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Abstract

Earlier research on poverty failed to provide us with consistent measures of its prevalence across space and time. This is due to the limitations of the available sources and to the difficulty of applying to them the poverty definitions of modern social science. This article discusses different possible approaches to poverty measurement and the problems encountered when applying them to historical sources. Thereafter it proposes a way to measure absolute and, more importantly, relative poverty which makes good use of the information made available by recent research on inequality. We detect a long-run tendency towards an increase in the prevalence of poverty, both in the South and in the North of Europe. This trend was only temporarily interrupted by large-scale plague and other catastrophes, although the Black Death had stronger and more persistent poverty-reducing effects. Our approach, which this article applies mostly to Italy, the Low Countries and partially Germany and other areas, could be used for even broader international comparisons.

JEL Codes: D31, I12, I14, I30, N30, J11, J31

Keywords: Poverty, economic inequality, social inequality, wealth concentration, Middle Ages, early modern period, Italy, Low Countries, Germany, plague, Black Death

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Poverty in preindustrial Europe has been the subject of extensive studies. The previous decades have, for instance, brought us illuminating debates on the organisation and extent of early modern poor relief, as well as on its causes and effects. Several scholars have asked how medieval and early modern societies dealt with the problem of poverty, why they did so, and what the consequences were for economic growth, migration, community, and inequality.¹ Others have concentrated on shifts in the meaning and cultural production of poverty as an idea and concept, or of distinct categories of deserving and undeserving poor.² These social and cultural perspectives on medieval and early modern poverty have been crucial in highlighting not just the extent of poverty in European history, but also the variety of policy responses poverty elicited, and the consequences of the policy choices made by government and civil society in the past.

Somewhat unexpectedly, the scholarly focus on the cultural, political and social interaction with poverty in preindustrial times has left the economic side relatively understudied. Economic history has tended to agree with the medieval and early modern adage that poverty was a natural and virtually universal phenomenon: its existence, prevalence, and long-term persistence through the centuries is hardly called into question. By concentrating on the ways in which preindustrial societies dealt with poverty, historiography has largely side-stepped the question of how prevalent poverty was in the preindustrial past – and whether temporal and geographic differences existed. Was the prevalence of poverty constant across Europe and throughout the preindustrial era, or was it subject to shifts and reconfigurations?

There are good reasons why this question has not received a conclusive answer so far. Settling upon a definition of poverty that is both meaningful and feasible (given imperfect source materials) for a study that aims to cover a period of several centuries is itself not an easy task. Indeed, almost all of the historical studies dealing with reconstructions of poverty in medieval and early modern Europe have expressed frustration at the intractability and inconsistency of the criteria, categories and definitions used by contemporaries. These problems are further compounded by the fact that the poor themselves have left much less archival records than any other social group. This paper aims to add new insights to the question of the prevalence of the poor in medieval and early modern Europe, while also striving to bring some clarity to the methods that can be employed for this task given the notorious limitations

¹ Solar, 'Poor relief'; Healey, *The first century of welfare*; Hindle, *On the parish?*; Keniston McIntosh, *Poor relief in England*; van Bavel and Rijpma, 'How important were formalized charity'; Rubin, *Charity and community in medieval Cambridge*; Slack, *The English Poor Law*.

² See for instance Stedman Jones, *An end to poverty?*; Schen, 'Constructing the poor'; Pullan, *Rich and poor in Renaissance Venice*.

of the available sources. It does so by contrasting relative and absolute definitions of poverty relying on a large number of administrative – in particular fiscal – sources, and by arguing that the proper combination of objective absolute and relative measures of poverty offers good, but largely unexplored, opportunities for long-term comparisons.

Indeed, the time is ripe for new studies of poverty, because recent advances in other research areas promise to change our way of looking at the poor. Thanks to a large body of original work produced by social and economic historians our knowledge of medieval and early modern economic development, living standards and inequality is now considerable. Studies on living standards, wages, and economic performance have demonstrated how a ‘Little Divergence’ between southern and northern Europe took place during the early modern period.³ On the other hand, recent reconstructions of trends in wealth and income inequality have suggested growing inequality and socio-economic polarisation during the period of the emergence of the fiscal-military state and the expansion of merchant capitalism in both northern and southern Europe.⁴ It is intuitive how poverty connects to all these recent works – so it is somewhat surprising that it has received so little attention thus far. One specific aim of our article is to study if poverty increased together with inequality.

