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Economic inequality in preindustrial Europe, 1300-1800:
methods and results from the EINITE project

INTRODUCTION

After many years of neglect, recent research has added considerably to our knowledge of inequality dynamics in preindustrial times.[1] We now have good-quality, data-rich reconstructions of long-term trends in (mostly wealth, sometimes income) inequality for many parts of Italy,[2] Spain,[3] Portugal,[4] the Low Countries,[5] Germany[6] and Sweden.[7] Other research focused on single years for which excep-

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[1] The research leading to these results has received funding from the European Research Council under the European Union's Seventh Framework Programme (FP7/2007-2013)/ERC Grant agreement No. 283802, EINITE-Economic Inequality across Italy and Europe, 1300-1800 as well as under European Union's Horizon 2020 Framework Program/ERC Grant agreement No. 725687, SMITE-Social Mobility and Inequality across Italy and Europe, 1300-1800.

[2] G. ALFANI, *Economic Inequality in Northwestern Italy: A Long-Term View (Fourteenth to Eighteenth Centuries)*, in "The Journal of Economic History", 75, 2015, n. 4, pp. 1058-1096; G. ALFANI, *The rich in historical perspective. Evidence for preindustrial Europe (ca. 1300-1800)*, in "Cliometrica", 11, 2017, n. 3, pp. 321-348; G. ALFANI, S. SARDONE, *Long-term trends in economic inequality in southern Italy. The Kingdom of Naples and Sicily, 16th-18th centuries: first results*, paper given at the Economic History Association Annual Meeting, Nashville, 2015; G. ALFANI, W. RYCKBOSCH, *Growing apart in early modern Europe? A comparison of inequality trends in Italy and the Low Countries, 1500-1800*, in "Explorations in Economic History", 62, 2016, pp. 143-153; G. ALFANI, F. AMMANNATI, *Long-term trends in economic inequality: the case of the Florentine State, ca. 1300-1800*, in "Economic History Review", 70, 2017, n. 4, pp. 1072-1102; G. ALFANI, M. DI TULLIO, *The Lion's Share. Inequality and the Rise of the Fiscal State in Preindustrial Europe*, Cambridge 2019.

[3] C. SANTIAGO-CABALLERO, *Income inequality in central Spain, 1690-1800*, in "Explorations in Economic History", 48, 2011, n. 1, pp. 83-96; H. GARCÍA-MONTERO, *Long-term Trends in Wealth Inequality in Catalonia, 1400-1800: Initial Results*, Dondena Working Paper, 79, 2015; G. ALFANI, *The rich in historical perspective*, cit.

[4] J. REIS, *Deviant behaviour? Inequality in Portugal 1565–1770*, in "Cliometrica", 11, 2017, n. 3, pp. 297-319

[5] J.L. VAN ZANDEN, *Tracing the beginning of the Kuznets Curve: Western Europe during the Early Modern Period*, in "Economic History Review", 48, 1995, n. 4, pp. 643-664; W. RYCKBOSCH, *Economic inequality and growth before the industrial revolution: the case of the Low Countries (fourteenth to nineteenth centuries)*, "European Review of Economic History", 20, 2016, pp. 1-22; G. ALFANI, W. RYCKBOSCH, *Growing apart in early modern Europe?*, cit.; G. ALFANI, *The rich in historical perspective*, cit.

[6] G. ALFANI, V. GIEROK, F. SCHAFF, *Economic inequality in preindustrial Germany, ca. 1300-1850*, Stone Center Working Paper Series, 3, 2020.

[7] E. BENGTSSON, A. MISSIAIA, M. OLSSON, P. SVENSSON, *Wealth inequality in Sweden, 1750-1900*, "Economic History Review", 71, 2017, n. 3, pp. 772-79

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tionally good information was available, for example in Spain in 1759[8] or in Poland in 1578,[9] or provided more tentative estimates of overall inequality based on social tables, particularly for England.[10] This broad research campaign reached beyond Europe, as preindustrial inequality was explored also for Anatolia under the Ottoman Empire,[11] for the pre-revolutionary United States,[12] and for Japan in the late Tokugawa period.[13]

A considerable part of the data which has recently become available about pre-industrial inequality has been produced by the ERC-funded project *EINITE – Economic Inequality across Italy and Europe 1300-1800*,[14] whose work is currently being continued and extended to other subjects (social mobility) by another ERC-funded project, *SMITE – Social Mobility and Inequality across Italy and Europe 1300-1800*. EINITE covered a range of Italian pre-unification states, plus other European areas including the Low Countries, England, Germany, south France and Catalonia. The aim of this article is to provide an overview of the results produced by EINITE for some of these areas, and particularly for Italy and for the Low Countries (this choice is partly due to the fact that research is still ongoing for the other areas, and partly to space constraints).

This first section of the chapter focuses on the historical sources used and on the methods employed to study inequality and to reconstruct aggregate "regional" measures from community-level data. The second section presents synthetically the main results obtained. The third section provides an overview of different interpretations about the main factors shaping distributive dynamics in the long run.

1. SOURCES AND METHODS

Most of the recent studies of preindustrial inequality listed in the introduction make use of fiscal sources to reconstruct wealth distributions. In particular for

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[8] E.A. NICOLINI, F. RAMOS PALENCIA, *Decomposing Income Inequality in a Backward Pre-Industrial Economy: Old Castile (Spain) in the Middle of the 18th Century*, in "Economic History Review", 69, 2016, n. 3, pp. 747-772; IDEM, *Comparing Income and Wealth Inequality in Pre-Industrial economies: Lessons from 18th-century Spain*, EHES Working Papers, 95, 2016

[9] M. MALINOWSKI, J.L. VAN ZANDEN, *Income and its distribution in preindustrial Poland*, in "Cliometrica", 11, 2017, n. 3, pp. 375-404

[10] For example, P.H. LINDERT, *Three centuries of inequality in Britain and America*, in *Handbook of Income Distribution*, A.B. ATKINSON, F. BOURGUIGNON eds., London 2000, pp. 167-216; S. BROADBERRY, STEVEN, B.M.S. CAMPBELL, A. KLEIN, M. OVERTON, B. VAN LEEUWEN, *British Economic Growth 1270-1870*, Cambridge 2015; R.C. ALLEN, *Class structure and inequality during the industrial revolution: lessons from England's social tables, 1688-1867*, in "Economic History Review", 72, 2019, n. 1, pp. 88-125.

