influence of private enterprise, and expanding the welfare state. In the eyes of Piketty, the Swedish case thus illustrates that “inequality is not the product of some essential cultural predisposition”.¹²

Despite the debate on the origins of Sweden’s present-day egalitarianism, the evidence on the pre-modern income distribution remains fragmentary, at best. Previous studies deal either with wealth, a particular social group or focus on a specific geographic place.¹³ As a result, there is no comprehensive evidence on the Swedish income inequality at the time when the relatively inclusive four-estate parliament was formed. In this paper, we contribute to this debate by providing the first evidence on the nationwide income distribution in Sweden in the pre-industrial period. Using information from the allocation of the tax-burden associated with the Älvsborg ransom of 1613, we combine two types of income information. First, we use the schedule drawn up by the authorities to distribute the burden of the tax, which gives us the amount to be paid as well as the size of different groups, distributed across about fifty social categories. Second, for some affluent groups such as the royal family, the nobility, clergymen and burghers, the taxation was based on individual assessments, which allows us to use detailed individual data on top income earners. Combining these two sources of information, we are able to present evidence on income inequality, top income shares, and the relative economic strength of the four estates making up the Swedish four-estate political system, as well as compare it to other early modern European societies.

Our results show that in 1613, the top 1 percent earned 13.2 percent of incomes, while the top 0.1 and top 0.01 percent earned 4.8 and 2.2 percent, respectively. This means that, in terms of incomes in the absolute top, Sweden does not stand out as comparatively equal when related to other contemporary European societies. Where Sweden does stand out instead is in the share of income accruing to the bottom 90 percent, which was substantially

¹¹ Companies were also allowed to vote, and in some municipalities, they could control a majority. See E. Bengtsson “The Swedish Sonderweg in question”.

¹² Piketty (2020). *Capital and ideology*, p. 188.

¹³ We discuss previous research on Swedish early modern inequality in Section 2.

larger in Sweden than in these other societies. The group of landed peasants alone received more than 50 percent of all incomes. This was in large part the result of the fact that Sweden lacked any numerically or economically significant middle class. At this time, most of the church property and incomes had been confiscated by the state following the reformation, leaving the clergy decimated both numerically and financially.¹⁴ The state bureaucracy, both civil and military, was still small compared to what it would later become through institutional reforms and extensive warfare, which also meant that the nobility as a group was relatively small, as few officers or civil servants were ennobled.¹⁵ On top of this, the Swedish urban population still only amounted to about six percent of the total population, not least since the foreign trade and the export of later famous Swedish staple goods such as copper, iron, and tar, was still modest compared to what it would later become, as the total value of Swedish exports more than quintupled during the fifty years after 1613.¹⁶ Our results thus indicate that, due to the rural nature of the Swedish society and the relatively weak social differentiation in the countryside at the beginning of the seventeenth century, there was a strong material basis for the inclusion of farmers in the process of political bargaining; highlighting the significance of the socio-economic structure in determining the design of the early modern Swedish parliament.

Our approach to estimating top income shares, which follows the methodology introduced by Piketty and his collaborators, also allows us to compare the results for Sweden in 1613 to the assessments for modern Sweden published by Roine and Waldenström, beginning in 1903.¹⁷ Our comparison with the data from turn of the nineteenth century shows that Sweden experienced a substantial widening of inequality over the course of the centuries after 1613, in particular through the growth of the income share of the top 10 percent,¹⁸ a

¹⁴ Lars-Olof Larsson, "Kyrkans tionde och kronans: studier kring reformationens återverkningar på tiondebeskattningen", *Scandia* 32:2 (1966) (on the confiscation of tithes); Lars-Olof Larsson, "Jordägofördelningen i Sverige under Gustav Vasas regering", *Scandia* 51:1–2 (1985) (on the confiscation of church lands).

¹⁵ Peter Englund, *Det hotade huset: adliga föreställningar om samhället under stormaktstiden*, Stockholm: Atlantis (1989), e.g., p. 11–14 (on the expansion of the nobility and of the state bureaucracy); Sven A. Nilsson (1989), *På väg mot militärstaten: krigsbefälets etablering i den äldre vasatidens Sverige*, Uppsala: Opuscula historica upsaliensia (on the number of the nobility compared to the numbers of officers and civil servants).

¹⁶ Robert Sandberg, *I slottets skugga: Stockholm och kronan 1599–1620*, Stockholm (1991), p. 35; Sven Lilja, *Tjuvehål och stolta städer: urbaniseringens kronologi och geografi i Sverige (med Finland) ca 1570-tal till 1810-tal*, Stockholm (2000), p. 76 (on the degree of urbanisation); Jan Lindegren, "Men, money, and means", in Philippe Contamine (ed.), *War and competition between states*, Oxford university press (2000), p. 144–146 (on the exports).

¹⁷ The methodology was first introduced in T. Piketty "Income inequality in France, 1901–1998", *Journal of Political Economy*, vol. 111, no. 5 2003, p. 1004–1042. The Swedish series has been presented in J. Roine and D. Waldenström "The evolution of top incomes in an egalitarian society: Sweden, 1903–2004", *Journal of Public Economics*, vol. 92, no. 1–2, 2008, p. 366–387.

¹⁸ The income distribution for 1613 also includes present-day Finland. The estimates of top income shares for Finland starting in 1865 by Roikonen and Heikkinen suggests even higher inequality than in Sweden around the

result which is also in line with what has previously been shown regarding the growth of Swedish wealth inequality after 1750.¹⁹

Following from this, we conclude that despite the relatively egalitarian income distribution at the time when the Swedish four-estate parliament was formed, the inclusive institutions that resulted did not prevent Swedish society from becoming more politically and economically unequal during the subsequent centuries, eventually resulting in the vast inequalities and exclusionary political institutions present at the turn of the nineteenth century.

The long-term development that we can now sketch thus casts doubt on the proposed link between Sweden's inclusive early-modern political institutions and its twentieth century egalitarianism. Instead, it illustrates the malleability of a political system as economic developments upends its material basis, putting into question the generality of the argument made by Acemoglu and Robinson, Engerman and Sokoloff, and others, on the persistence of inclusive political institutions that results from an initially more egalitarian social structure.

The rest of the article proceeds as follows. The next section provides an overview of the relevant research on pre-industrial inequality, with particular attention given to previous studies concerning seventeenth-century Sweden. This is then followed in section three by a presentation of the main sources used in this study (i.e., material from the 1613 'Älvsborg ransom' taxation) and the methods used to study the income distribution.²⁰ After this follows the presentation of the results, which is divided into four parts. Section four is focused on top incomes: the share of incomes going to the richest individuals, a study of their social backgrounds and the nature of their income-generating activities. In section five we divide the population into income quantiles and study their social composition, as well as compare the economic strength of different socio-political groups (e.g., the peasants). Section six consists of a comparison between the Swedish income distribution and previous studies of other pre-industrial European societies. Finally, in section seven we compare the income distribution in Sweden in 1613 with that of Sweden at the beginning of the twentieth century. We conclude in section eight by arguing that Sweden in 1613, in fact, was a more equal society than other

same time. See page 78 in P. Roikonen and S. Heikkinen "A Kuznets rise and a Piketty fall: income inequality in Finland, 1865–1934", *European Review of Economic History*, vol. 24, no. 1, 2020, p. 46–79.

¹⁹ E. Bengtsson, A. Missiaia, M. Olsson, and P. Svensson "Wealth inequality in Sweden, 1750–1900", *The Economic History Review*, vol. 71, no. 3, 2018, p. 772–794.

²⁰ More in-depth information regarding the sources (both regarding the individual incomes and the social table) can be found in Appendices I–V, together with a discussion of the translation of the Swedish social categories, a presentation of the method used for creating the socio-political groups, and a discussion of the robustness of some assumptions made in the calculations.

early modern European economies for which income distribution data exists, that this was mainly due to the fact that Sweden lacked a substantial bourgeoisie, bureaucratic or noble middle class, and that this void instead was filled by the peasants, who, through the combined economic resources they represented, also gained institutional political influence through the four-estate parliament. Sweden's inclusive institutions did not prevent it from becoming more politically and economically unequal during the subsequent centuries, however, resulting in the vast inequalities and exclusionary political institutions present at the turn of the nineteenth century. We thus conclude that Sweden's post-WW2 egalitarianism is the result of events during the twentieth century, and not the outcome of a longer historical continuity.

2. Previous research

Research on pre-industrial inequality has traditionally focused on the distribution of wealth. The main reason for this is that capital was more often subject to taxation and, consequently, there are many more sources for pre-industrial wealth than income. This wealth-approach has been used by Guido Alfani and co-authors when studying in inequality across Europe during the centuries from the Black Death up to 1800. Estimates has been provided for several Italian city states, the Low Countries, the German lands, and England.²¹ The general conclusion from this research is that inequality tended to grow across these diverse polities throughout the early-modern period. There are some important drawbacks of using wealth as a measure of economic inequality, however. The most important is that, historically, most individuals only held very little or no wealth at all.

Since wealth only tallies physical capital but disregards human capital, historical records as a consequence are tacit regarding the incomes of the propertyless, since the incomes accruing to an individual from his or her unskilled labour and human capital is not considered. Another approach follows a methodology set out by Thomas Piketty, which measures or estimates the income shares that went to the top income earners.²² These estimates, which are available for an increasing number of countries, typically begin with the year when a personal income tax was introduced. This means that in only a few cases the series goes back to the nineteenth century, and to a time before a country began to

²¹ See e.g., the survey in G. Alfani "Economic inequality in preindustrial times: Europe and beyond", *Journal of Economic Literature*, vol. 59, no. 1, 2021, p. 3–44.

²² See e.g., the edited volume A. B. Atkinson and T. Piketty (eds.), *Top incomes over the twentieth century: a contrast between continental european and english-speaking countries*, Oxford University Press, Oxford, 2007 and A. B. Atkinson, T. Piketty, E. Saez "Top incomes in the long run of history", *Journal of economic literature*, vol. 49, no. 1, p. 3–71.

industrialize. In terms of top income shares, most countries studied exhibit a pattern of high inequality prior to the first World War, followed by falling inequality during the interwar period resulting from capital destruction, inflation, and increases in progressive taxation. The drawback of this method is that it only pertains to the top of the income distribution and therefore remains silent about the distribution of income among the majority of the population.

A third approach, introduced by Milanovic, Lindert and Williamson, uses so-called “social tables” to reconstruct income inequality in pre-industrial societies.²³ The method consists of combining information on the size of different social groups or classes within a society with estimations of the average income of the same groups, which results in an estimate of income inequality that takes into consideration the full population. Using this methodology, the authors have produced inequality estimates for pre-industrial economies ranging from the Roman Empire under Augustus to nineteenth-century colonial India. A disadvantage of the approach, however, is that it runs a risk of underestimating inequality because of the fact that incomes tend to be very skewed near the top of the income distribution.²⁴ Research on modern top incomes has found that major changes in inequality are, in fact, often the result of the fortunes of the richest in society.²⁵

Our approach is a combination of methods taken from the social tables and the top income literature. We start by constructing a social table consisting of roughly fifty groups, using the taxation amount of each group together with the number of taxation units for the same categories. To this social table we then add data gathered from individual taxation assessments for the richest individuals in society (e.g., the royal family, the nobility, the burghers, and the clergy). This allows us to precisely calculate the income share going to the top 1, top 0.1, and even top 0.01 percent, which means that we avoid the problem otherwise present in the social tables-method of missing individual variation at the top of the distribution. In addition, since all income data is classified according to social group, we are able not only to analyse the social composition of the top of the income distribution as well as the different quantiles, but also to compare the relative economic standing of the four political estates of the Swedish parliament with each other as well as to other, non-enfranchised, social

²³ B. Milanovic, P. H. Lindert, and J. G. Williamson “Pre-industrial inequality”, *The economic journal*, vol. 121, no. 551, 2011, p. 255–272.

²⁴ J. Modalsli “Inequality in the very long run: inferring inequality from data on social groups”, *The Journal of Economic Inequality*, vol. 13, no. 2, 2015, p. 225–247.

²⁵ See e.g., J. Roine and D. Waldenström, “Long-run trends in the distribution of income and wealth,” in A. B. Atkinson and F. Bourguignon (eds.), *Handbook of income distribution*, Amsterdam, Elsevier, 2015, p. 469–592.

groups. Our definitions of income and population follow closely the methodology set out by Piketty and co-authors when studying modern inequality, which means that the income shares and the distribution we present is comparable to those found in previous research regarding the twentieth century.²⁶

Previous research on the distribution of income and wealth in Sweden prior to the late seventeenth century mainly consists of studies focusing on one particular social group, and is, in addition to this, often also limited to studying a single small region or town. This still leaves unanswered questions on how large regional variations in wealth or income were, or how the economic fluence of members of different social groups compared to each other.