We begin by providing an overview of the available literature on poverty (Section I), together with the definitions and methods employed across the social sciences to measure and analyse this social phenomenon (Section II). In Section III (and in Appendix A), we take a different perspective: we look at how the late medieval and early modern fiscal sources (especially those from Italy and the Low Countries, but other European areas are also considered) defined the ‘poor’ who were eligible for special fiscal exemptions. In Section IV we focus on the concept of ‘relative poverty’, which allows us to use recent work on inequality at the regional or state level to produce new information about the spread of poverty across society. Section V provides some final conclusions, also indicating the directions towards which future co-ordinated European research could be more fruitfully addressed.

I: The prevalence of poverty in the European past: a critical overview of the literature

The prevalence of poverty plays an important role in rival interpretations of the transition towards capitalism. A first historiographical tradition, which is largely Malthusian

³ Allen, ‘The Great Divergence’; Pamuk, ‘The Black Death’.

⁴ For a synthesis, Alfani, ‘Economic inequality in preindustrial times’.

in nature, has underlined the constant and persistent character of pre-industrial poverty. According to this view, changes in the numbers of the poor in early modern societies were mostly cyclical: corresponding to the ups and downs in the tense relationship between demography and economic output.⁵ When seen from this perspective, poverty appears like a structural feature of preindustrial societies, while the intensity and prevalence of poverty was subject to Malthusian fluctuations. This also implies that the population at risk of cyclically falling into a condition of poverty was quite large, and included all those unable to accumulate resources to be used in times of dire need.⁶ Indeed, as spelled out by Laurence Fontaine, poverty was ‘a potential process, before being an acquired status’.⁷

Starting from similar premises, some recent economic theories have incorporated bleak, Malthusian views on the living conditions in preindustrial societies. Unified Growth Theory implies an extreme Malthusian situation in which almost everybody is stuck at subsistence levels until the onset of the Industrial Revolution, and a similar argument has been made by economic historian Gregory Clark – a self-declared ‘arch-Malthusian’.⁸ These positions have sometimes led to a view of pre-industrial societies as characterised by a generalized condition of ‘equality in poverty’.⁹ However, such views do not seem to reflect well the actual historical situation of preindustrial Europe which, as is becoming increasingly clear thanks to current research, was characterized by high and usually growing income and wealth inequality and, as we will show, by a high *but far from generalized* prevalence of poverty. Surely, as has recently been argued, these extreme ‘Malthusian’ interpretations do not reflect very well Malthus’ own views about the laws governing human history: as positive checks ensured that, barring phases of acute population pressure on resources, life above subsistence was a common enough human experience.¹⁰

A second historiographical tradition has stressed improvement rather than stasis. The consensus view shared by most social and economic historians specializing in late medieval and early modern times highlights the role of economic development in alleviating poverty. In some cases, this is argued in direct terms, by indicating how exceptional phases of economic efflorescence, such as the sixteenth-century Golden Age of Antwerp, helped to reduce the

⁵ For instance Scholliers, ‘De materiële verschijningsvormen’; Faber, *Dure tijden en hongersnoden*.

⁶ Pullan, ‘Poveri, mendicanti e vagabondi’; Fontaine, ‘Assistance et solidarité’; Fontaine, *The moral economy*; Alfani and Di Tullio, *The Lion’s share*, pp. 62-3.;

⁷ Fontaine, ‘Assistance et solidarité’, p. 4.

⁸ Galor, *Unified growth theory*; Clark, *A farewell to alms*. Note that Galor (pp. 90-1) admits that after 1500, some ‘mitigating factors’ at least hindered convergence towards Malthusian steady state.

⁹ Malanima, *Pre-modern equality*.