[11] J. CANBAKAL, A. FILIZTEKIN, Ş. PAMUK, *Inequality of Income and Wealth in the Ottoman Empire, 1500-1800*, Paper given at the World Economic History Congress, Boston, 2018.

[12] P.H. LINDERT, J.G. WILLIAMSON, *Unequal gains. American growth and inequality since 1700*, Princeton 2016.

[13] O. SAITO, *Growth and inequality in the great and little divergence debate: a Japanese perspective*, in "Economic History Review", 68, 2015, n. 2, pp. 399-419.

[14] http://www.dondena.unibocconi.it/EINITE.

southern Europe, the sources more commonly used are the property tax records usually called *estimi* in Italy, *cadastres* in France and similarly elsewhere. These sources contain information about the taxable wealth owned by each household. This always includes real estate (lands and buildings), and sometimes other items as well, like capital invested in trade. Real estate, however, was the most important component of wealth, and by far. For preindustrial societies, in which most of the product was agrarian, wealth inequality is also a good proxy of income inequality, not only because the property of land (or more precisely, the right to the use of land) was of great importance in defining how the total product was distributed, but also because it is very unlikely that, in such a society, income and wealth inequality could move in different directions – a particularly important circumstance as the way in which inequality changes is more relevant, in the long run, than its level, as will be seen in the next section. Even for the period of the Industrial Revolution it has been argued that concentration of wealth followed the same path as that of income.[15] Finally, in most circumstances wealth inequality is the *only* possible proxy for preindustrial income inequality, and overall it does not seem to be a worse indicator than others that have been used to study income distribution.[16]

As a rule, the Italian *estimi* include only taxable property, consequently they omit feudal property and property owned by the Church (more specifically, by religious institutions such as monasteries or cathedral chapters) *ab antiquo* ('since ancient times'). However they include the property acquired by the Church after the *estimi* were introduced, as this was not, or not fully, exempt. Sometimes exempt property was included in the registers but it was not considered when calculating the tax distribution.[17] This is not, however, a major concern as arguably what we should be interested in is the distribution of household wealth, hence excluding that owned by institutions. After all today, too, household surveys do not include institutional incomes or property.

It is necessary to clarify what an *estimo* value is. The value given to taxable property was not a market value but a measure of the fiscal capacity generated by each piece of property, which is also why in some instances the house of residence was not subject to taxation. However, we can reasonably assume that the *estimo* values were proportional to the market values, or at least to the values prevailing in the market at the time when the *estimo* was compiled. In fact, if a new *estimo* provided evaluations largely discordant with market values, widespread protest for unjust taxation would have followed immediately. Moreover, when the values of an outdated *estimo* started diverging noticeably from market values, political pressure built up to change the *estimo*. This being said, many years could pass before a new *estimo* was introduced: compiling it was an expensive process because the evaluation and

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[15] P.H LINDERT, *Toward a comparative history of income and wealth inequality*, in *Income distribution in historical perspective*, Y.S. BRENNER, H. KAELBLE, M. THOMAS eds., Cambridge 1991, pp. 212-231.

[16] P.H. LINDERT, *Making the most of Capital in the 21st Century*. NBER working paper No. 20232, 2014; G. ALFANI, *Wealth Inequalities and Population Dynamics in Northern Italy during the Early Modern Period*, in "Journal of Interdisciplinary History", 40, 2010, n. 4, pp. 513-549; IDEM, *Economic Inequality in Northwestern Italy*, cit.

[17] G. ALFANI, *Economic Inequality in Northwestern Italy*, cit.

description of the recorded property had to be precise, reliable, and "fair". Moreover parts of the local society, expecting an increase in their fiscal burden, might try to slow down the process or to make it fail entirely. Finally individuals, families, or whole social-economic groups could try to influence the evaluation process.[18] For all these reasons, no *estimo* can be thought to perfectly reflect market values or the fiscal capacity generated by property, but at the same time it can be considered to provide a very good proxy for it, at least in distributional terms. After all, no evaluation of the fiscal capacity of taxpayers has ever proved faultless – until today. An additional problem in using these sources is that the values recorded in the *estimi* are often difficult to convert into (approximate) market values expressed in a common currency.[19] This, however, is not a problem when comparing measures like the Gini index, which is a pure number. But it has consequences when attempting to combine the local series into aggregate series, as seen below.

The main limitation of the *estimi*, the *cadastres* and of all the property tax records of their kind is that they only rarely include the propertyless, that is, those households that had no taxable wealth. However, such households are usually very few (3-7% of the total in Italy), as even tiny properties were recorded, like a small orchard or a fraction of vineyard. Consequently although the exclusion of the propertyless from inequality measurement leads to systematic under-estimation of inequality levels, the distortion is very limited.[20] More importantly, empirically we find that including the propertyless does not change the direction of the trend.[21]

Taking into account what has been discussed above about the characteristics of the *estimi*, all the information used in the following for Italy has to be considered related to household-levels distributions of wealth inequality, propertyless excluded (in order to compare like with like, the propertyless have been removed in the rare instances when they have been recorded). Based on these distributions, it is possible to calculate a variety of measures of inequality, including the Gini index which is by far the most commonly used. In the standardized version used here, the Gini index varies between the value of 0, which corresponds to perfect equality (each individual/household has the same income/wealth) and 1, which corresponds to perfect inequality (one individual/household earns/owns everything). An example of the results obtained from applying these simple statistical instruments to wealth distributions reconstructed from archival data is presented in Graph 1, which