The income and wealth of the Swedish nobility has been studied by Jan Samuelson for the 1560s and for 1607.²⁷ He finds that the main source of income of the nobility was feudal rents from their inherited estates, although some members of the high aristocracy also benefited from royal donations, while lesser noblemen could complement their modest rent incomes by salaries from state service. Samuelson's general conclusion is that the nobility as a group was divided between a small group of aristocrats with very large fortunes and incomes, and a larger group of petty nobles, who often owned little or nothing more than a single manor house.²⁸

Regarding burghers, the income distribution in Stockholm during the early years of the seventeenth century has been studied by Robert Sandberg.²⁹ His analysis was based on taxation lists created for the so called *örestal*-tax, in which it was stressed that the procedure sought to be "fair" in the sense that the taxation should be proportional to individually assessed incomes. Sandberg found a substantial difference between the richest burghers and the rest, where in 1607 the bottom 80 percent paid 41 percent of the tax, compared to the 34

²⁶ It should be noted, however, that in terms of geography the Swedish territory has undergone some changes since 1613 (although they may be regarded as small when put in a European long-term perspective). Our data cover all of the Swedish realm in 1613, which includes most of modern-day Sweden but not regions that were conquered from Denmark in the middle of the seventeenth century (e.g., Scania), not the region around the Älvsborg fortress, which was occupied by Denmark at the time, and not Lapland (as the Saami were not included in the taxation). On the other hand, it does include most of what today is Finland, as well as a part of modern Russia. A map of the included territory may be found in Martin Andersson, *Migration i 1600-talets Sverige: Älvsborgs lösen 1613–1618*, Malmö (2018), p. 50.

²⁷ Jan Samuelson, *Aristokrat eller förädlad bonde? Det svenska frälsets ekonomi, politik och sociala förbindelser under tiden 1523–1611*, Lund (1993), p. 56–113.

²⁸ Numerically, this division may be exemplified by the distribution of the feudal rent income in 1607. Of a total of 320 noblemen in Sweden (excluding Finland), 69 percent had an income of 100 *daler* or less, while only 12 individuals had an income of more than 500 *daler* and the top percent had an income of more than 800 *daler*, according to Samuelson (1993), p. 70.

²⁹ Sandberg (1991), p. 294–302.

percent paid by the top 7 percent of the burghers.³⁰ A similar pattern has been found in studies of smaller towns such as Uppsala or Enköping, but there the *örestal* was more equally distributed as a result of the fact that the richest burghers in these smaller towns were much less affluent than their counterparts in Stockholm.³¹

Most attention in previous Swedish research on pre-industrial inequality has however been given to the wealth distribution within the peasant group. Several studies concerning the seventeenth century have used proxies for wealth such as the number of cattle or sown acres. In one such study, Jonas Lindström found that the bottom 50 percent of peasant households (in two parishes in Central Sweden in 1641) owned about a third of the livestock, while the top decile owned close to a fifth.³² Other studies have found similar results, or perhaps a somewhat more unequal distribution, as in one northern parish studied by Jan Lindegren, where in 1621 the bottom half of the population owned only 25 percent of the livestock, while the top decile owned 23 percent.³³ Perhaps most illuminating is a study by Börje Harnesk of six rural parishes (all located in a region in northern Sweden), which was based on records from wealth taxations that not only included livestock but also money, precious metals, and crops.³⁴ Harnesk found that the peasant wealth distribution was quite homogeneous over the different parishes, as well as stable during the last decades of the sixteenth century. The top decile of the peasantry owned between 19 and 24 percent of the total local assets, while the bottom decile only owned some 3 or 4 percent; a wealth distribution that Harnesk described as “considerable” and as “hardly an, in an economic sense, equal peasant society”.³⁵ However, since we are here interested in incomes rather than in the wealth distribution, it should be noted that a substantial portion of this inequality found by Harnesk was due to the fact that precious metals (mainly thesaurized silver in the form of status objects such as spoons) were very unevenly distributed in the peasant population. If silver is disregarded, the

³⁰ In the central parts of Stockholm, where the rich burghers preferred to live. The differences were consequently smaller in suburban areas, where the top 7 percent of the burghers only paid 14 percent of the tax. Sandberg (1991), p. 299.

³¹ Sven Ljung, *Enköpings stads historia 1: Tiden till och med 1718*, Enköping (1963), p. 403–408.

³² Jonas Lindström, *Distribution and differences: Stratification and the system of reproduction in a Swedish peasant community 1620–1820*, Uppsala (2008), p. 71–73.

³³ Jan Lindegren, *Utskrivning och utsugning: Produktion och reproduction i Bygdeå 1620–1640*, Uppsala (1980), p. 95–96 (calculations based on fig. 13). The wealth shares owned by the respective groups were almost identical two decades later, in 1641 (24 % and 23 % respectively), although they had not been constant during the interval period (in 1630, the top decile was down to 21 percent and the bottom-half up to 31 percent). The taxation year chosen for studying local peasant inequality may thus significantly affect the results, if a measure such as the number of animals is used.

³⁴ Börje Harnesk, “Rika bönder och fattiga: Hälsingland på 1500-talet”, *Scandia* 66:2 (2000), p. 191–213.

³⁵ “[...] olikheterna i förmögenhet varit betydande. Det är knappast ett i ekonomiskt avseende jämlikt bondesamhälle som framträder [...]” Harnesk (2000), p. 196–197.

wealth distribution found by Harnesk would instead resemble the ones found in studies relying on livestock or grain.³⁶ Peasant total wealth was thus much more unevenly distributed than their productive capital, the livestock and the grain, which we believe could be regarded as more strongly correlated with peasant incomes.

To sum up, previous research on Swedish inequality during the late sixteenth and early seventeenth centuries has mainly concerned wealth distributions within certain social groups and local communities. For noblemen as well as for the burghers of Stockholm, research indicates similar patterns, in which a large share of the total incomes went to a small portion of the population. Small-town burghers and peasants were markedly less divided. Although even peasant wealth inequality has been described as substantial, this was less the case if only productive assets are considered. As noted above, one crucial question regarding Swedish economic inequality is however left unanswered by the previous research: How did individuals of different social groups, such as the wealthiest burghers or noblemen, compare to each other? Our study contributes to the existing research by providing the first estimate of the full distribution of income in pre-industrial Sweden, at the time of the formation of the four-estate parliament.

3. Sources and methodology

Our study is based on records from the *Älvsborgs lösen* taxation, which was levied during six consecutive years 1613–1618 in order to gather funds for repurchasing the fortress of Älvsborg, which had been lost to Denmark during a previous war.³⁷ When developing the elaborate taxation scheme needed for this purpose, state officials faced several challenges. Not only was individual taxation still a relatively new phenomenon in Sweden, but the king and his counsellors also had to take into consideration that most Swedes had little or no direct interest in the ransom of the particular fortress. As a response, a novel taxation scheme was developed that sought to be regarded as legitimate and as “fair” as possible. In order to achieve this, the scheme relied on two basic principles. The first was that everyone living in Sweden, regardless of social standing, should contribute to the tax, and this included (at least publicly) even the members of the royal family. The second principle was that each and every

³⁶ Harnesk (2000), p. 195 only gives the wealth-sine-silver data in a figure for one of the parishes and does not further comment on its distribution.

³⁷ Hence its name, Sw. *lösen* (i.e., *lösensumma*) = ransom. The total ransom sum was 1 million *riksdaler*, which may be compared to the fact that the state’s “central disposable means” from regular taxation at the beginning of the 1620s was about 1.3 million *riksdaler*, or that the total value of Sweden’s annual export in 1613 was 1/3 million *riksdaler* (according to Lindegren (2000), figs. 7–8).

individual (or family, as taxation units were made up of adult singles or married couples) should pay an amount that was proportional to their economic standing.³⁸

However, the seventeenth-century Swedish state did not have any information on individual incomes. Instead, state officials created a taxation scheme that contained 55 different social categories, together with the respective sum they had to pay. Exactly how the scheme was drawn up is not known, but it appears to have been based on assumptions regarding the mean or typical incomes within each respective category. On top of this, the state officials also realized that such a schematic model was not very well suited for the taxation of the rich. This problem was instead solved by gathering information on individual incomes for members of the most affluent social groups.

The ambitious taxation scheme still left a couple of groups exempt from taxation. One of these was peasants who lived and worked the demesne lands closest to the noble manors (as a concession to the privileges of the nobility). For control purposes, such peasants were nevertheless often included in the taxation records, and we have thus chosen to include them in our calculations, under the assumption that they would have paid the same amount as other peasants, had they been taxed.³⁹ Another exempt group were personal servants of the nobility. As we have not been able to estimate neither the size nor the economic standing of this group it has been left out of the study, under the assumption that it was numerically small, relatively poor, and thus also economically negligible on the societal scale. It may further be noted that also all children under the age of 15 were exempt, regardless of social class or if they were living at home or working as servants. As this is common practice also in modern taxation, this omission is of little or no importance for the comparability of our results.

The omission of a couple of social groups was on the other hand counterbalanced by the addition in practice of a few more categories than the original 55 to the taxation scheme. This meant that both rural and urban households were in practice further differentiated according to their tax-paying capacity, so that groups such as widows, beggars, or peasants regarded as “poor” were assigned lower amounts.⁴⁰

³⁸ Martin Andersson, ”Det finns 55 sorters människor: Hur en rättvis stat såg sina undersåtar”, i Martin Dackling & Sari Nauman (eds.), *Järn i elden: Kön, makt och relationer 1600–2020*, Göteborg (2020).

³⁹ For a later part of the seventeenth century, Kurt Ågren found that differences in taxation pressure were more pronounced depending on the size of holdings than on whether farms were owned by the nobility or not. Kurt Ågren, *Adelns bönder och kronans: skatter och besvär i Uppland 1650–1680*, Uppsala 1964.

⁴⁰ Other additional social groups were only used regionally. For details, see Appendix I.

Table 1. Social table for Sweden in 1613, with number of taxation units and total taxation amounts.

No.	Social group	Number of tax units	Tax per tax unit (riksdaler)	Total taxes paid (riksdaler)
(1)	The king	1	Ind. ass.	2,115
(2)	The queen widows	2	Ind. ass.	413
(3)	The dukes	2	Ind. ass.	3,049
(4)	Nobles: men, widows and orphans	600	Ind. ass.	16,832
(5)	Bishops	6	40	240
(6)	Schoolmasters, professors	36	8	288
(7)	Rural and urban clergy, superintendents	898	Ind. ass.	13,967
(8)	Urban chaplains	34	4	136
(9)	Rural chaplains	329	2	658
(10)	Royal secretaries and chamberlains	12	40	480
(11)	Chief accountants, masters of the mint	4	50	200
(12)	Customs officials	19	50	950
(13)	Bailiffs, scribes	201	16	3,216
(14)	Bailiffs of forges, of the Sami, of manors etc.	13	4	52
(15)	Scribes of castles, towns, military etc.	10	4	40
(16)	Vice bailiffs, vice scribes	85	3	255
(17)	Vice judges	33	12	396
(18)	Higher cavalry officers	19	20	380
(19)	Higher infantry officers	69	12	828
(20)	Lower officers	237	3	711
(21)	Burghers	5,118	Ind. ass.	21,645
(22)	Burghers (with individual taxation, but no surviving records)	167	See Appendix III	648
(23)	Other townspeople (non-burghers)	6,581	2	13,162
(24)	County sheriffs	404	8	3,232
(25)	Miners	459	Ind. ass.	1,426.5
(26)	Mining engineer	1	5.5	5.5
(27)	Peasants	100,347	2	200,694
(28)	Rural craftsmen	900	4	3,600
(29)	Soldiers and cavalymen	3,219	2	6,438
(30)	Married cottagers	6,281	1.5	9,421.5
(31)	Unmarried cottagers, male servants, widowers	32,473	1	32,473
(32)	Widowers (in Uplandia)	59	0.67	39.5
(33)	Poor households (in Uplandia)	2	0.33–0.5	0.83
(34)	Widows	6,810	1	6,810
(35)	Widows (in Uplandia)	201	0.33	0.33
(36)	Female servants, female cottagers	41,101	0.5	20,550.5
Grand total		206,733		365,418.7

Note: The table includes social groups not only from the taxation scheme but also the groups found in the taxation lists, such as a differentiation of the poor used only locally in rural Uplandia. “Ind. ass.” denote groups that were taxed based on individual assessments. Some social groups were more heterogeneous than the table shows and also included other categories of taxation units (for details, see Appendix I).