¹⁰ Alfani, ‘Economic inequality in preindustrial times’.

poverty rate.¹¹ More frequently, though, the argument remains implicit since no empirical evidence on the relationship between economic development and the prevalence of poverty is readily available. It is striking, for instance, how many general surveys of the pre-industrial European economy refer to ‘poverty’ only in this general, abstract sense: as a suggestive description of the state of the Malthusian economy that characterized Europe before the onset of (early) modern economic growth.¹² Additionally, most of this literature does not seem to have assimilated the newly accumulated knowledge about household-level distributions of wealth and income – admittedly, also because most of the information we now have about preindustrial household inequality has been published in the last five or six years. Indeed, for early modern times the combination of slowly improving *average* living standards, often measured as per-capita GDP, and of growing inequality implies that while undoubtedly some people benefited from growth, not all were equally advantaged.¹³ Growing per-capita GDP and growing income inequality would be compatible with *both* an increase, or a decline in the prevalence over time of poverty, and the actual trend would be defined by the relative strength of the two historical processes, as well as by the fine detail of the distributive dynamics (in particular, by how growth benefited different percentiles of the overall distribution). This only confirms the need to try and measure poverty as directly as possible, and the illusory character of any attempt at predicting a priori its extent and its spread, or of deducing it from other indicators like per-capita GDP.

As a further confirmation a third historiographical tradition, in direct contrast with the second, argues for a growing prevalence of poverty in early modern Europe. Research on the proletarianization process, for instance, has stressed how the growing importance of commerce and capital in late medieval and early modern Europe could have favoured the spread of poverty.¹⁴ But the positive empirical correlation between commercialization and poverty could be the outcome of the opposite mechanism: if poor relief reform was able to increase market

¹¹ Blockmans and Prevenier, ‘Armoede in de Nederlanden’.

¹² For instance, Peer Vries’ 2013 book called *Escaping poverty: the origins of modern economic growth* does not talk about the level of poverty in the pre-industrial world, despite its title. Nor does, for instance, Broadberry and O’Rourke’s *Cambridge Economic History of Modern Europe, 1700-1870* contain an index entry on poverty, let alone a chapter. Likewise, Robert Allen’s article on ‘Progress and Poverty in Early Modern Europe’ does not exactly live up to its title, since it provides estimates of total factor productivity and real wages, but not of the numbers of poor people.

¹³ For a comparative analysis of trends in per-capita GDP in preindustrial societies, it will suffice to cite Fouquet and Broadberry, ‘Seven centuries’. For an overview of recent works on preindustrial inequality, Alfani, ‘Wealth and income inequality’; Alfani, ‘Economic inequality in preindustrial times’; Alfani and Di Tullio, *The Lion’s share*.

¹⁴ Lis and Soly, *Poverty and capitalism*.

dependence, it could also be credited with fostering commercial growth.¹⁵ As the two mechanisms are not logically contrasting, they might both reflect aspects of reality and in such case, they may well have to be considered synergistic.

A fourth and final view on early modern poverty does not take demographic or economic growth as its starting point, but the family and the life-cycle. The literature on European family systems highlighted how different life-cycle stages and different types of marriage and familial organization led to different risks of vulnerability and poverty. This point of view would therefore predict that the spread and evolution of diverging marriage patterns across Europe during the late Middle Ages contributed to contrasting trajectories in terms of the prevalence of poverty. This branch of the literature is closely connected to the first (at least as practiced by social historians, not by economists) as it basically aims at providing a more detailed analysis of those characteristics of the household that made it more susceptible to falling into a condition of poverty during crises. So, while the size of the household and its structure by age and sex surely mattered (with larger households with many underage children being, *ceteris paribus*, more fragile, especially when headed by widows), other factors measurable at the household level were also very important, for example indebtedness or access to charity.¹⁶