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[18] About these phenomena, see for example the case study of Imola: C. ROTELLI, *La distribuzione della proprietà terriera e delle colture a Imola nel XVII e XVIII secolo*, Milano 1966, pp. 33-42; IDEM, *La finanza locale pontificia nel Cinquecento: il caso di Imola*, in "Studi storici", IV, 1968, pp. 115-18.
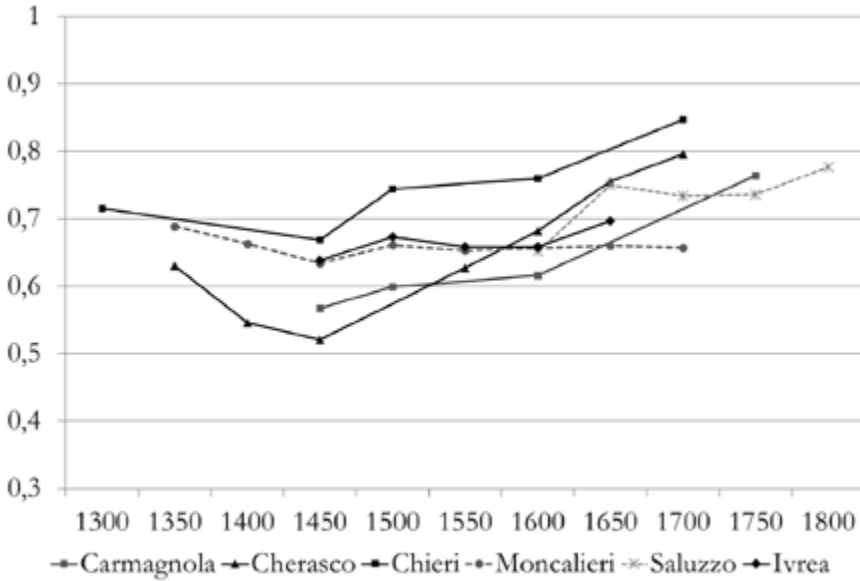
[19] See for example the discussion of the case of Piedmont in G. ALFANI, *Economic Inequality in Northwestern Italy*, cit., p. 1065.

[20] For example in the city of Bergamo in the Republic of Venice, possibly the Italian community for which we have the most complete information about the prevalence of the propertyless over time, from 1537 to 1702 the distortion to the level of the Gini index varied from a minimum of 0.006 Gini points in 1640 (from 0.715 excluding the propertyless to 0.721 including them) to a maximum of 0.03 Gini points in 1610 (from 0.723 to 0.753). G. ALFANI and M. DI TULLIO, *The Lion's Share*, cit.

[21] For further discussion, see G. ALFANI, *Economic Inequality in Northwestern Italy*, cit.; IDEM, *The rich in historical perspective*, cit.; G. ALFANI, M. DI TULLIO, *The Lion's Share*, cit.

shows the tendencies in inequality found in six small cities of the Sabaudian State (in the nowadays Italian region of Piedmont).

Graph 1. **Long-term trends in economic inequality in cities of the Sabaudian State (Piedmont). Gini indexes of wealth concentration**

As can easily be seen, the series show an impressive degree of coherence in the trends they follow: inequality growth was nearly monotonic from ca. 1450, while in the late Middle Ages a phase of inequality decline was found, triggered by the Black Death plague affecting Piedmont from 1348. These trends will be discussed further in the next section. Here, it is important to underline the fact that the very coherence of the trends that have been detected for each community in the areas explored systematically by the EINITE and SMITE projects suggests that it is possible and useful to try and provide an overall measure of distributive dynamics across broad areas: regions or entire states. But there is another reason why producing inequality measures representative of entire regions or states is desirable: such measures are a useful synthesis of a range of relevant variables which is broader than the simple sum of local distributions, variables that are important to assess properly distribution across large areas. In particular, they take into account differences in average wealth/income levels between different communities, territories, or environments (especially city vs country).

Producing these measures, however, presents some challenges. To overcome them, a specific method has been developed. Introduced in my study of the Sabaudian State,[22] later it has been applied to the Florentine State (Tuscany) as well as to

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[22] G. ALFANI, *Economic Inequality in Northwestern Italy*, cit.

the southern Low Countries[23] and more recently to the Republic of Venice[24] and to Germany.[25] The method is being applied also to the Kingdom of Naples.[26]

To build proper regional measures of inequality it does not suffice to calculate averages of local Gini indexes or of other inequality measures, as this would cause a loss of crucial information about between-community inequality. Instead, the method consists in the construction of regional distributions starting from simplified, or "fictitious" distributions modeled on information about deciles of income/wealth. For each community, a distribution of 100 elements, or "fictitious households", is modeled: 10 fictitious households per decile, each having the same share of wealth (1/10 of the decile each). The tenth decile (the rich) is modeled in greater detail, using information about the top 5% and top 1% wealthy, as it is usually found empirically that what happens to the top rich disproportionately influences the overall trend in terms of Gini values.

Using these fictitious distributions it becomes easier to solve weighting problems and issues of comparability across sources, making the task of aggregating community-level data to produce regional reconstructions a relatively easy one.[27] First, separate urban and rural inequality series are constructed, which are then weighed based on the urbanization rate in each time period to obtain the final, overall regional distribution. For example, Alfani and Ryckbosch in their reconstruction of the regional distribution of Tuscany assumed a 20% urbanization rate constant over time (coherently with the available information about urbanization trends in that region).[28] This implied, for each year, building a regional distribution in which urban entries (i.e. the number of "fictitious households") corresponded exactly to the above shares of the total. This procedure is similar in principle to that described by Milanovic for calculating "weighted international inequality".[29] Sometimes, the lack of appropriate data requires additional assumptions in order to build the regional distribution. Earlier applications of this method provided adequate solutions for many of these practical problems, solutions which have been replicated in later studies in order to increase comparability. For example in the case of the Sabaudian State, it was impossible to convert the values in the property tax registers of one community to another, except for the Canavese area in 1628-49 – so the assumption was made, that the urban-rural differential in average household wealth across Piedmont was the same as in the seventeenth-century Canavese.[30] Later, a similar problem (though to a somewhat lesser scale) was found in the study of the Republic of Venice. Here, complete information, expressed in the same unit of measurement, was available for the province of Padua. Based on this and incorporating some additional information about territorial variation across the Venetian

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[23] G. ALFANI, W. RYCKBOSCH, *Growing apart in early modern Europe?*, cit.