Source: see Appendix II.

The social table that forms the basis of our analysis is shown in Table 1. The table shows the number of taxation units (adult single individuals or married couples), the annual amount to be paid in tax per unit, as well as the aggregated amount for the social group as a whole, also in annual terms. The total number of taxation units is close to 207,000, which together paid a total annual tax of more than 365,000 *riksdaler*, an average of about 1.75 *riksdaler* per taxation unit. The number of categories shown in the table is 36, a reduction of the 55 social groups mentioned in the original taxation scheme; as some similar groups were taxed the same amount, as a consequence such groups were often not clearly separated in the taxation records. However, the social table also includes some additional groups that were either missing in the original scheme (e.g., group 26, a mining engineer), or else are shown separately for source-technical purposes (e.g., group 22, burghers with individual taxation but no surviving records). A full presentation of what each of the 36 groups in the social table contains may be found in Appendix I, while further information on the individually assessed groups is found in Appendix III.

Since the main sources of income differed between the top social groups, tax officials had to use different methods in order to gather information on individual incomes. In short (full information is given in Appendix III), the nobles and the royal family were taxed based on the rent incomes from their landed estates, with an additional amount (taken from the social table) for those noblemen who had incomes from a state office such as bishop or officer. Due to the loss of some records, individual data is missing for 17 percent of the nobility, the majority of which we, however, have been able to amend using records for the preceding or following years. The urban and rural parish clergy were taxed based on assessments made by their respective bishop, who presumably relied on records on individual parish sizes and incomes. The individual taxation of burghers relied on the above-mentioned *örestal* assessments, which were used to distribute the annual urban taxes. Although the precise details of the system are unknown, it is known that these assessments were renewed annually by the local town magistrates and that they corresponded to each individual burgher's tax-paying capacity. The last social group that was individually assessed were the peasant miners, in their case on the basis on their shares in iron forges and copper mines respectively. As a result of engaging in this activity, they were somewhat more prosperous than the average peasant.

Our data set is built up from a social table for the categories that were not individually assessed, where the number of taxation units within each group has been gathered from the regional taxation lists. This has then been combined with the individual

information regarding the taxes paid by the rich. It should thus be noted that all data concern taxation payments, and that we regard these as a better proxy for income than for wealth. This was clearly the case for some of the individually assessed groups, such as the royal family and the nobility, and the fact that all peasants were taxed the same amount fits well with what is known from previous research (see above) about the more equal distribution of productive assets (and hence, the production and consequently the income) than the distribution of peasant total wealth. Further, the fact that the tax was levied during six consecutive years in order to ensure that as many as possible should be able to afford to make their full taxation payments, is also an indication that the assessments should rather be seen as reflecting annual incomes than wealth. This being said, there was no clear-cut division between ‘income’ and ‘wealth’ in the modern sense present in the Swedish taxation system at the beginning of the seventeenth century, and the exact relation between tax and income remains unknown. The observed taxation amounts hence cannot be compared to absolute income figures for other societies or periods: what they offer us is an opportunity to measure income inequality, and the relative sizes of the total income that the groups making up the four political estates represented.

4. Top incomes

We start by focussing on the top income earners: How far removed were they from the rest of the population, and where did their incomes come from? Most of the information on the incomes of the rich comes from individual assessments, although a few of the rich (such as e.g., bishops, bailiffs, and higher officers) were taxed using the social table. Table 2 shows the income share held by the top 1.5 percent etc., as well as the income share held by the king Gustavus Adolphus, who was the richest individual living in Sweden in 1613, reflected by his 2,115 *riksdaler* taxpayment. The income of the super-rich (i.e., the richest 0.01 percent of the population, or 20 tax units) amounted to 2.2 percent of total income, which meant that they paid at least 106 *riksdaler*, 60 times the amount paid by an average taxpayer (which was somewhat less than the amount paid by a peasant household).

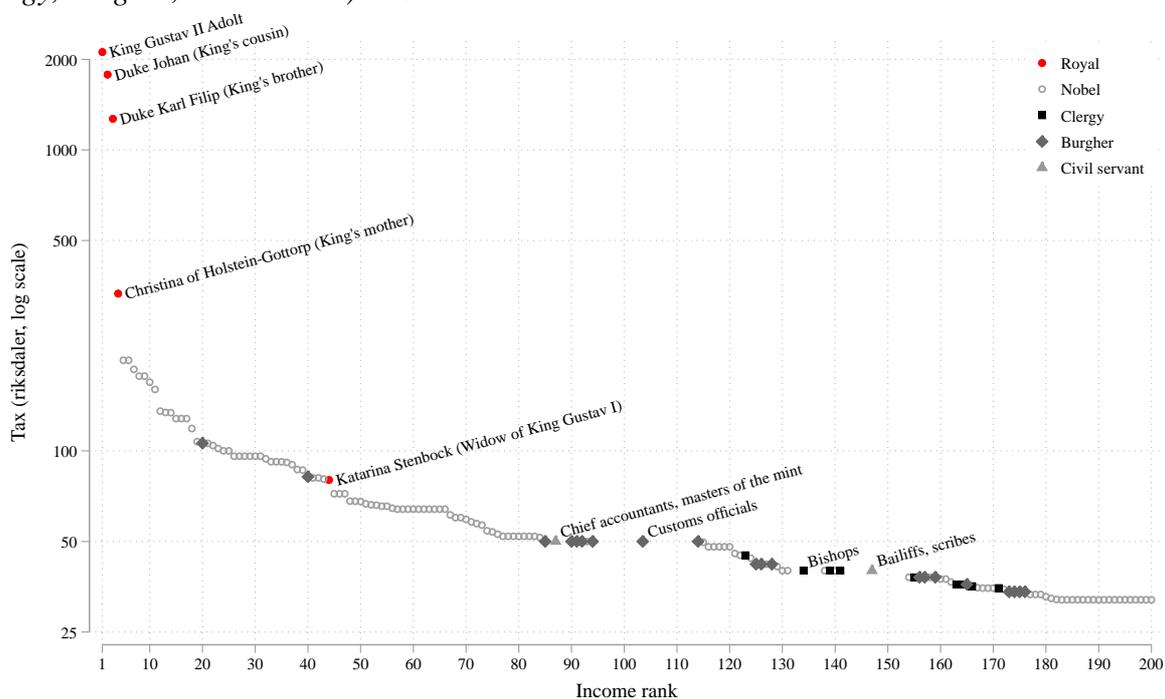
Table 2. Income shares and income thresholds for the top quantiles in Sweden in 1613.

Quantile	P98.5– 100	P99– 100	P 99.5– 100	P.99.9– 100	P99.9– 99.99	P99.99–100	Richest: The king
Share of income (percent)	15	13	10	4.8	3.7	2.2	0.58
Tax threshold (<i>riksdaler</i>)	5	8	16	32	50	106	2 115
Multiples of the average tax amount	2.8	4.5	9.0	18.1	28.3	60.0	1196.4

Moving slightly down the top of the income distribution, we find that most of the civil servants and officers fell into the top 1 percent group, where we also find most of the individually assessed clergy. In fact, at the 8 *riksdaler* needed to belong to this top part of the income distribution, we even find the richest of the peasants, the county sheriffs (*länsmän*).

We will return to this relatively strong position of the wealthiest peasants further below. For now, we instead turn our attention to the individuals that made up the economic elite in Sweden in 1613. Figure 1 below presents details regarding the richest 200 tax units, with their relative ranking on the x-axis and their respective taxation (in *riksdaler*) on the y-axis (on a logarithmic scale), the symbol denoting their respective social group.

Figure 1. Taxation amounts of the top 200 tax units and their social classification (royal, noble, clergy, burgher, civil servant) in Sweden in 1613.



Note: The figure shows the taxation amounts of the 200 richest tax units in Sweden in 1613. The y-axis has a log scale. Symbols mark the respective social group. In the case of the royals and the collectively assessed, the name of the individual or the group is provided next to the marker.

Source: The Älvsborg ransom taxation. See Appendix II for further details.

In the case of the royals and the collectively assessed, the name of the individual or the group is provided next to the marker. The figure clearly illustrates the dominance of the royal family in the absolute top of the income distribution, with the king Gustavus Adolphus followed by the two dukes, his cousin Johan and brother Karl Filip at 1,780 and 1,269 *riksdaler* respectively, in their turn (more distantly) followed by the king's mother, queen widow Kristina at more than 300 *riksdaler*. As was mentioned above regarding previous research on wealth distributions, the fact that one family held such a large share of the total national income meant that the very top of the income distribution could change fundamentally through inheritances. Most of what in 1613 was divided between the members of the royal family had fifty years earlier all been in the hands of the founder of the dynasty, king Gustav I (d. 1560), while, as a result of most of the family members dying without children during the following decade (duke Johan in 1618, queen widow Katarina Stenbock in 1621, duke Karl Filip in 1622, and finally queen widow Kristina in 1625), all these incomes would once more be gathered in the hands of the king by the mid 1620s. This might very well help explaining the frivolous land donation policies of both Gustavus Adolphus and of his sole daughter and heir, queen Kristina.⁴¹

The 15 tax units that followed below the three royals in the income distribution all belonged to the aristocracy, the richest of these being Göran Gyllenstierna and Bengt Sparre at taxation sums of 200 *riksdaler* each. The richest burgher, the Stockholm merchant Mårten Trotzig, paid a little more than half of that sum, which placed him as Sweden's twentieth richest. Burghers otherwise become more common from place 90 downwards at sums of about 50 *riksdaler*, where we also begin to find the richest of the non-noble civil servants, such as customs officials and chief accountants. As we approach the 150th richest, noblemen and burghers still dominate the distribution, although here also a few of the richest of the clergy (e.g., the bishops, and a couple of very affluent parish priests) may be found at 40 *riksdaler*.

Where did the incomes of the rich come from? Leaving the royal family aside, the individuals with the highest incomes were all members of the landed nobility. The top-ten nobles (of which seven were men and three widows) all but one had inherited the noble status, as well as in most cases the title of count (*greve*) or baron (*friherre*). Some were closely related, such as the brothers Jakob and Johan de la Gardie, of which the latter was married to a daughter of Beata Karlsdotter (Gera), whose income placed also her within the top-ten

⁴¹ Eli F. Heckscher, *Svenskt arbete och liv från medeltiden till nutiden*, Stockholm (1942), p. 163–164.

group. These men and women had typically not only inherited their nobility titles but also the feudal estates, as their fathers or fathers-in-law may be found in the published lists of Sweden's richest nobles in 1563 or 1607.⁴² Yet they were no idle landlords, since all the men in the top-ten group were active as servants of the state. Most were members of the council of the realm, as well as serving either in the military as admirals or colonels, or else within the royal administration as county governors or as judges of the high court. Göran Gyllenstierna may serve as an example of these men. His grandfather had been the twelfth richest nobleman back in 1562, his father had the thirteenth highest income in 1607, and Göran, as well as his father, his grandfather, and even his father-in-law were all members of the council of the realm. Göran inherited the title of baron from his father, served as "highest admiral of the realm" in 1611, chief district judge in 1612, and received the honour of knighthood at Gustavus Adolphus's coronation. Although some of his income would have been generated by his judge title and by royal donations given as a reward for his services, most of Göran's high income was the result of his noble birth and of his (and of his wife's) inherited landed estate.⁴³

Of the 19 burghers whose incomes placed them among the top 200 taxation units, thirteen were at home in Stockholm, while four lived in Gävle and two in Uppsala. Several of these had a German origin, having either immigrated to Sweden themselves or else being sons of German immigrants (although, without further research into their family history, for some this is only inferred from their names). At least for the richest of these, their incomes to a large extent came from the exports of iron and copper, as well as from investments in mines and ironworks. Many of them were also active as town magistrates or as servants of the king. Peter Grönenberg might serve as an example of these men.⁴⁴ He was born in Söderköping, son of a German immigrant merchant, and received his education abroad in Danzig and in other German towns. His main source of income during the 1610s was the Stockholm export of copper and iron, and he would later become one of the directors of the Trade company (*Handelskompaniet*), as well as a tax farmer for several Swedish provinces. Grönenberg married a daughter of Mårten Trotzig, the richest burgher in Sweden, was ennobled in 1622, and eventually ended up as the Swedish ambassador in Hamburg. He was also a member of the Stockholm town magistrates, and represented the capital in the Swedish diet.

⁴² Samuelson (1993), p. 72–74, 78–79.

⁴³ *Svenskt biografiskt lexikon*, band 17 p. 589: Gyllenstierna, släkt.

⁴⁴ *Svenskt biografiskt lexikon*, band 17 s. 379, Peter Grönenberg (Gröneberg).