None of these four historiographical traditions could be fully substantiated or disproven based on the limited information which has so far been available. In fact, recent research has emphasised how elements from all four historiographical traditions might have played an important role in different periods and places. For instance, Jonathan Healey has recently shown how life-cycle aspects were clearly important as causes of poverty in seventeenth-century England, but that the risk of poverty was also structural to a significant degree. Different economic and demographic factors across time and space thus combined with life-cycle effects, to create a more complex image of early modern poverty.¹⁷ However, further progress in our understanding of preindustrial poverty requires better and more comparable information about the very prevalence of the phenomenon. By systematically examining the levels of poverty across time and space in early modern Europe, this article provides essential groundwork for a better interpretation of its long-run determinants. Before doing that, though, we need to clarify which definitions of poverty, and which methods to measure it, are better suited to extract all the information that somewhat reluctant historical sources can offer.

¹⁵ Solar, 'Poor relief'.

¹⁶ Fontaine, 'Assistance et solidarité'; Alfani and Di Tullio, *The Lion's share*.

¹⁷ Healey, 'Poverty in an industrializing town'.

II: Definitions, methods and sources to study preindustrial poverty

There are at least two – interconnected – reasons why systematic empirical studies of medieval and early modern poverty levels are rare. One is the thorny question of definitions, and the other is the issue of sources. In studies of inequality today the most widely accepted definition is that provided by the World Bank: poverty consists of a ‘pronounced deprivation in well-being’.¹⁸ Although few would dispute this abstract definition, its application requires agreement on more contested issues such as the precise definition of what ‘pronounced’ deprivation is, as well as of how ‘well-being’ can be measured.¹⁹ Depending on the purpose for which measurement is conducted, the first step is the selection of a suitable indicator of welfare for which data can be gathered for a representative sample of the population. The second step is the choice of a poverty line: those who do not reach such a line in terms of their access to the selected welfare indicator are considered to be poor. The most common indicators of welfare used for this purpose are income (in developed countries) and consumption expenditure (in developing countries). Data for both these indicators is most often collected from stratified samples of household surveys.²⁰

Poverty lines can be either relative or absolute, and objective or subjective. Relative poverty measures typically define poverty lines as a constant proportion of the mean or median income or consumption level.²¹ The European Union for instance defines poverty as incomes falling below 60% of the median income. This way of measuring poverty is very useful for policy purposes, for example to define the potential impact of public actions targeting the poor. However, for comparisons between countries and over time, often absolute poverty lines are preferred. An absolute poverty line means that the threshold is fixed in terms of the indicator being used, and is defined in such a way that it allows for meaningful comparisons. This means that absolute poverty lines must reflect a similar purchasing power across the sample. The implication is that it is possible to identify a basket of essential goods and services. The poor are those whose purchasing power is below that required for the basket. However, the definition of an absolute or biologically defined minimum subsistence level has proven to be elusive, and the criteria for fixing objective absolute poverty lines are thus often the subject of dispute. This is shown, for example, by recurrent discussions at the World Bank on whether the absolute

¹⁸ World Bank, *World Development Report 2000/2001*.

¹⁹ Houghton and Khandker, *Handbook*, pp. 20-35; Atkinson, ‘On the measurement of poverty’.

²⁰ Houghton and Khandker, *Handbook*, pp. 15-16.

²¹ Ravallion, ‘Poverty comparisons’.

global poverty line should be at US\$1, US\$1.25, US\$1.5 or even US\$2.0. The alternative is to opt for subjective poverty lines, which are fixed by asking the poor themselves (or the surveyed population in total) where they believe the poverty line should be located. Although measures of life satisfaction and happiness are becoming increasingly popular in economics, self-rated poverty definitions are rarely used and generally considered inadequate for comparing poverty across time and space.