[24] G. ALFANI, M. DI TULLIO, *The Lion's Share*, cit.

[25] G. ALFANI, V. GIEROK, F. SCHAFF, *Economic inequality in preindustrial Germany*, cit.

[26] G. ALFANI, S. SARDONE, *Long-term trends in economic inequality in southern Italy*, cit.

[27] G. ALFANI, *Economic Inequality in Northwestern Italy*, cit., pp. 1081-2

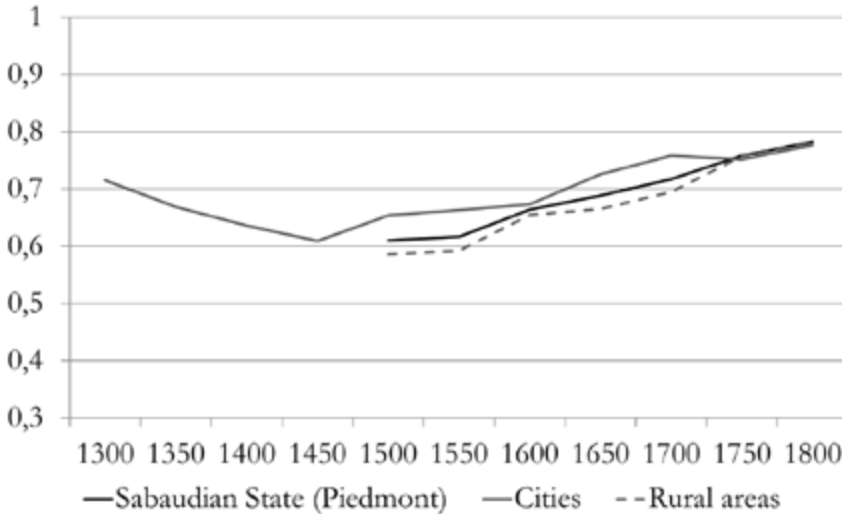[28] G. ALFANI, W. RYCKBOSCH, *Growing apart in early modern Europe?*, cit.

[29] B. MILANOVIC, *Worlds Apart. Measuring International and Global Inequality*, Princeton 2005.

[30] G. ALFANI, *Economic Inequality in Northwestern Italy,* cit., pp. 1081-1082

Terraferma, it has been possible to produce an estimate of the average rural/urban wealth ratio across the Republic of Venice (or more precisely, its Italian domains i.e. the above-mentioned *Terraferma*).

For reasons of synthesis, I will refer to the above-mentioned publications for more details and practical information about the method developed for the construction of the aggregate, territorial distributions. The most detailed description of the method refers to the case of the Republic of Venice.[31] Here, as a conclusion, it will suffice to underline that the final outcome is a distribution representative of broad areas, a distribution which can then be explored on its own with any appropriate statistical instrument. Such distribution is itself the result of a weighted aggregation of two other distributions, one related to the cities and one the rural areas. As an example, Graph 2 presents the case of the Sabaudian State (more precisely, the part of such state corresspoding to nowadays Piedmont), showing the series of Gini indexes calculated on the urban, on the rural and on the overall distributions. As can easily be noticed, the urban series reflect very well the local tendencies presented in Graph 1. Another important point to underline is that the overall series tends to follow more closely the rural than the urban series. This is because the vast majority of the Piedmontese population lived in the countryside (urbanization rates, for cities over 5,000 inhabitants, varied in the 23-26% range during the seventeenth and eighteenth centuries). For the same reason, the aggregate series tends to reflect more closely the rural series also in all other cases for which this kind of regional study has been produced.

Graph 2. **Long-term trends in inequality in the Sabaudian State (Piedmont). Gini indexes of wealth concentration.**

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[31] G. ALFANI, M. DI TULLIO, *The Lion's Share*, cit., pp. 181-199.

2. ECONOMIC INEQUALITY IN THE LATE MEDIEVAL AND EARLY MODERN PERIOD: AN OVERVIEW

In the earlier section, some information has been shown about long-term trends in inequality in the Sabaudian State (Piedmont). The trends found for this European area are very similar to those which have been reconstructed elsewhere and overall, this recent research allows to establish two key features of preindustrial inequality trends in Europe during 1300-1800:
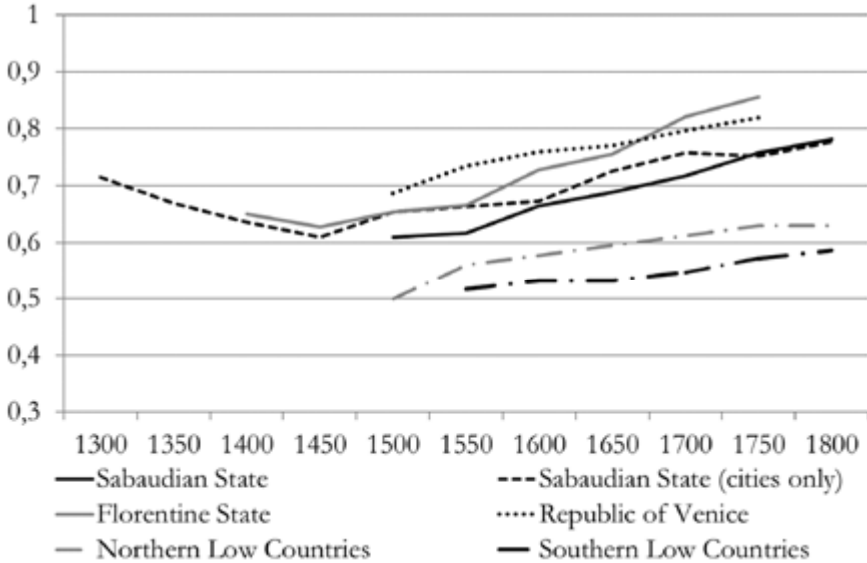
1)   during the entire period, the only generalized phase of sustained inequality decline was triggered by the Black Death epidemic, affecting the continent during 1347-51;