Among the individuals within the top group, we also find some state servants whose incomes were not individually assessed, such as the master of the mint in Stockholm, Antonius Grooth.⁴⁵ He was born a nobleman, son of a governor of Brabant who had immigrated to Sweden for religious reasons, but made a living through his work as a goldsmith and a burgher before he succeeded his father-in-law (another Dutch immigrant goldsmith) as master of the Stockholm mint. Another example of a person with mixed income sources was the bishop of Turku, Ericus Erics, who was not only taxed 40 *riksdaler* for his position as bishop but also a further 32 *riksdaler* for the incomes from the landed estate inherited from his grandfather, a military nobleman who had immigrated to Finland from Germany half a century before.⁴⁶

It is thus apparent that for the richest among the rich, the majority of the income consisted of feudal rents from inherited lands, although for many the rent income could be supplemented by state service in various leading positions. For the somewhat less affluent among the richest, it was on the contrary the revenue generated by state service that was their main source of income, which to an extent instead could be supplemented by feudal rents (as for bishop Ericus) or involvement in trade (as for mint master Grooth). Finally, only a few individuals qualified among the richest solely through trade incomes, generated by their involvement in the Swedish export of iron and copper. It may also be noted that also these men, e.g., Grönenberg and Trotzig, eventually came to supplement their trade incomes through feudal rents and revenues from state service, although it is perhaps less likely that this ever became an as important source of income for them as their business ventures were.

5. Class composition

Moving beyond the sole focus on the absolute top, Table 3 presents the population shares of aggregated estate groups in four different quantiles of the income distribution, as well as the share of total income earned by each group. The aggregated estate groups shown in the table are the four political estates: nobility, clergy, burghers, and peasants, as well as the royal family, civil and military officials, and the (semi-)landless: a group which lacked political influence and representation.⁴⁷

⁴⁵ *Svenskt biografiskt lexikon*, band 17 s. 337, Grooth, von, släkt.

⁴⁶ *Svenskt biografiskt lexikon*, band 14 s. 197, Ericus Erics.

⁴⁷ Each of the four political estates of noblemen, burghers, clergy, and peasants, consists of a number of social groups (the details are given in Appendix IV). The royal family is treated as a separate group, since they held significant political influence in the parliament (although, it should be noted, not necessarily acting as a unified party). Moreover, we use separate groups of civil servants and officers, which were not members of any of the

Table 3: Each estate group's share of total income and of the number of taxation units in different quantiles.

No. of tax units	Estate/Group	Share of total income	Estates'/groups' share of tax units in quantile				
			All	P1-99	P99-99.9	P99.9-99.99	P99.99-100
5	Royal	2%	<1%	0%	0%	0%	20%
600	Nobility	5%	<1%	0%	5%	81%	75%
1,303	Clergy	4%	1%	0%	43%	4%	0%
11,885	Burghers	10%	6%	6%	18%	10%	5%
102,111	Peasants	57%	49%	50%	19%	0%	0%
358	Civil servants	1%	<1%	0%	11%	4%	0%
325	Officers	1%	<1%	0%	4%	0%	0%
90,146	(Semi)landless	21%	44%	45%	0%	0%	0%
No. of tax un. in quantile			206,733	204,263	2,084	366	20

Sources: see Appendix II.

The table shows that, in fact, all groups except the landless had an income share that was larger than their population share, so that the members of all other groups were more well-off than they would have been given a completely equal income distribution. This was true even for the landed peasant group, which made up almost half the population and hence was the largest social group.

The clergy, the nobility, and the royals all held much larger shares of the total income than their share of the population. This may also be seen from the composition of the four quantiles presented in the table. The bottom 99 percent of the income distribution, the P1-99, was made up of all of the landless, most of the peasants and most of the burghers. Since it is known from the design of the social table that peasants and burghers were considered to have higher incomes than the landless, this means that most peasants in fact fell in the upper half of the income distribution, and that the vast majority of the top ten percent were, in fact, either peasants or burghers. Further, the peasant group not only held above half of total income, as they could also politically dominate the rural landless groups by

estates but still, depending on their positions, could reach other forms of political influence. A final group is the (semi-)landless, the rural poor below the peasant rank, who were excluded from all political influence, on the national as well as on the local arena. By sorting into these groups, we are thus able not only to compare the relative economic strengths of the political estates, but also the relative economic standing of the groups formally excluded from political influence as well.

monopolizing the rural political representation,⁴⁸ they, in fact, represented about three quarters of total national income – which suggest that the representatives of the peasant estate had a solid economic basis to back up their demands for political influence.

The social composition of the quantile just above the bottom 99 percent, P99–99.9 was more mixed. It was numerically dominated by the clergy, although burghers and peasants each made up close to a fifth of the group, and state officials about a tenth. One quantile further up in the distribution, in the P99.9–99.99, we find the vast majority of the nobility, still about ten percent burghers (i.e., wealthy merchants), while no peasants and only few priests or civil servants. And as we reach the absolute top income group, the P99.99–100, or the richest 20 tax units, the nobility dominates numerically. In addition to the richest nobles, this quantile also includes the five royals, and, as we previously saw, only a single merchant.

The numbers from the table thus demonstrate that, although the royal family and the nobility were rich enough to be placed exclusively within the top one percent, their total numbers were minuscule and their share of the total national income quite small. The nobility earned about 5 percent of total income. The population figure of the clergy was somewhat larger than for the nobles, about one percent, but since the members of this group also were somewhat less well-off, their share of the total national income was even smaller than the nobility's: about four percent. The burgher estate was larger, even though it still made up only about six percent of the kingdom's population due to the low degree of urbanisation in Sweden; yet the total income figure represented by the burghers was of the same size as those of the nobility and the clergy combined: about ten percent. Taken together, the income share of the peasant group: 57 percent, clearly dominated over the share held by the four estates together.

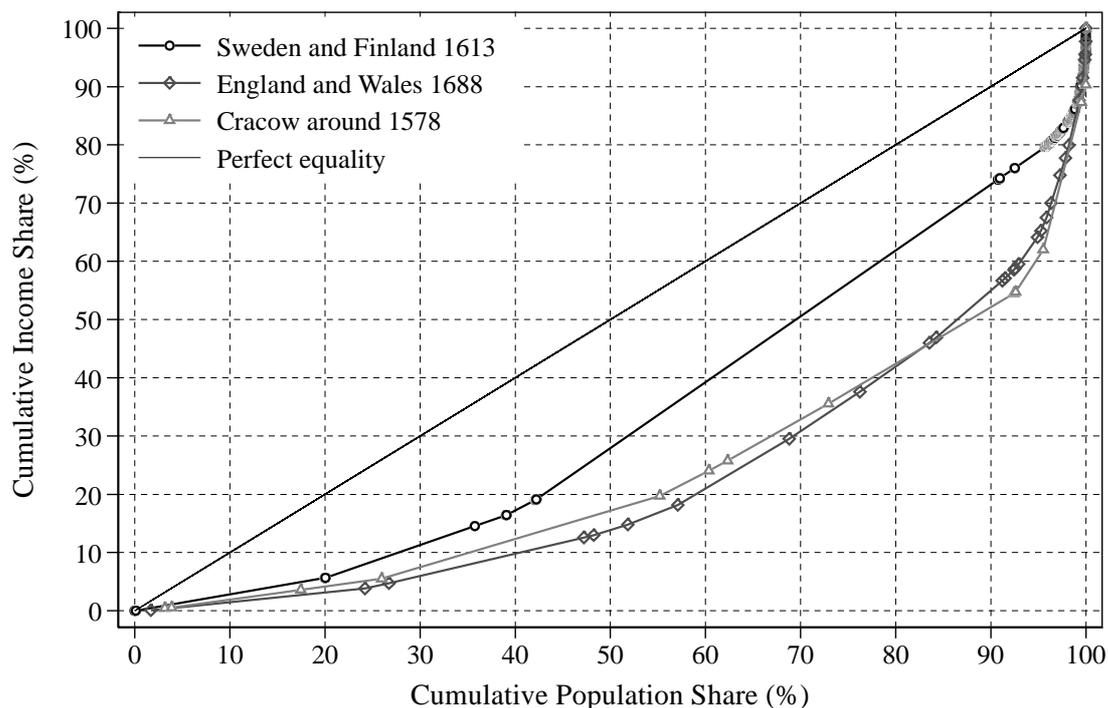
6. Swedish pre-industrial inequality in comparative perspective

How did the Swedish income distribution compare to other early-modern European societies? Thanks to the effort of Milanovic, Lindert, and Williamson in collecting and systematizing published social tables, we can compare our Swedish data to those for England and Wales in 1688, the Voivodeship of Cracow in 1578, France in 1788, and Old Castile in 1752.⁴⁹

⁴⁸ Österberg (1989), "Bönder och centralmakt", p. 90–91; Hallenberg & Holm (2016), *Man ur huse*; Martin Andersson (2020), "Lönekamp: husbönderna, statsmakten och klasskampen", *Arbetshistoria: meddelande från Arbetarrörelsens arkiv och bibliotek*, vol. 173–174 (2020), p. 50–59.

⁴⁹ B. Milanovic, P. H. Lindert, and J. G. Williamson "Pre-industrial inequality". See B. Milanovic "Towards and explanation of inequality in premodern societies: the role of colonies, urbanization, and high population density", *The Economic History Review*, vol. 71, no. 4, p. 1029–1047, 2018 for an updated collection of social

Figure 2. Lorenz curves showing the income distribution in Sweden in 1613 compared to England and Wales in 1688 and the Voivodeship of Cracow around 1578.



Sources: Sweden, see Appendix II; England and Wales 1688: P. H. Lindert & J. G. Williamson “Revising England’s social tables 1688–1812”; Voivodeship of Cracow 1578: M. Malinowski & J. L. Van Zanden “Income and its distribution in preindustrial Poland”.

Figure 2 displays Lorenz curves for Sweden, and a first set of comparators: England and Wales, and the Voivodeship of Cracow in Poland. England and Wales were a forerunner in pre-industrial capitalist economic development. Its distribution of land at the end of the seventeenth century was extremely unequal, a fact which is reflected in the shape of the income distribution in 1688. The bottom 50 percent of the population held less than 20 percent of all incomes. This group included the numerous landless and semi-landless labourers, out-servants, cottagers and paupers. The self-owning peasant class was small compared to Sweden; Farmers and freeholders together constituting only about 17 percent of

tables. The original data published in the following publications: England and Wales 1688: P. H. Lindert & J. G. Williamson “Revising England’s social tables 1688–1812”, *Explorations in Economic History*, vol. 19, no. 4, 1982, p. 385–408; Voivodeship of Cracow 1578: M. Malinowski & J. L. Van Zanden “Income and its distribution in preindustrial Poland”, vol. 11, no. 3, 2017, p. 375–404; France 1788: C. Morrisson & W. Snyder “The income inequality of France in historical perspective”, *European Review of Economic History*, vol. 4, no. 1, 2000, p. 59–83; Old Castile 1752: B. Yun Casalilla “Sobre la transición al capitalismo en Castilla: economía y sociedad en Tierra de Campos 1500–1830”, 1987, doctoral thesis at the University of Salamanca; F. Ramos Palencia “Pautas de consume familiar en la Castilla Preindustrial: El consume de bienes duraderos y semiduraderos en Palencia 1750–1850”, 2001, University of Valladolid doctoral thesis; C. Álvarez-Nogal & L. Prados de la Escosura “Searching for the roots of Spain’s retardation (1500- 1850)”, 2006, Madrid: Unversidad Carlos III Working Papers in Economic History.