Although the most suitable definition of poverty for specific purposes, and how poverty should be measured, are highly debated issues there exists an ample consensus on a number of useful welfare indicators and poverty line definitions. However, if one wants to measure poverty in the long run of history, such approaches invariably run into important difficulties. Studies of poverty based on today's standards of measurement began only at the turn of the twentieth century. Seebohm Rowntree, an English industrialist and sociologist, for instance, carried out one of the first large-scale quantitative studies of poverty in the city of York in 1899, and again in 1935.²² His surveyors visited more than 16.000 families, and complemented this information with wage and income data supplied by employers. He then defined a poverty line based on the income required "to secure the necessaries of a healthy life." However, before Rowntree's times there are hardly any systematic studies of poverty according to modern criteria. Take for example the French philosopher and mathematician, Condorcet, who in 1788 defined as poor 'he who has neither land nor personal property [and who] is destined to fall on hard times should the slightest mishap befall him'.²³ These and other definitions of poverty as a process, not as a status (see Section I), while they tell us much about the reality of life in preindustrial times, are obviously difficult to transform into a workable definition of poverty which could be applied to measuring the prevalence of inequality based on the sources available.

Indeed, sources detailing the income or consumption expenditure of the poor are very rare before modern times, and assessing the composition and price of the 'necessaries of a healthy life' for this period is fraught with difficulties. What we have with relative abundance, are fiscal sources of the kind much-used by recent studies of preindustrial inequality. These were property tax records, like the Italian *estimi* that exist in close variants in many other European areas from north-eastern Spain to southern France and parts of Germany, or general taxes on (components of) income, such as the *huishuurgelden* commonly used in the Low

²² Rowntree, *Poverty: a study of town life*; Rowntree, 'Poverty and progress'.

²³ Cited from Fontaine, *The moral economy*, p. 16.

Countries. Indeed, these sources allow us to follow two different and mutually supporting approaches to poverty measurement. It seems convenient to present the virtues and shortcoming of such approaches by looking at how they combine two crucial aspects: ‘subjective vs objective’ definitions of poverty, and measurement of ‘absolute vs relative’ poverty (Table 1).

A first approach is based on information about the poor that comes directly from those sources that *label* a part of the population as poor or miserable. This requires us to ask who did contemporary observers consider to be poor, and what were their criteria for labeling a household or an individual as such. Quite clearly, following this line of reasoning we are embracing a “subjective” definition of poverty. However, we do not focus on the peer evaluation of just any observer, but of a very specific kind, namely fiscal administrators charged with drawing up tax records and determining each household’s fiscal contribution. These local administrators can generally be assumed to have been incentivized to maximize fiscal revenue and the number of contributors – so that it is unlikely that their definition of poverty will often have strayed very far from a household’s total inability to pay tax. As a consequence, what these authors tell us about is the prevalence of conditions of ‘absolute’ poverty.

This approach, which is similar to the use of village-based definitions of poverty in developmental research today, has the advantage of being within reach of the kind of data available for preindustrial times.²⁴ Moreover, the general scarcity and unreliability of income, consumption expenditure and price data required to estimate a basic cost of living for the poor, makes it unlikely that a quantification of these scattered data would produce results any more accurate than a local and contemporary direct estimate (see further discussion in the following). This approach, however, is also beset by difficulties. When we equate a contemporary fiscal assessor’s evaluation of a household’s poverty to an absolute poverty line, we must be aware of the fact that these evaluations potentially changed across space and time. Insofar as these changes reflect differences in the cost of living or in the attainment of minimum levels of welfare, they are not necessarily problematic, and do not differ much from how global poverty is measured today.

However, other contextual variables may also have impinged on fiscal assessments of poverty. One of those is fiscal pressure. The higher the fiscal pressure imposed by the state, the higher the pressure on fiscal administrators to reduce the number of exemptions extended to

²⁴ Compare for instance to Krishna, ‘Escaping poverty’.

the poor. Since fiscal pressure increased in most European states over the course of the early modern period, it is not unreasonable to assume that this also exerted an influence on fiscal evaluations of poverty.²⁵ Secondly, one should also take into account the possibility that definitions of the poor for reasons of fiscal exemption were influenced by moral and religious concerns rather than by purely fiscal ones – indeed, this happened even for apparently ‘objective’ definitions, like that of vagrancy, which instead can be shown to be culturally-determined.²⁶ In medieval and early modern Europe tax exemptions were (at least in theory) based on a conception of society in which the clergy, the nobility, and often also the poor, were believed to be entitled to specific tax regimes based on their place in the social hierarchy.²⁷ Since these exemptions and their religious, moral and social justification were subject to growing contestation during the early modern era, it is again not inconceivable that this affected the definitions of poverty used by fiscal administrators. It is therefore important to place the fiscal assessments of poverty in the wider context of public attitudes towards taxation and the poor in general (see Appendix A).