2)   after this phase of decline, and beginning from ca. 1450 (with some regional variation), both income and wealth inequality tended to increase almost monotonically in almost all the areas for which we have evidence.

These tendencies are clearly visible in Graphs 3a and 3b, which report the Gini index and the share of the richest 10% for some Italian states and for the southern and northern Low Countries. The measures refer to wealth inequality for Italy and to income inequality for the Low Countries[32] – hence the trends, not the levels, should be compared (as wealth tends to be more concentrated than income, in the past as with today).
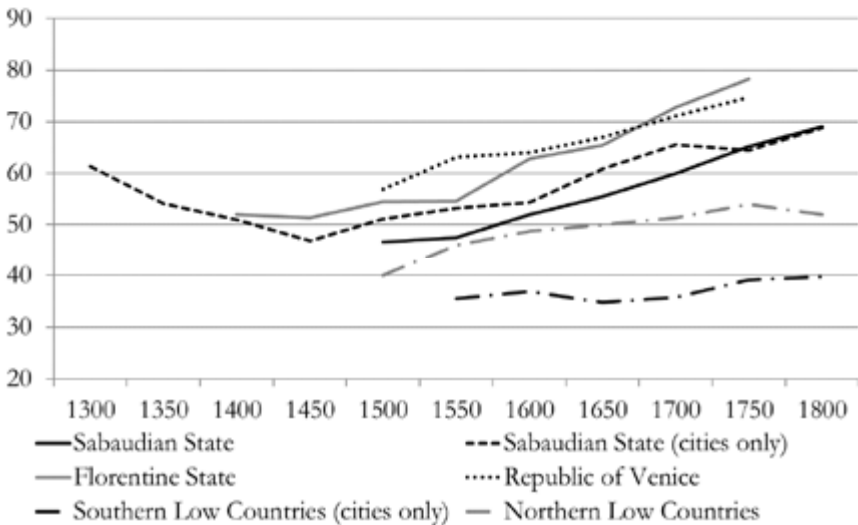
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[32] Information about income inequality in the Low Countries has been obtained from rental values of houses, that a consolidated literature has shown to reflect quite well relative levels of income (see J.L. VAN ZANDEN, *Tracing the beginning of the Kuznets Curve*, cit.; L. SOLTOW, J.L. VAN ZANDEN, *Income and wealth inequality in the Netherlands, 16th-20th centuries*, Amsterdam 1998.

Graph 3. Long-term trends in economic inequality in Italy and the Low Countries, 1300-1800

a. Gini indexes

b. Share of the top 10%

Notes: The series refer to wealth inequality for the Sabaudian State, the Florentine State and the Republic of Venice (excluding those with no property), and to income inequality for the southern and northern Low Countries.

The longest aggregate series that it has been possible to reconstruct so far refers to the cities of the Sabaudian State (Piedmont). There, before the Black Death the Gini index of wealth concentration equalled 0.715. By 1350, in the immediate aftermath of the Black Death, it had declined to 0.669. Decline continued in the following years, and the absolute minimum value reported for this area in the entire period 1300 to 1800 was reached around 1450, with a Gini of 0.609. After that, inequality growth resumed, continuing without interruption for about two and a half centuries. Indeed, only by the mid-seventeenth century the pre-plague inequality levels were finally exceeded. Inequality growth stalled in the cities of Piedmont during the first half of the eighteenth century, but became intense again in the second half of the century, peaking at 0.777 by 1800 (if we look at the entire region, not just cities, inequality growth continued throughout the century). The same path is found looking at the share of the richest 10%, who owned 61.3% of all wealth in 1300, 46.8% in 1450, and 68.9% in 1800, as well as at the other Italian states.[33] During the early modern period, inequality growth (of income) is also found in the northern and southern Low Countries.

The distributive consequences of the Black Death are worthy of specific attention. For such an early period, evidence is relatively scarce and to date it involves mostly the Sabaudian State,[34] the Florentine State[35] and the southern Low Countries.[36] Although only for the Sabaudian State we have an aggregate series covering the pre- and post-Black Death, for each of these areas we can observe some specific communities before and after this terrible mortality crisis. For all available cases, inequality declined immediately after the Black Death, with a tendency to continue for about 50 to 100 years, depending on the area. For example in the city of Prato in Tuscany, the Gini index of wealth inequality was 0.703 in 1325, but by 1372 it had fallen to an all-time low of 0.591 (between the two dates, the share of the richest 10% declined from 65.7% to 48.1%, to the advantage of all other segments of the wealth distribution). Again in Tuscany, in the rural community of Poggibonsi the Gini index was 0.550 in 1338, but only 0.474 in 1357, after the Black Death.[37] It should be noted that inequality decline after this, which was probably the most terrible mortality crisis to have ever affected Europe (it killed up to 50% of the population on the continent), is the outcome that should be expected as it goes hand-in-hand with increasing real wages following the sharp reduction in the offer of la-

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[33] G. ALFANI, *Economic Inequality in Northwestern Italy,* cit.; IDEM, *The rich in historical perspective*, cit.

[34] G. ALFANI, *Economic Inequality in Northwestern Italy,* cit.