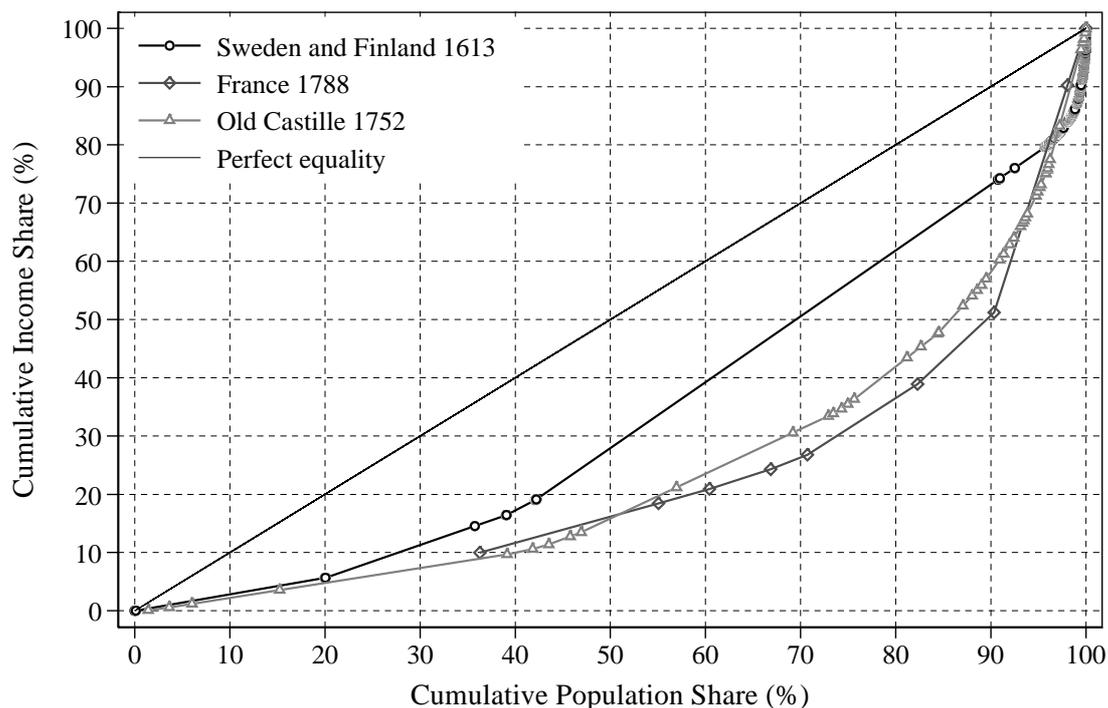
the population. The Voivodeship of Cracow on the other hand was characterized by a demesne economy based on serfdom. The bottom half of the population, consisting of servants, beggars, agricultural workers and small tenant farmers, only received about 20 percent of incomes. Cracow lacked a group of self-owning peasants altogether, as all farmers were tenants on crown or noble land.

Although the economic structure was fundamentally different in the two countries, the shape of the income distribution in Cracow was, in fact, quite similar to the one in England & Wales. While, in contrast, in Sweden the groups poorer than the peasant farmers (e.g., rural craftsmen, soldiers, and cottagers) constituted a smaller share of the population, they still held a similar share of income as in England & Wales and in Cracow. As a result, the Lorenz curve for Sweden is much steeper at the lower end, producing a lower level of total inequality. The Gini coefficient for England and Wales was 45 and in Cracow 53, which can be contrasted to Sweden, where it stood at 33.5.

The comparison to the other two premodern political entities, France and Old Castille, can be seen in Figure 3. In France just before the revolution, the bottom half of the population was made up of agricultural day-labourers, servants, and small-scale farmers, who, together, received less than 20 percent of all incomes, while self-owning farmers made up about 27 percent of the population and held 21 percent of incomes.⁵⁰ The income distribution in Old Castile in the middle of the eighteenth century resembled that in France in 1788 (although the Castilian social table is not based on social groups but rather on the distribution of family income in five locations, and can therefore not be decomposed into different classes' shares). In comparison, the income distribution in Sweden was markedly less unequal, largely due to the greater income share held by the bottom half of the population, i.e., the landless groups and the peasants. The corresponding Gini coefficient in France was 55.9 and in Old Castille 52.5.

⁵⁰ This combines the numbers for small- and large-scale farmers. The group of small-scale farmers alone constituted 18 percent of the population and received only 8 percent of incomes.

Figure 3. Lorenz curves showing the income distribution in Sweden in 1613 compared to France in 1788 and Old Castile in 1752.



Sources: Sweden, see Appendix II; France 1788: C. Morrisson & W. Snyder “The income inequality of France in historical perspective”; Old Castille 1752: B. Yun Casalilla “Sobre la transición al capitalismo en Castilla; F. Ramos Palencia “Pautas de consume familiar en la Castilla Preindustrial”; C. Álvarez-Nogal & L. Prados de la Escosura “Searching for the roots of Spain’s retardation (1500- 1850)”.

To what extent can the lower level of inequality in Sweden be explained by a correspondingly lower share of incomes accruing to top income earners? Table 4 shows the share of income accruing the top one percent and the bottom 90 percent of earners, respectively, in the five societies. While the top one percent in Sweden in 1613 had a similar income share as the top in England and Wales and in the Voivodeship of Cracow: between 13 and 15 percent, the top shares in France and in Old Castile were, actually, significantly lower: just between 5 and 6.5 percent.

What is remarkable about the Swedish income distribution when compared to the four other pre-industrial European societies is, in fact, not the position of the absolute top, but instead the income earned by the mass of the population, i.e., the income share going to the bottom 90 percent. While Swedish peasants together with the rural landless groups below them, which together made up the bottom 90 percent, earned 73 percent of all incomes, the corresponding shares were only 55 percent in England and Wales and below 50 percent in the three other societies.

Table 4. *Income shares of the top 1 and the bottom 90 percent in Sweden in 1613, compared with four other European pre-industrial societies.*

	Sweden and Finland 1613	England & Wales 1688	Voivodeship of Cracow circa 1578	France 1788	Old Castile 1752
	(1)	(2)	(3)	(4)	(5)
Top 1%	13.21	14.4	15.99	5.05	6.47
Bottom 90%	73.18	54.97	47.86	41.86	49.29

Sources: Sweden, see Appendix II. Other countries: See note to figure 2 and 3.

Applying the method developed by Milanovic, Lindert & Williamson, we can also compare the inequality found in Sweden and in the other pre-industrial societies with what would have been the theoretical maximum given their economic standard as measured by GDP per capita. Milanovic, Lindert & Williamson argues that richer societies are able to “afford” higher levels of inequality, since, in a very poor society, most people’s incomes keep them just above subsistence minimum (estimated to 300 1990 USDs), which leaves very little room for exploitation by the rich.⁵¹ This results in a theoretical inequality frontier, above which inequality cannot rise without causing unsustainable mass-starvation due to the incomes of the poor being pushed below the subsistence minimum.

The GDP per capita figures for the four comparison societies are reported in Milanovic et al (2011) and Milanovic (2018), while we use the 2013 release of the Maddison dataset to calculate the GDP per capita in 1990 USDs for Sweden in 1613.⁵² This results in a Swedish GDP per capita in 1613 of 814 (in 1990 USD), which can be compared with the corresponding values for England and Wales in 1688 of 1,418 USD, the Cracow voivodship in 1578 of 810 USD, France in 1788 of 1,135 USD, and Old Castile in 1752 of 745 USD. Figure 4 shows the comparison along with the inequality possibility frontier.

⁵¹ B. Milanovic, P. H. Lindert, and J. G. Williamson “Pre-industrial inequality”.

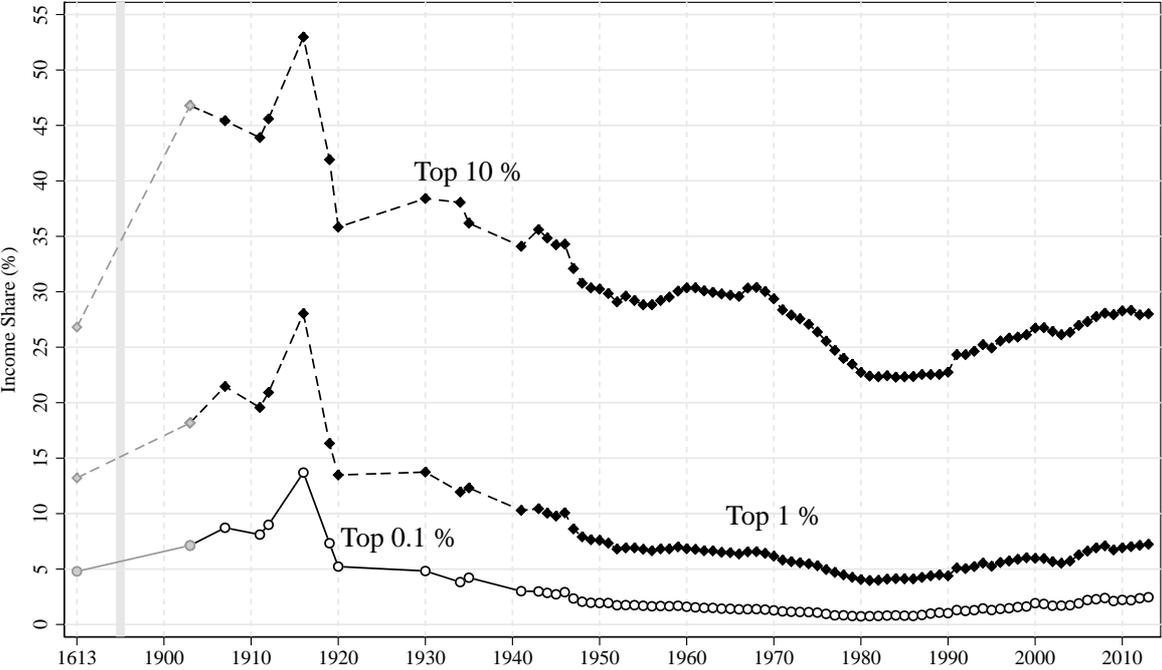
⁵² In the 2013 release, GDP per capita figures are only given for Sweden for the benchmark years 1600 and 1650. To get an estimate of GDP per capita in 1613, we follow the approach in B. Milanovic, P. H. Lindert, and J. G. Williamson “Pre-industrial inequality” of interpolating between the two benchmarks. This may be compared with the latest 2020 release of the Maddison database, in which yearly GDP per capita figures are given for Sweden back to 1300. The 2020 release suggest a 24 percent growth of GDP per capita between 1600 and 1613, while our interpolation results in an increase of 7 percent. For Finland, the latest release includes estimates for 1600 and 1650. These suggest that Finland had a GDP per capita level 95 percent of the Swedish in 1600 and 90 percent in 1650.

there must have existed strong political forces that held down levels of exploitation in Sweden.

7. Persistent egalitarianism? Swedish income inequality in 1613 and in the twentieth century

How did Swedish income inequality develop in the centuries after 1613? There are no data available for comparison with the period prior to the introduction of personal income taxes in Sweden 1903. The structure of that data, is very similar to ours, however, making possible a comparison. In the top income share estimates published by Roine and Waldenström (2008), the income earning unit is the tax unit, which consists of individuals over the age of 16 and combines the income of married couples, just like in our seventeenth-century data. A comparison with their estimated income shares is provided in Figure 5 below. The figure shows the share of income accruing to the top 10 percent, top 1 percent, and top 0.1 percent, respectively.

Figure 5. Top income shares in Sweden in 1613 and 1903–2013.



Note: Break in the x-axis indicated in light grey.
Sources: 1613, see Appendix II. Other years: J, Roine & D, Waldenström “The evolution of top incomes in an egalitarian society: Sweden, 1903–2004”, *Journal of public economics*, vol. 92, no. 1-2, 2008, p. 366-387.

The figure clearly demonstrates that income inequality rose sharply during the three-hundred-year period from the beginning of the seventeenth to the early twentieth century. The rise in inequality would have been even greater if the area of the Swedish kingdom had not been drastically reduced by the loss of Finland in 1809, as the top income shares in Finland around the turn of the nineteenth century were even higher than the corresponding shares in Sweden.⁵³

The change from 1613 to 1903 was not so much due to a rise in the income shares of the top 0.1 percent or the top 1 percent, which only rose from about 5 to 7.5 and 13 to 18 percent of the total income respectively, but rather through a dramatic increase of the income share of the top 10 percent group, which rose from about a quarter of total incomes up to close to half.⁵⁴ This corroborates the conclusion we made above regarding the relative absence of a rich ‘upper middle class’ in Sweden in 1613, while also indicating that such a group was formed during the centuries leading up to 1900. This trend in inequality is also in line with other research on the development in the eighteenth and nineteenth century. Bengtsson et al (2018) find that, in terms of wealth, although Sweden was relatively equal compared to Britain and France in 1750, its inequality grew continuously, and by 1900, was on par with the level in those countries.

It may also be noted that the income shares of the top 0.1 and 1 percent found in 1613 were once more reached in the interwar period, while the income share of the top 10 percent did not fall to such a low level until the middle of the 1970s. While the income shares of the top 0.1 and 1 percent groups in Sweden today are still much lower than they were in 1613, when these groups consisted of e.g., noblemen, state servants, priests and the royal family, the income share of the top 10 percent has for the last 20 years or so once more reached and hovered around the level of the early seventeenth century, when this quantile was made up by well-off burghers and peasants. It is clear that while Sweden in 1613 was a comparatively equal society, the development over the subsequent centuries resulted in higher inequality on par with the level in other parts of Europe.⁵⁵

⁵³ In Finland, the top 0.1 percent share of the income in 1899 was 14.8 percent, while the top 1 percent share was 28.9 percent and the top 10 percent share as much as 56.6 percent, according to the estimates by P. Roikonen & S. Heikkinen “A Kuznets rise and a Piketty fall: income inequality in Finland, 1865–1934”, *European Review of Economic History*, vol. 24, no. 1, p. 78.