Table 1. *Alternative approaches to poverty measurement*

	Subjective	Objective
Absolute	Fiscal definitions of poverty: % of exempted households, etc.	Model distributions (social tables); subsistence baskets
Relative	Self-reported assessments of perceived poor status: for instance based on pauper petitions	Poverty-line approach based on detailed wealth or income distributions

A second approach that preindustrial fiscal sources allow us to pursue is based on the household-level distributions of wealth and (rarely) income that can be produced from them. In many cases, and surely in that of the property tax records widespread in southern Europe, fiscal sources report estimates which are not readily convertible in a common currency, either

²⁵ Alfani and Di Tullio, *The Lion’s Share*; Yun-Casalilla and O’Brien, *The rise of fiscal states*.

²⁶ Hitchcock, ‘The Vagrant Poor’.

²⁷ Mousnier, ‘Les concepts d’ordres d’états’; Pullan, *Rich and poor in Renaissance Venice*.

because the unit of measurement they used is difficult to identify with precision, or because it does not reflect market values but simply the relative position of households according to their fiscal capacity.²⁸ These relative positions (transformed into household shares of the overall estimation of the taxable wealth of the communities) were then used to distribute various fiscal burdens. While this is not a problem in studies of inequality – as the most popular inequality measures, like the Gini index or quantiles of various kind, are pure numbers – in the case of poverty this makes it difficult to estimate meaningful absolute poverty lines. But we can still apply relative ones: as these are usually defined as a certain fraction of the median value of the distribution, their use for studying poverty requires no additional information. Indeed, relative poverty lines can be set according to the same criteria used in studies of poverty today, as discussed in Section IV. Note that, as the setting of relative poverty lines is not based on individual perception, but is (or should be) based on recognized best practices and on accepted technical conventions, the use of fiscal assessments in this way leads to producing poverty measures classifiable as “objective”. Also note that on principle, this approach could be applied also to distributions reconstructed from probate inventories by means of re-sampling techniques (to solve the problem of under-representation of the poorest strata in probates), of the kind recently proposed for Sweden.²⁹

While in the rest of the paper we will focus on the first and the second approach, it must be noted that many earlier studies tried to provide at least a glimpse of the extent of ‘absolute’ poverty. These studies can be divided into two main branches, which are however interconnected. One strives to define consumption baskets appropriate to a given society and period. This leads to defining, first of all, pure subsistence baskets, or ‘bare-bones baskets’ in the words of Robert C. Allen.³⁰ Those individuals or households that barely reach this level are to be counted among the poor – hence bare bones baskets define a first poverty line. But Allen also proposes a second poverty line, which corresponds to larger ‘respectability baskets’. Those who could not afford it can also be considered poor because their level of consumption is not sufficient to reach a socially-acceptable minimum. The second branch of studies focuses on constructing ‘model distributions’, which usually take the form of social tables. Based on these, the share of the population living in poverty can be estimated, at least on principle. For example, in their recent encompassing study of preindustrial England, Broadberry et al. use a set of new social tables and apply to them Allen's respectability baskets. This leads to the

²⁸ See Alfani, ‘Economic inequality in northwestern Italy’, p. 1065 for a discussion.

²⁹ See Bengtsson et al., ‘Wealth inequality in Sweden’.

³⁰ Allen, *The British industrial revolution*, pp. 25-56.

conclusion that in 1290 about 41% of English families were poor, dropping to 22% by 1381 as a consequence of the Black Death, and then fluctuating around this level for the remainder of the medieval and early modern era (20% in 1801-3).³¹

Although such estimates of objective-absolute poverty can be instructive, the paucity of information on which they are usually based makes them vulnerable to criticism of any of the many underlying assumptions, and of little use in studying local poverty levels in a more fine-grained manner. Furthermore, such measures are necessarily restricted to a few years only, thus limiting the opportunities for analyzing long-term trends. So, while these studies are undoubtedly interesting and relevant, and will serve as useful terms of comparison in the following, we believe that it is also very important to try and study poverty in a more direct and empirical way.