[35] G. ALFANI, F. AMMANNATI, *Long-term trends in economic inequality.*

[36] W. RYCKBOSCH, *Economic inequality and growth before the industrial revolution, cit.*

[37] G. ALFANI, F. AMMANNATI, *Long-term trends in economic inequality*, cit.

bour, which contributed to reducing income inequality. Reduction in wealth ine-quality (and consequently, in capital income inequality) is also to be expected, as higher real wages provided a larger part of the population with the means to acquire property – in a context in which much more real estate than usual was being of-fered on the market, leading to cheaper prices.[38]

For the early modern period, the almost monotonic inequality growth reported in Graph 3 seems to reflect well an overall tendency across Europe. Germany is a partial exception, as there we find traces of a temporary phase of inequality decline associated to the Thirty Years' War (1618-48), which was the most destructive con-flict of early modern Europe.[39] Another possible exception is Portugal, for which some evidence of early modern (income) inequality decline has been produced. Possibly this was the consequence of "a long wave of agriculture-based economic expansion during which the demand for labour mostly ran ahead of that for land".[40] For the rest of Europe, however, a growing body of literature has been dis-cussing the factors leading to inequality *growth*, as will be seen in the next section. Before moving to tentative explanations of preindustrial inequality dynamics, it is worth underlining a final empirical tendency arising from recent studies: the ability of changes in the wealth or income share of the top of the distribution (in Graph 3b, the richest 10%) to shape the overall inequality trend as measured by Gini in-dexes (just compare Graph 3a to 3b). This finding, which is not a statistical necessi-ty but simply an empirical regularity, is also to be found in contemporary societies.[41]

3. ON THE DETERMINANTS OF INEQUALITY GROWTH IN EARLY MODERN TIMES

The currently-available data give the clear impression that during late medieval and early modern times, the underlying tendency of both wealth and income ine-quality has been orientated towards growth. As a matter of fact, the only significant decline in wealth and income inequality is associated to a large-scale catastrophe: the fourteenth-century Black Death. As discussed in the earlier section, explaining inequality decline after the Black Death is quite straightforward, as it seems to fol-low "naturally" from an increase in real wages fuelled by labour shortages, the availability of more property being offered on the market, and finally, the fragmen-tation of large patrimonies caused by unmitigated particle inheritance systems.[42] But explaining inequality growth in early modern times is somewhat trickier, as the fac-tors able to determine inequality growth in the long run of history are currently the object of intense debates which for reasons of space could not be covered exhaust-

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[38] G. ALFANI, T. MURPHY, *Plague and Lethal Epidemics in the Pre-Industrial World*, in "The Journal of Economic History", 77, 2017, n. 1, pp. 314-343, 332-334.

[39] G. ALFANI, V. GIEROK, F. SCHAFF, *Economic inequality in preindustrial Germany*, cit.

[40] J. REIS, *Deviant behaviour?*, cit., 21.

[41] A. B. ATKINSON, T. PIKETTY, E. SAEZ, *Top Incomes in the Long Run of History*, in "Journal of Economic Literature", 49, 2011, n. 1, pp. 3-71; F. ALVAREDO, A. B. ATKINSON, T. PICKETTY, E. SAEZ, *The Top 1 Percent in International and Historical Perspective*, in "Journal of Economic Perspectives", 27, 2013, n. 3, pp. 3-20.

[42] For further discussion, G. ALFANI, T. MURPHY, *Plague and Lethal Epidemics*, cit.

ively here. Hence, the objective of this section is simply to provide an overview of some of these debates, focusing on the early modern period.[43]

A first important point to underline, is that preindustrial inequality growth (either rural or urban) could not be presented simply as a by-product of economic growth. Indeed, economic growth may contribute to explaining some cases, like that of the Dutch Republic after it gained independence and went through its Golden Age. It seems, in fact, that this case has been pivotal in spreading among economic historians the idea that inequality grows together with per capita GDP, ever since the seminal article by Van Zanden on Holland.[44] Van Zanden, in his turn, presented his interpretation as an extension of the famous hypothesis put forward by Kuznets,[45] according to which income inequality followed an inverted-U path through the industrialization process (the so-called "Kuznets Curve"), with a rising phase at the beginning of industrialization. This path would be the consequence of economic development, and particularly of the transfer of the workforce from a traditional (agrarian) sector to an advanced (industrial) one. Note that Kuznets's hypothesis referred to income inequality, however it stands to reason that it can also be applied to wealth.[46] For Van Zanden, in the Dutch Republic inequality growth at the onset of the industrialization process merged with a longer phase of rising inequality covering the early modern period – resulting in what he called a "super-Kuznets curve". In his view, preindustrial inequality growth was even "over-explained" by economic growth. He proposed different explanations for why economic growth could foster inequality growth: (i) urbanization (hence, transfer of workforce from a rural/backward sector to an urban/relatively advanced one); (ii) increasing skill premium; (iii) changes in the functional distribution of income. Van Zanden's interpretation was grounded in the specific context of the Dutch Republic, one of the most economically dynamic areas of early modern Europe. Recently, somewhat similar views have been expressed by Bas Van Bavel who argued, based on evidence for some specific periods and areas including the Dutch Republic during the seventeenth century, that inequality increase was associated with the development of market economies, which may have led to growth in inequality of both income and wealth through increases in the efficient scale of trade and production, growing opportunities for financial dealing and speculation, growing investment opportunities (favouring the elites) in landed property and in shares of the public debt.[47] Although admittedly Van Bavel hints at the possibility that, after a certain

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[43] For a more complete and systematic treatment of this complex matter, see G. ALFANI, *Wealth and Income Inequality in the long run of history*, in C. DIEBOLT and M. HUPERT eds., *Handbook of Cliometrics*, 2ns Edition, Berlin-Heidelberg 2019; G. ALFANI and M. DI TULLIO, *The Lion's Share*, cit.; G. ALFANI, *Economic inequality in preindustrial times: Europe and beyond*, in "Journal of Economic Literature", forthcoming.