⁵⁴ The share of the absolute top, the P99.99–100, was virtually unchanged, rising from 2.18 to 2.75 percent of total income.

⁵⁵ See the comparison in J. Roine and D. Waldenström, “Long-run trends in the distribution of income and wealth”.

8. Discussion

Our results show that the Swedish income distribution in 1613 was more egalitarian than income distributions in all other early modern economies for which similar data has been published, including such different societies as proto-capitalist England and feudal Poland. This difference was not due to a weaker position of the top one percent in Sweden, individuals whose main incomes were feudal rents coming from (inherited) landed estates, complemented by incomes from state service and international trade. Instead, what was remarkable about the Swedish income distribution was the relatively strong economic standing of the peasantry. This was not the least an effect of the absence of what may be regarded as a pre-industrial upper middle class: the early modern state bureaucracy was still small, the clergy had been severely decimated as a consequence of the Reformation, the number of petty nobles was comparatively small, and the degree of urbanisation in Sweden was very low compared to other areas in Europe. All this meant that there was no deep gulf separating the peasants from the top decile. In fact, the most well-off among the peasants had incomes that placed them just below the top 1 percent in society, which might also explain why peasant sons during the seventeenth century rather frequently managed to climb the social ladder and become clergy or state officials.⁵⁶

All this also helps to explain why the Swedish parliament came to consist of four estates. While noblemen, burghers, and clergy were about equally numerous within the top one percent of the income distribution, the peasants not only fell just outside this group, but, as a class, they had a combined economic strength that not only far exceeded that of the other estates, but was also much greater than that of the peasant group in other pre-industrial societies. The Swedish peasants not only controlled a large share of the total national income, during the state formation process they also succeeded in monopolizing the political interaction with the central authorities, which meant that they could also represent the economic aspects of the landless, upon which also the heavy conscription burden primarily fell.⁵⁷ The non-noble officers on the other hand, who formed a fifth parliamentary estate during a couple of decades during and following the civil war of the 1590s, due to their

⁵⁶ Sten Carlsson, *Bonde, präst, ämbetsman: svensk ståndscirkulation från 1680 till våra dagar*, Stockholm (1962).

⁵⁷ Mats Hallenberg & Johan Holm, *Man ur huse: hur krig, upplöpp och förhandlingar påverkade svensk statsbildning under tidigmodern tid*, Lund (2016).

significant military capital, did not represent any substantial economic means and did soon lose their representation.⁵⁸

This line of reasoning also means that the parliament was established just at the right time for the peasants to be included as a fourth political estate. Although we still lack data on changes to the income distribution during the seventeenth and eighteenth centuries, several processes are likely to have resulted in Swedish inequality becoming more similar to other premodern societies. The seventeenth century saw a rapid expansion of the state bureaucracy, resulting in a much larger number of both civil and military officials. As many of these were rewarded for their services both by ennoblement and by donations of landed estates, the nobility's share of all land in Sweden reached 33 percent by 1700.⁵⁹ The century also saw rapid urban growth, especially in Stockholm where the population more than quintupled, but also through the foundation of prosperous new towns such as Gothenburg, where an expanding group of internationally trading merchants settled. Taken together, the growth of these 'upper middle classes', which were more or less lacking in 1613, but would – most likely – have placed themselves within the top 10 percent of the income distribution, meant a significant decrease of the economic (and hence political) importance of the peasants. It is in that sense that the Swedish parliament may be considered to have been formed at just the right time for a separate peasant estate to have been included, an estate which would then, thanks to the path-dependency in the design of political institutions, remain there for the next two and a half centuries, irrespective of the diminishing social representativeness of the group.

Our results also speak to the debate about the roots of Sweden's post-Second World war egalitarianism. Those arguing for a link between Sweden's early modern social structure and post-World War 2 Social Democratic egalitarianism need to explicate why these two periods were separated by an epoch of extreme proletarianism and exclusionary political institutions in the nineteenth century. Although the Swedish parliament, from the beginning of the seventeenth century, included peasants as a fourth estate, this did not prevent Sweden from becoming extremely unequal both politically and economically during the centuries leading up to the twentieth. As we have shown in this article, this was not least due to the fact that the income share going to the top ten percent of the population doubled. While this group had included the peasant MPs already during the early seventeenth century, so it included

⁵⁸ Nilsson (1989), especially ch. II. Nilsson also makes the point that the officer estate was doomed to fail because it continuously lost its most prominent members through ennoblements.

⁵⁹ Carl-Johan Gadd, *Jordnaturernas fördelning i Sveriges län år 1700: en rekonstruktion, samt en jämförelse med förhållandena vid 1500-talets mitt*, Göteborg (2020).

their successors two and a half century later, peasants who had inherited a political system that over time became increasingly exclusive as the relative economic equality of the early seventeenth century withered away.⁶⁰

Several influential theories in economics and political science hypothesize that existing social inequalities influence the subsequent design of economic and political institutions.⁶¹ In this paper we have illustrated that the inclusive political institution of the Swedish four-estate parliament was founded at a time of relatively low levels of income inequality and a strong economic position of the landed peasantry. This inclusive political equilibrium was eroded over time, however, and punctuated with the shift to an extreme proprietary regime in the nineteenth century. The Swedish case thus clearly illustrates the malleability of socio-political systems and the potential for radical shifts between different inequality regimes.

⁶⁰ Erik Bengtsson & Mats Olsson, “Peasant aristocrats? Wealth, social status and the politics of Swedish farmer parliamentarians 1769–1895”, *Scandinavian journal of history* 45:5 (2020).

⁶¹ Engerman & Sokoloff 1997, idem 2000; Acemoglu & Robinson 2008, Rothstein & Uslaner 2016.

Appendix I. Translations and an overview of the taxation groups

The translations into English of the Swedish terms used in the original sources for the social groups can only be regarded as roughly equivalent; not only because many of the words lack an exact English counterpart, but also because it is sometimes difficult even to know the precise meaning even of the Swedish term. For this reason, the translated English terms are listed below together with the Swedish original, followed by an explanatory comment when deemed necessary. These comments also include additional information on social groups that were not part of the original taxation scheme but were nevertheless sometimes used in the regional taxation lists. The terms follow the same order as in Table 1.

The king: *kungl. maj:t*, i.e., ‘his royal majesty’, i.e., Gustavus Adolphus, who had succeeded his father on the throne in 1611.

The queen widows: *änkedrottningarna*, i.e., the mother of the king and his grandfather’s third wife.

The dukes: *arvfurstarna*, ‘the hereditary princes’, i.e., the king’s brother Karl Filip and their cousin Johan.

Noblemen, widows and children: *ridderskapet, adeln, frälset, frälseänkor, omyndiga frälsebarn*, i.e., the knights (a higher noble rank) as well as the rest of the nobility, including widows and orphaned children, who still might have substantial rent incomes from inherited estates.

Bishops: *biskopar*.

Schoolmasters and professors: *skolmästare, professorer*. Schools were located in some of the larger towns, Sweden’s only university in Uppsala.

Rural and urban clergy, superintendents: *superintendents, stadspredikanter, sockenpräster*. Superintendents were the equivalent of bishops in sees formed after the Lutheran reformation.

Urban and rural chaplains: *kaplaner i städerna, på landsbygden*. The latter group also includes a small number of *lapppräster*, clergy working among the Sami.

Royal secretaries and chamberlains: *sekreterare, kamrerare*, most of which were located at the royal castle in Stockholm. As there are no preserved records indicating that these men actually paid the tax, we have gathered information on their numbers from other sources.⁶²

Chief accountants, masters of the mint: *räntmästare, myntmästare*, this group also includes the scribes of the mint, *myntskrivare*. These men as well seem to have been able to avoid taxation. Information of their numbers has been gathered from other sources.⁶³

Customs officials: *tullnärer*. The high taxation of this group seems to have been a mistake, perhaps due to the fact that customs officials in Stockholm were wealthy; the taxation lists show that almost all customs officials in the smaller towns were unable to pay such a high amount. We have however not tried to correct this by guesswork. Some customs officials seem to have been able to avoid the tax; we have thus completed their numbers from other sources.⁶⁴

⁶² Chamberlains: two are mentioned as being responsible for the Älvsborgs ransom taxation itself. In addition, six other chamberlains are mentioned in court records from Stockholm during the period 1612–1615. We further assume that the dukes must have had at least one chamberlain each. Secretaries: one is mentioned in the taxation records, two further in court records from Stockholm. However, two of these were noblemen and are thus counted as such. In addition, one secretary is mentioned in Finland (Turku), and we further assume that each of the dukes must have had at least one. Court records published in Nils Staf (ed.), *Stockholms stads tänkeböcker från år 1592 7* (1608–1613), Stockholm (1964); Nils Staf (ed.), *Stockholms stads tänkeböcker från år 1592 8* (1614–1615), Stockholm (1966).

⁶³ Chief accountants: two are mentioned in court records from Stockholm in 1610, one in Finland is mentioned in ÄL, vol. 5. Masters of the mint: the one in Stockholm was a nobleman and has been counted as such, the one working for duke Johan is mentioned in ÄL, vol. 5. Scribes of the mint: no such men have been found. Court records printed in Staf (1964).

⁶⁴ Lokala tullräkenskaper, Swedish National Archives (for Gävle, Brätte, Tälje, Nyköping, and Stockholm).

Bailiffs and scribes: *fogdar, skrivare*. This group also includes bailiffs and scribes of hundreds, and bailiffs of castles (*häradsfogdar, härads-skrivare, slottsfogdar*).

Bailiffs of forges, of the Sami, of royal manors: *hyttfogdar, lappfogdar, (ladu)gårdsfogdar*. This group was an addition to the original list, containing bailiffs with lower incomes than the category above.

Scribes of castles, of towns, of the chamber, of soldiers, of the region: *slottsskrivare, stadsskrivare, kammarskrivare, knekteskrivare, landsskrivare*. This group was also an addition to the original list. As these scribes had lower incomes, the result was a better diversification among royal officials.

Vice bailiffs, vice scribes: *underfogdar, underskrivare*. This group also includes bailiffs of tenants, *landbofogdar*.

Vice judges: *underlagmän, lagläsare*. The ordinary judge of each province was a member of the nobility and taxed as such, while the actual judicial work was usually performed by the salaried vice judges.

Higher cavalry officers: *ryttmästare, kaptener, rytterilöjtnanter, rytterifänrikar*. No differentiation was made between officers of different ranks.

Higher infantry officers: *knektövitsmän, knektlöjtnanter, knektfänrikar*.

Lower officers: *kvartermästare, andra underbefäl*, both in the cavalry and in the infantry.

Burghers: *besuttna borgare*, the word ‘besutten’ here perhaps best translated as being a member of the community of taxpaying burghers (*borgerskapet*). They were differentiated in the taxation lists from the other townspeople. The burghers include more specific titles such as burgomaster, shipmaster, helmsmen, and even executioner (*borgmästare, skeppare, styrman, skarprättare*).

County sheriffs: *länsmän*, one of the most well-off peasants in a local community, simultaneously its representative and a local state official concerning matters such as crime prosecutions or taxation assessments.

Miners: *bergsmän*, peasants living in the mining regions with special privilege to own and work in the mining and forging industries. The taxation lists distinguished between the copper miners and the iron miners (*kopparbergsmän, järnbergsmän*).

Mining engineer: *konstmästare*. Only one such man was found in the taxation lists.

Peasants: *bönder, såväl frälse som ofrälse, hela som halva*, meaning “both the nobility’s and the others, whole as well as half”. A “half peasant” was a fiscal term that had developed in order to differentiate between more or less affluent peasants, where the poor often only had to pay half the full amount of taxes. The 1613 taxation however instead stated that all peasants should pay the same amount. This resulted in some local protests, as well as in the rare use of lower taxation of “poor households” in the region of Uplandia. More general was the habit of lowering the tax for widows and widowers, the word “peasant” being interpreted as referring to a married couple (a habit that had developed in other individual taxation schemes during the previous decade).⁶⁵ The group also includes people labelled as fishermen, rural tradesmen, charcoal makers, hunters, harness makers, and gun smiths (*fiskare, landsköpmän, kolare, djurskyttar, harneskmakare, rörsmeder*).