[44] J.L. VAN ZANDEN, *Tracing the beginning of the Kuznets Curve*, cit.

[45] S. KUZNETS, *Economic Growth and Income Inequality*, in "American Economic Review", 45, 1955, n. 1, pp. 1-28.

[46] P.H. LINDERT, *Toward a comparative history of income and wealth inequality*, cit.; IDEM, *Making the most of Capital in the 21st Century*, cit.

[47] B. VAN BAVEL, *The Invisible Hand? How Market Economies have Emerged and Declined since AD 500*, Oxford 2016, pp. 192-193.

level of markets development, further inequality increases might occur even in the absence of substantial economic growth and as a consequence of concentration of political power in the hands of the wealthiest, the fact remains that for him, in market economies "inequality grows most in the phases in which economic growth is more conspicuous".[48]

It is surely possible, even probable, that the inequality growth that has characterized the Dutch Republic during the early modern period was, at least in part, the consequence of economic growth. However, this argument could not be generalized to the rest of Europe, where income and wealth inequality growth were also found in periods of economic stagnation, or decline.[49] This was, for example, the case in many Italian states[50] as well as in the southern Low Countries[51] and, as will be seen, this is why much recent literature has been looking in other directions for an explanation of preindustrial inequality growth. After all, even for modern times it is now clear that the association between inequality growth and economic development can no longer be described in simple "Kuznetsian" terms: "the recent increase [in income inequality] since around 1980… does not fit the [Kuznetsian] predicted earnings dynamics within the distribution. As an increasing number become skilled, the difference within the top should decrease, not increase as seems to be the case".[52] Moreover, the decline in income inequality in the first half of the twentieth century also does not easily fit the Kuznets curve paradigm, as the decline was driven, to a large degree at least, by the dynamics of capital income, and not of labour income.[53] From all the above considerations, the conclusion can be reached that "there is no mechanical relationship between inequality and industrialization or technological change. It is no more unavoidable that inequality increases in early stages of introducing new technology, than it is automatic that inequality eventually goes down".[54] For these and other reasons, many scholars have argued that we should move definitely beyond the idea of the Kuznets curve.[55] Similar views have also been expressed about preindustrial times, and more generally the idea that

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[48] *Ibid.*, p. 261.

[49] This is is also confirmed by comparing the available estimates of per-capita GDP with the estimates of economic inequality in time: G. ALFANI, W. RYCKBOSCH, *Growing apart in early modern Europe?*, cit.; G. ALFANI, M. DI TULLIO, *The Lion's Share*, cit..; G. ALFANI, *Economic inequality in preindustrial times*, cit.

[50] IDEM, *Economic Inequality in Northwestern Italy,* cit.; G. ALFANI, F. AMMANNATI, *Long-term trends in economic inequality*, cit.; G. ALFANI, M. DI TULLIO, *The Lion's Share*, cit.

[51] G. ALFANI, W. RYCKBOSCH, *Growing apart in early modern Europe?*, cit.

[52] J. ROINE, D. WALDENSTRÖM, *Long Run Trends in the Distribution of Income and Wealth*, in *Handbook of Income Distribution*, A.B. ATKINSON, F. BOURGUIGNON eds., vol. 2A, Amsterdam 2015, pp. 469-592, 552.

[53] T. PIKETTY, *The Kuznet's curve, yesterday, and tomorrow*, in *Understanding Poverty*, A. BANERJEE, R. BENABOU, D. MOOKERHEE eds., Oxford 2006, pp. 63-72; IDEM, *Capital in the Twenty-First Century*, Cambridge MA 2014.

[54] J. ROINE, D. WALDENSTRÖM, *Long Run Trends in the Distribution of Income and Wealth*, cit., p. 552.

[55] For example, P.H. LINDERT, *Three centuries of inequality in Britain and America*, cit.; IDEM, *Making the most of Capital in the 21st Century*, cit.

economic growth should be considered as the most obvious culprit in inequality growth has been challenged directly.[56]

Beyond economic growth, other factors that have been considered capable of promoting inequality growth in the long run include population growth and urbanization (which is itself a possible indicator of economic growth), as well as proletarianization: that is, the process leading a share of the European population, growing throughout the early modern period, to lose the ownership of the means of production, thus becoming dependent on selling their labour for wages. Some of these factors, and particularly proletarianization,[57] do seem able to contribute to explain distributive dynamics in some periods and areas. They, however, could not be taken as exclusive or even principal explanations of early modern inequality growth, either because empirically they are found to be no better (and sometime quite worse) correlated with inequality growth than economic growth, or because they refer to processes that affected Europe in waves, like in the case of proletarianization,[58] or however in a discontinuous way, and so seem unable to determine the smooth monotonic trends shown in Graph 3. Consequently, here they will not be discussed further, referring to other publications for a more detailed analysis.[59]

If we look for general explanations, political-institutional factors currently seem to be the most promising. Recently, Scheidel has underlined the connection between political power and the building of great fortunes in early modern times, especially in the context of large empires, like the Ottoman or the Spanish, or of highly centralized states like the Kingdom of France.[60] He also argued more generally that "in the long run, political and material inequality evolved in tandem",[61] but did not describe in detail the actual mechanisms leading to this result. Generally speaking, there is little doubt that in a preindustrial context, political power could be a crucial tool in building a fortune. However, in medieval and early modern Europe, while this might explain a significant part of the tendencies affecting the top rich, we find a much more encompassing process of wealth concentration, which affected the entire society – leading, in fact, to growing polarization: throughout the early modern period, the poorest strata of society became increasingly distant both from the high and the middle strata.[62] To understand this process, it is important to

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[56] G. ALFANI, *Prima della curva di Kuznets: dinamiche della ricchezza tra Medioevo ed Età Moderna*, in *Ricchezza, valore, proprietà in età preindustriale 1400-1850*, G. ALFANI, M. BARBOT eds., Marsilio 2009, pp. 143-167; G. ALFANI, *Wealth Inequalities and Population Dynamics*, cit.; IDEM, *Economic Inequality in Northwestern Italy,* cit.; G. ALFANI, M. DI TULLIO, *The Lion's Share*, cit.; G. ALFANI, *Wealth and Income Inequality*, cit.

[57] For example, W. RYCKBOSCH, *Economic inequality and growth before the industrial revolution*, cit; G. ALFANI, W. RYCKBOSCH, *Growing apart in early modern Europe*?, cit.

[58] C. TILLY, *Demographic origins of the European proletariat'*, in *Proletarianization and Family History*, ed. D. LEVINE, Orlando 1984, pp. 1-85.

[59] G. ALFANI, *Wealth and Income Inequality*, cit.; G. ALFANI, M. DI TULLIO, *The Lion's Share*, cit.

[60] W. SCHEIDEL, *The Great Leveller: Violence and the Global History of Inequality from the Stone Age to the Present*, Oxford 2017, pp. 80-83.

[61] *Ibid.*, p. 43.

[62] G. ALFANI, *Economic Inequality in Northwestern Italy*, cit.; G. ALFANI, M. DI TULLIO, *The Lion's Share*, cit.

look closer at some crucial institutional developments, which were surely connected to, but did not merely mirror, changes in the distribution of political power. I refer in particular to the rise of the fiscal-military state.

From ca. 1500, the growing cost of warfare increased states' financial needs. In turn, a larger and more efficient military allowed for concentration of coercive power, providing the means to impose a growing fiscal extraction. This led to the deepening of states' fiscal capacity and to increases in the per capita fiscal burden.[63] For example, in the period ca. 1550 to 1780, per capita fiscal pressure more than trebled in the Sabaudian State, increased six-fold in France and almost seven-fold in England and the Dutch Republic. Such increases were able to produce, by themselves, greater inequality as the structure of the preindustrial fiscal systems was overall regressive: the effective tax rates paid by those at the top were lower than those suffered by the bottom of society. Consequently, contrary to what is common in modern advanced societies, post-tax inequality was greater than pre-tax inequality. This was the consequence of a regime of systematic privilege, enrooted in law and institutions as well as in a culture that favoured nobles over commoners, citizens over rural dwellers, and so on. Regressive taxation affected both the income and wealth distribution (note that in the long run, the total income distribution tends to shape the wealth distribution through the mechanism of savings). As the structure of early modern fiscal systems did not change much during the early modern period, remaining markedly regressive, the increase in per-capita taxation caused by the rise of the fiscal-military state was able to also increase the capacity of such fiscal systems to promote more and more inequality growth over time. As a possible explanation for preindustrial inequality growth, increase in per-capita (regressive) taxation has two particularly desirable features: it was a pan-European phenomenon, and it progressed in a basically monotonic way during the early modern period in most areas of the continent – which is exactly what we need in order to explain general trends of the kind shown in Graph 3. Additionally, the process of the rise of the fiscal-military state and of the parallel increase in the per capita fiscal burden involved all European states independently from their economic conditions, as all had to play the same game if they were to protect themselves or to be able to project military power outside their boundaries. Consequently, it can be used to explain the numerous instances of preindustrial inequality growth in stagnant or declining economies.[64]

A recent study has analysed the case of the Republic of Venice or more specifically of its Italian domains, the *Terraferma*.[65] Here, during the early modern period the effective overall fiscal rate weighing on the poorest 10% of the population might have been as little as 20-25%, and as much as 55-60% higher than that paid by the richest 5%, taking into account both direct and indirect taxation. The regressive structure of the fiscal levy did not change significantly over time, but as else-

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[63] *The rise of fiscal state in Europe (1200-1815)*, ed. R. BONNEY, Oxford 1999; *The Rise of Fiscal States: A Global History. 1500-1914*, B. YUN-CASALILLA, P.K. O'BRIEN eds., Cambridge 2012.

[64] G. ALFANI, *Economic Inequality in Northwestern Italy*, cit.; G. ALFANI, W. RYCKBOSCH, *Growing apart in early modern Europe*?, cit.; G. ALFANI, M. DI TULLIO, *The Lion's Share*, cit.

[65] *Ibidem.*

where, per-capita fiscal pressure increased: by about 70% from the mid-sixteenth to the mid-eighteenth century. Although this increase was more moderate than elsewhere (partly because levels of taxation in the sixteenth-century *Terraferma* were relatively quite high to begin with), it is still significant and able to increase considerably the ability of the fiscal system to promote further inequality growth. This view is strengthened by the consideration that the main reasons for collecting more and more resources – war and the service of public debt, itself mostly accumulated to pay for war and defence – did not lead to inequality reduction as the consequence of state expenditure, differently from what we are used to today when welfare and social spending represent the largest component of the public budget. On the contrary: in preindustrial settings, state expenditures probably further favoured inequality growth.[66]

Although it seems certain that during the early modern period the rise of the fiscal-military state played a very important role in favouring inequality growth across Europe, this was surely not the only factor at work. Other factors might have played an important, and even a crucial role in at least some specific historical phases. Indeed, it is probably wrong to focus research solely on identifying a single unifying cause of long-term inequality growth. In fact, as is arguably also the case for research on inequality trends in more recent epochs,[67] we should openly recognize that the main causes explaining distributive dynamics can vary across space and time. Additionally, the exceptional vitality shown in recent years by studies of historical inequality suggests that the availability of good-quality information will continue to increase at a steady place, allowing us to explore in greater depth the factors at work and the very nature of the historical processes that underlie distributive dynamics. This is also bound to keep well alive the debate on the roots of preindustrial inequality.

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[66] *Ibid.*, pp. 165-174.

[67] P.H. LINDERT, *Three centuries of inequality in Britain and America*, cit.