Rural craftsmen: *gångskräddare, skomakare, skinnare, andra slags ämbetsmän som inte är borgare eller bönder*, i.e., all rural craftsmen (especially mentioning tailors, shoemakers, and tanners) who were not burghers in a town or peasants. This group also includes one glazier (*glasmästare*) and some stonemasons (*stenhuggare*) mentioned in the taxation lists.

Soldiers and cavalymen: *gemena ryttare, landsknektar*. The word *gemen* here means ‘common’ or ‘ordinary’, to distinguish them from the noble knights. The group also came to include artilleryists and sailors (*bösseskyttar, hakeskyttar, båtsmän*).

Cottagers: *husmän*. This group was not mentioned in the taxation table but was in practice treated as if consisting of a male and a female servant (which was equivalent to three quarters of a peasant couple). It also included some other groups of married men such as sextons, mine workers, and day labourers (*klockare, gruvdrängar, dagkarlar*).

Unmarried cottagers, male servants, widowers. This group was in the table made up of beggars and servants (*lösgångare, driftekarlar, drängar*), as well as of servants of the rural craftsmen (*sådana ämbetsmäns drängar*). It came in practice to include all sorts of unmarried landless or poor men, most of which would have made a living through some kind of wage-labour. The group contained not only male servants, unmarried cottagers, and widowers (*drängar, ogifta husmän, änklingar*) but also sons and son-in-laws, beggars, “very poor” cottagers, “half couples” (i.e. also rural poor), journeymen, unmarried parish clerks, poor people trading in the towns, some servants of the nobility, of the dukes, of the royal castles, or of the rural executioner (*söner, mågar, löskarlar, utfattiga backstusittare, halva hjonelag, mästervänner, ogifta klockare, skottmän, adelstjänare, hertig Johans tjänare, slottstjänare, landsprofosstjänare*).

Female servants, female cottagers: *tjänstehustrur, pigor*, that is married and unmarried female servants. Although not mentioned in the taxation table, this group also came to include a large number of female cottagers (*huskvinnor*).

⁶⁵ Andersson (2020).

Appendix II. Source volumes

The records from the Älvsborg's ransom taxation are since the nineteenth century (when Finland was conquered by Russia) divided between the Swedish and the Finnish National Archives, where they form two collections called "Älvsborgs lösen 1613" (ÄL) and "Äldre räkenskapssamlingen, serie 483" (ÄR) respectively, which we have accessed through digitized images of microfilm copies. We have usually relied on records from the first year of taxation, 1613, since previous research has found that later lists were more prone to omit the poor who could not pay any taxes.⁶⁶ For the regions where this list was lost, we have instead used records from revisions performed a few years later that copied the information found in the earlier lists, and only in their absence a taxation list from a later year.⁶⁷ This procedure made it possible to gather data on all of Sweden that is as complete as possible regarding the whole population. Details on the volumes used for different regions are given below, with record type indicated by an 'S' for data taken from summaries that were made by the officials and included in the taxation lists, a 'T' for taxation lists that lacked such summaries and where taxation units consequently were counted manually, and an 'R' for data taken from the records of the later taxation revisions. The taxation year is indicated by an integer, where 1 equals the first taxation year (1613) etc.

Province and region/town	Volume	Type and year
Uplandia		
The king's part	ÄL 10A	S1
The queen widow's part	ÄL 80	T1
Westmannia	ÄL 40	R1
Dalecarlia	ÄL 45A	S1
Suthermannia		
The queen widow's part	ÄL 80	T1
Oppunda, Jönåker, Nyköping	ÄL 69	S1
The remaining parts	ÄL 62	S1
Nericia	ÄL 62	S1
Wermelandia	ÄL 69	S1
Ostrogothia	ÄL 72	S1
Smalandia		
Kalmar län	ÄL 18	S1
Jönköpings län	ÄL 27	S1
Westrogothia		
Duke Johan's rural part	ÄL 78	S1
Skövde, Hjo, Falköping	ÄL 78	T1
Karl Filip's part	ÄL 62	S1
The king's part	ÄL 33	T1
Dalia	ÄL 33	T1
Gestricia	ÄL 80	S1

⁶⁶ Jan Brunius, *Bondebygd i förändring: bebyggelse och befolkning i västra Närke ca 1300–1600*, Lund (1980), p. 138–140; Lennart Andersson Palm, *Folkmängden i Sveriges socknar och kommuner 1571–1997: med särskild hänsyn till perioden 1571–1751*, Göteborg (2000), p. 34.

⁶⁷ For details, see Andersson (2018).

Norrland	ÄL 51	T1
Duke Karl Filip's inherited estates (<i>arv och eget</i>)	ÄL 61	S2
Åland	ÄR Ca	T1
Ostrobothnia		
Rural areas	ÄR Fb	T1
Southern, towns	ÄR Fj	T6
Northern, towns	ÄR Fg	T4
Finland proper		
Turku	ÄR Ba	R1
Vemo, Piikkis, Raumo	ÄR Bb	T1
Masku	ÄR Bs	T6
Naantali	ÄR Be	T1
Satakunta	ÄR Bb	T1
Uusimaa		
Raseborgs län	ÄR Dj	R6
Kymmenegårds län, Borgå län	ÄR Dc	T1
Tavastia	ÄR Ec	T1
Savolax		
Lillsavo	ÄR Gc	T1
Storsavo	ÄR Gq	R6
Carelia		
Rural areas	ÄR Gs	R1
Viborg	ÄR Ga	T1

Appendix III. Individual income assessments

According to the taxation scheme, both the king (Gustavus Adolphus) and the two dukes (Karl Filip and Johan) were expected to pay an amount equivalent to 48 percent of their total annual income from both their personal estates and from their whole respective realms. Although they as political leaders might to some extents have been able to administer this whole income, ever since the foundation of the ruling Vasa dynasty in the 1520s, the kings (and dukes) had strived to build up their personal fortunes, which was always administered separately from that of the state. Instead of following the letter of the taxation scheme and including all state revenue into our calculations (which would severely distort any comparisons), we have chosen to include in the incomes of the king and the dukes their personal domains only, which results in them having a taxation basis equal to that of the nobility. In reality, neither Johan nor Karl Filip had paid anything at all as late as in 1619, and how much the king personally paid remains unknown; the basic principle that everyone had to contribute was evidently mostly rhetoric aimed for the masses.⁶⁸ The incomes of the king's and the dukes' estates have been gathered from various accounts, all goods converted into *riksdaler* through the same methods that were used by contemporaries for converting nobility *natura* incomes into cash equivalents.⁶⁹

The two queen widows were, according to the statute, obliged to pay according to their "will, fortune and disposition" without any further specification. Queen Kristina, the kings' mother, did not contribute at all until in 1619, when she made a single payment of 2000 *riksdaler*.⁷⁰ In order to make her payment comparable with the others, we divided this sum by six in order to reflect that the tax was levied during six consecutive years.

Queen Katarina Stenbock, widow of the king's grandfather, did as far as the records show not pay any taxes at all. She did not own a personal estate, but held a small *livgeding* in central Sweden that she had received as her dowry. On the basis of her incomes from this

⁶⁸ That neither duke paid the tax is evident from a remark in ÄL, vol. 1.

⁶⁹ The income of the king is based on records in Upplands handlingar 1613:9, 1614:11, Smålands handlingar 1613:5, Swedish National Archives; and on Äldre räkenskapssamlingen, vols. 1762, 2505, 2511, 3566, 3570, 3571, 5963, Finnish National Archive. The income of duke Karl Filip is based on Södermanlands handlingar 1619:5, Östergötlands handlingar 1613:7, Swedish National Archives. The income of duke Johan on Kungliga arkiv, Hertig Johan av Östergötland, vol. K 358, Swedish National Archives.

⁷⁰ This is noted several times in ÄL, vol. 1, Swedish National Archive.

region, we estimated that she should have paid 30 percent of that sum annually, as all other noble widows did.⁷¹

The nobility was taxed on the basis of the income of their inherited or otherwise acquired estates (their *arv och eget*). Each noble man as well as woman was supposed to self-report the number of tenant farms he owned and their individual rents, which were then summed up and converted in accordance with a table included in the noble privileges (*rusttjänstordningen*) into a taxable income. According to the taxation scheme used in 1613, a nobleman should make an annual payment of 48 percent of this calculated income, while women and under-age children should only pay 30 percent, probably reflecting their assumed less possibilities to gain further incomes through e.g., state service.

For a variety of reasons, some members of the nobility (17 percent) refused to make any payments to the tax commissions. Some poorer noblemen sought protection from their wealthier peers, claiming that they did not have the funds available. Others, stressing their elevated status, chose to pay the tax in person to the king in Stockholm. A third group of non-payers were noble officers currently abroad on campaign in Novgorod, who might not have been present at all in Sweden during the six years the taxation period lasted.⁷²

Since nobles had to report their incomes in a similar fashion every year for the regular taxation, some of the missing data can be amended by the use of records from the years soon before or after 1613. For nobles in the Swedish provinces, we used a list of incomes put together in the royal chamber in 1607 (containing 6 percent of the nobles missing in our data) as well as self-report documents ranging from 1604 to 1610 (an additional 1 percent).⁷³ For nobles living in the Finnish provinces, we used a list of the number of tenants farms in their possession from 1618 under the assumption that each tenant paid an annual rent equivalent to 1 *riksdaler*, which was often the case according to other records (adding an additional 2 percent).⁷⁴

As there are no sources regarding the incomes of the remaining 40 noblemen (6.7 percent), these figures were estimated based on the following assumptions. Noblemen whose names could not be found in the standard literature, whose homes according to the records

⁷¹ Västmanlands handlingar 1576:13, Swedish National Archive. No later cadaster from the area has been found, but given the conservative nature of the feudal rents, even this early volume should give a good representation of her incomes around 1613.

⁷² The data on the nobility's payments (and on the names of the non-paying) was collected from the following volumes: Älvsborgs lösen 1613, vols. 1, 3–5, 10A, 11A, 12, 18, 20, 23–25, 27, 33–36, 40, 45B, 62–64, 68–69, 72, 78, 80, Swedish National Archives; Äldre räkenskapssamlingen, serie 483, vols. Bb, Be, Bt, Bööö, Cb, Dh, Ea, Em, Fa, Gl, Gp, Finnish National Archives.

⁷³ Frälse- och rusttjänstlängder, vols. 15, 27, 31, 34, Swedish National Archives.

⁷⁴ Äldre räkenskapssamlingen, vol. 212e, Finnish National Archives.

were located in villages without any known manors, and who did not pay the tax (2.6 percent of all nobles) were thought to have been rather poor and were hence each assigned a taxation payment of 3 *riksdaler*, 1.5 the amount paid by a peasant household. Widows in a similar position (2.6 percent) were consequently assigned 2 *riksdaler* each. Noble officers known to have been engaged in the Russian campaign, as well as a couple of known nobles (1 percent), were assigned taxation payments of 32 *riksdaler* each, equivalent to the median and most common value for all nobles. Their widows or wives left at home (only two persons) were thus consequently assigned taxation payments of 20 *riksdaler*.

The taxation of both rural and urban parish clergy was based on the fact that they on average should pay 16 *riksdaler*, but that this sum should be adjusted by each of the bishops in order for it to reflect each individual's income. Although the precise methods used by the bishops are unknown, they did have ample access to information in their archives regarding the incomes of each parish in their respective diocese. The evaluations of the bishops resulted in individual payments ranging from 2 up to 45 *riksdaler*.⁷⁵ A few bishops however let all the parish clergy in their diocese pay the same amount of 16 *riksdaler*, perhaps reflecting a more equal income distribution in these regions (but equally plausible due to a lack of enthusiasm for the taxation project). This included all priests (except for one) in the diocese of Skara, in the *superintendentia* of Kalmar, and in the Åland islands, which was part of the diocese of Turku.

No records survive of the taxation sums paid by the 25 members of the clergy in Skara diocese who lived in areas belonging to duke Karl Filip; further missing data consists of two pastors in Nericia (due to the loss of a couple of pages from the end of the taxation list), as well as from the feudal parish of Ängsö in the diocese of Västerås, whose pastor was probably protected from taxation by his noble lord. We made the assumption that each of these pastors paid the undifferentiated standard 16 *riksdaler*.

Burghers were taxed based on their *örestal*, which was a measurement of their relative economic standing used as the basis for other urban taxations. It was annually renewed by the local urban magistrates, although the precise details of how these assessments were made are unknown. Taxation lists from 1613 survive for most Swedish towns.⁷⁶

⁷⁵ Taxes paid by the clergy are commonly found in the general taxation lists, sometimes in separate documents. Uppsala diocese: most in ÄL, vols. 10A and 80, some urban clergy in vol. 15. Strängnäs diocese: vols. 62 and 67. Västerås diocese: vols. 40, 45B and 46. Linköping and Växjö dioceses (including Kalmar *superintendentia*): vols. 18, 19, 27, 28, 29, 31, and 72. Skara diocese: vols. 33, 68, 69, and 78. Turku diocese (including Viborg *superintendentia*): ÄR 483 vols. Ea, Cf (Åland); urban in vols. Bb, By, Dj, and Gs.

⁷⁶ Lists from Stockholm, Norrmalm, and Södermalm are printed in Staf (1966). For other towns, the sources are ÄL, vols. 10B (Uppsala, Enköping, Öregrund – due to mechanical damage, data regarding 14 burghers instead

Three groups of towns miss information regarding the *örestal* of individual burghers. For the first one, individual taxation lists are missing, but this may be partly remedied since their total respective *örestal*-based taxes are known. From these totals (expressed in Hedemora as 200 *svenska daler*, in Karlstad as 100 *riksdaler*, and in Mariestad as a total *örestal* of all burghers of 50),⁷⁷ we made the assumption that the income distribution in each of the towns was similar to the ones found in Öregrund and Sigtuna, two towns which were also located in central Sweden and of about the same size (i.e., around 300 inhabitants). As a result, for these three towns we assume that P90–100 of the burghers held 20 percent of the *örestal*, P80–90 15 percent, P50–80 30 percent, P20–50 25 percent and P0–20 10 percent.

The second group of towns for which data is missing consists of eight towns (Kalmar, Vimmerby, Växjö, Västervik, Jönköping, Brätte, Skara, Lidköping) which all had been burned down during the previous war. As a reflection of their relative (and absolute) poverty in the post-war years, they were all exempt from *örestal* taxation. As a consequence, we accept the fact that the burghers of these towns had an *örestal* equal to zero.

In a third group, consisting of nine towns (Bogesund, Falköping, Hjo, Skövde, Filipstad, Trosa, Tunafors, Mariefred, Nådendal), the burghers also seem to have avoided *örestal* taxation. These towns were all among the smallest in the Swedish realm, having less than 300 inhabitants, and most of them had only been founded during the previous decade. We assume that the lack of *örestal* taxation also here reflects the fact that their inhabitants were relatively (and absolutely) poor and take their *örestal* as having been zero. It may however be noted that for both these latter two groups, their burghers were still taxed according to the taxation scheme, which means that these burghers, living in the poorest and in the recently devastated towns, were in fact assumed to be on an equal economic footing with workers living in the larger towns.

The last group subjected to individual taxation assessments were the miners (*bergsmän*), i.e., rural households involved in the metal industry in certain privileged mining districts in central Sweden. In addition to the amount paid by all peasants, the miners were also taxed on the basis of their shares in the copper mines or in the iron foundries. Although taxation lists including such individual assessments of miners have only been found for two

taken from vol. 11B (i.e. the second year's taxation list), Östhammar, Sigtuna), 19 (Eksjö), 42 (Arboga, Köping), 43 (Västerås), 51 (Härnösand, Hudiksvall), 62 (Örebro, Torshälla), 66 (Tälje, Nyköping), 72 (Söderköping), 76 (Skänninge, Vadstena, Linköping, Norrköping), 80 (Strängnäs, Gävle); ÄR, vols. Ba (Turku), By (Raumo), Bå (Björneborg), Dj (Borgå, Helsingfors, Ekenäs), Fk (Vasa), Fl (Uleå), Gs (Viborg).

⁷⁷ ÄL, vols. 45A (Hedemora), 62 (Mariestad), 69 (Karlstad).

mining districts, as the individual taxation sums there in most cases were very modest, we have not found it necessary to adjust the taxations of miners in other regions.⁷⁸

⁷⁸ ÄL, vols. 45A (copper mines in Kopparbergslagen in Dalarna), 69 (iron foundries in Värmlandsberg).

Appendix IV. Aggregated estate groups

For the comparisons of the estate groups made above in section 5, eight groups were created by adding together a various number of social groups. The composition of each of the groups is detailed below:

The royal family: the king, the dukes, and the queen widows.

Nobility: noblemen, widows, and children.

Clergy: bishops, professors, schoolmasters, parish clergy, urban and rural chaplains.

Burghers: burghers, and customs officials.

Peasants: peasants, miners, mining engineers, rural craftsmen, county sheriffs.

Civil servants: secretaries, chamberlains, masters of the mint, bailiffs of all sorts, scribes of all sorts, vice judges.

Officers: higher and lower officers of the cavalry and infantry.

(Semi-)landless: married and unmarried cottagers, soldiers, male and female servants, widows etc., day labourers, and beggars.

References

- D. Acemoglu and J. A. Robinson “Persistence of power, elites, and institutions”, *American Economic Review*, vol. 98, no. 1, p. 267–293, 2008
- D. Acemoglu and J. A. Robinson, “The rise and decline of general laws of capitalism”, *Journal of Economic Perspectives*, vol. 29, no. 1, p. 3–28, 2015.
- Acemoglu, Daron & Robinson, James A., *The narrow corridor: states, societies, and the fate of liberty*, Penguin Press, New York, 2019, p. 184.
- C. Álvares-Nogal & L. Prados de la Escosura “Searching for the roots of Spain’s retardation (1500- 1850)”, 2006, Madrid: Universidad Carlos III Working Papers in Economic History.
- G. Alfani “Economic inequality in preindustrial times: Europe and beyond”, *Journal of Economic Literature*, vol. 59, no. 1, 2021, p. 3–44.
- Andersson, Martin, *Migration i 1600-talets Sverige: Älvsborgs lösen 1613–1618*, Malmö (2018)
- Andersson, Martin, ”Det finns 55 sorters människor: Hur en rättvis stat såg sina undersåtar”, i Martin Dackling & Sari Nauman (eds.), *Järn i elden: Kön, makt och relationer 1600–2020*, Göteborg (2020).
- E. Bengtsson “The Swedish Sonderweg in question: Democratization and inequality in comparative perspective, c. 1750–1920”, *Past & Present*, vol. 244, no. 1, 2019, p. 123–161.
- E. Bengtsson, A. Missiaia, M. Olsson, and P. Svensson “Wealth inequality in Sweden, 1750–1900”, *The Economic History Review*, vol. 71, no. 3, 2018, p. 772–794.
- Bengtsson, Erik & Olsson, Mats, “Peasant aristocrats? Wealth, social status and the politics of Swedish farmer parliamentarians 1769–1895”, *Scandinavian journal of history* 45:5 (2020).
- Brunius, Jan, *Bondebygd i förändring: bebyggelse och befolkning i västra Närke ca 1300–1600*, Lund (1980).
- Carlsson, Sten, *Bonde, präst, ämbetsman: svensk ståndscirkulation från 1680 till våra dagar*, Stockholm (1962).
- K. L. Sokoloff and S. L. Engerman “Institutions, factor endowments, and paths of development in the new world”, *Journal of Economic perspectives*, vol. 14, no. 3, p. 217–323, 2000
- Englund, Peter, *Det hotade huset: adliga föreställningar om samhället under stormaktstiden*, Stockholm: Atlantis (1989).
- Gadd, Carl-Johan, *Jordnatureernas fördelning i Sveriges län år 1700: en rekonstruktion, samt en jämförelse med förhållandena vid 1500-talets mitt*, Göteborg (2020).
- Hallenberg, Mats & Holm, Johan, *Man ur huse: hur krig, upplopp och förhandlingar påverkade svensk statsbildning under tidigmodern tid*, Lund (2016).
- Harnesk, Börje, “Rika bönder och fattiga: Hälsingland på 1500-talet”, *Scandia* 66:2 (2000).
- Heckscher, Eli F., *Svenskt arbete och liv från medeltiden till nutiden*, Stockholm (1942).
- Isacson, Maths, *Ekonomisk tillväxt och social differentiering 1680-1860: bondeklassen i By socken, Kopparbergs län*. Dissertation, Uppsala Universitet, 1979.
- Larsson, Lars-Olof, ”Kyrkans tionde och kronans: studier kring reformationens återverkningar på tiondebeskattningen”, *Scandia* 32:2 (1966).

- Larsson, Lars-Olof, Jordägo fördelningen i Sverige under Gustav Vasas regering”, *Scandia* 51:1–2 (1985).
- P. H. Lindert & J. G. Williamson “Revising England's social tables 1688–1812”, *Explorations in Economic History*, vol. 19, no. 4, 1982, p. 385–408.
- Lilja, Sven, *Tjuvehål och stolta städer: urbaniseringens kronologi och geografi i Sverige (med Finland) ca 1570-tal till 1810-tal*, Stockholm (2000).
- Lindegren, Jan, *Utskrivning och utsugning: Produktion och reproduction i Bygdeå 1620–1640*, Uppsala (1980).
- Lindegren, Jan, “Men, money, and means”, in Philippe Contamine (ed.), *War and competition between states*, Oxford university press (2000).
- Lindström, Jonas, *Distribution and differences: Stratification and the system of reproduction in a Swedish peasant community 1620–1820*, Uppsala (2008).
- Ljung, Sven, *Enköpings stads historia 1: Tiden till och med 1718*, Enköping (1963).
- M. Malinowski & J. L. Van Zanden “Income and its distribution in preindustrial Poland”, vol. 11, no. 3, 2017, p. 375–404
- B. Milanovic, P. H. Lindert, and J. G. Williamson “Pre-industrial inequality”, *The economic journal*, vol. 121, no. 551, 2011, p. 255–272.
- B. Milanovic “Towards and explanation of inequality in premodern societies: the role of colonies, urbanization, and high population density”, *The Economic History Review*, vol. 71, no. 4, p. 1029–1047, 2018
- J. Modalsli “Inequality in the very long run: inferring inequality from data on social groups”, *The Journal of Economic Inequality*, vol. 13, no. 2, 2015, p. 225–247.
- C. Morrisson & W. Snyder “The income inequality of France in historical perspective”, *European Review of Economic History*, vol. 4, no. 1, 2000, p. 59–83.
- Nilsson, Sven A., *På väg mot militärstaten: krigsbefälets etablering i den äldre vasatidens Sverige*, Uppsala (1989).
- D. North and B. R. Weingast “Constitutions and commitment: the evolution of institutions governing public choice in seventeenth-century England”, *The Journal of Economic History*, vol. 49, no. 4, p. 803–832, 1989.
- Palm, Lennart Andersson, *Folkmängden i Sveriges socknar och kommuner 1571–1997: med särskild hänsyn till perioden 1571–1751*, Göteborg (2000).
- T. Piketty (2020). *Capital and ideology*. Cambridge, Massachusetts: Belknap Press, an Imprint of Harvard University Press.
- F. Ramos Palencia “Pautas de consume familiar en la Castilla Preindustrial: El consume de bienes duraderos y semiduraderos en Palencia 1750–1850”, 2001, University of Valladolid doctoral thesis.
- P. Roikonen and S. Heikkinen “A Kuznets rise and a Piketty fall: income inequality in Finland, 1865–1934”, *European Review of Economic History*, vol. 24, no. 1, 2020, p. 46–79.
- J. Roine and D. Waldenström “The evolution of top incomes in an egalitarian society: Sweden, 1903–2004”, *Journal of Public Economics*, vol. 92, no. 1–2, 2008, p. 366–387.
- B. Rothstein and E. M. Uslaner “All for all: Equality, corruption, and social trust”, *World Politics*, vol. 58, October, p. 41–72, 2005

Samuelson, Jan, *Aristokrat eller förädlad bonde? Det svenska frälsets ekonomi, politik och sociala förbindelser under tiden 1523–1611*, Lund (1993).

Sandberg, Robert, *I slottets skugga: Stockholm och kronan 1599–1620*, Stockholm (1991).

Staf, Nils (ed.), *Stockholms stads tänkeböcker från år 1592 7 (1608–1613)*, Stockholm (1964).

Staf, Nils (ed.), *Stockholms stads tänkeböcker från år 1592 8 (1614–1615)*, Stockholm (1966).

Svenskt biografiskt lexikon, accessed on sok.riksarkivet.se/sbl

L. Trädgårdh, “Statist individualism: on the culturality of the Nordic welfare state,” in B. Stråth and Ø. Sørensen (ed.), *The cultural construction of Norden*, Oslo, Scandinavian University Press, 1997, p. 253–285.

B. Yun Casalilla “Sobre la transición al capitalismo en Castilla: economía y sociedad en Tierra de Campos 1500–1830”, 1987, doctoral thesis at the University of Salamanca

Ågren, Kurt, *Adelns bönder och kronans: skatter och besvär i Uppland 1650–1680*, Uppsala 1964.

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