Indeed, the only approach that (we believe) is impossible to pursue with any degree of systematicity based on preindustrial sources, is that which corresponds to the combination of a ‘subjective’ definition of poverty with a ‘relative’ method of measurement. To clarify, this approach is that which can be applied to modern surveys of self-reported assessments of perceived property – surveys which are obviously lacking for preindustrial times.

III: The prevalence of the fiscal poor

The main obstacle to using fiscal sources for a comparative study of poverty, is that no universal definition of fiscal poverty was ever applied across Europe. Indeed, significant local variation existed even within a given principality or state. Tax exemption on the basis of poverty was usually at the discretion of local authorities, tax collectors, or poor relief institutions, and few of these authorities bothered with regulating the matter in detail. Consequently, the way in which fiscal sources defined the poor (or the tax exempts) presents many elements of subjectivity. Often the basis for exemption was determined by peers (members of the same community), for example when fiscal exemption for poverty was simply given to those benefiting from local relief, rather than by more uniform criteria defined in central legislation or by adopting absolute poverty lines according to an ‘objective’ principle. Appendix A provides additional historical detail about regulations and practices used in different European areas. And yet, notwithstanding this heterogeneity in the information available, fiscal sources, documentation related to beneficiaries of poor relief, and other

³¹ Broadberry et al., *British economic growth*, pp. 328-32.

historical sources of this kind remain a useful starting point for any attempt to provide at least some tentative quantification of long-run trends in poverty – also because this is the kind of information which has been employed by most earlier studies.

For some European areas, especially Italy and the Low Countries, the earliest useful figures about the prevalence of poverty based on fiscal sources date from the fourteenth century. The most abundant data comes from Italy. In the Tuscan *estimi* or *catasti* (property tax records) the poor with no ability to pay taxes were basically excluded from the records,³² but for 1364 and 1383 it is possible to measure the share of *nichil habentes* or ‘propertyless’ in the *contado* of Florence: 46% and 53%.³³ As for the city of Florence, Stella – using other fiscal sources – calculated an average incidence of the miserable on the total population of 36.4% and 28.3% respectively for 1355 and 1378.³⁴ The *libra* of Prato of 1372 also shows that the people listed with a value equal to zero were 37.6% of the total taxpayers,³⁵ while, for Siena, a comparison between the citizens enrolled in the *Tavola delle possessioni* of 1318 (which recorded only the owners of real estate) and the *libra* of 1328 (in which all the householders were listed) reveals that the propertyless were approximately 50% of all households – although the spread of sharecropping in this area suggests caution in the interpretation (see Appendix A for further details)³⁶. For the Low Countries, our earliest indications do not come from traditional tax records, but from sources detailing the innings from confiscated property after the Peasant Revolt of 1323-28 in Flanders. Based on these, we estimated that 22% of all households in the rural countryside of Coastal Flanders included in the confiscation records were recorded without any real estate, or ‘propertyless’.³⁷ For the towns of Veurne and Nieuwpoort their numbers rise to over 50%.

The data for the fifteenth century are more abundant. In Tuscany, the law of 1427 allowed Florentine citizens to deduct 200 florins for each member of the family: a significant amount, which prevents us from using the information about those assessed at zero as a proxy for poverty. This rule, however, was not extended to the taxpayers of the *contado*, who only shared with the citizens the deduction for the house of residence. The information about the valuations of rural households has often been used to provide rough estimates of the prevalence of poverty

³² Conti, *La formazione della struttura agraria moderna*, p. 14.

³³ Lis and Soly, *Poverty and capitalism*, p. 44.

³⁴ Stella, *La révolte des Ciompi*, p. 192. His data come from the books of the so called *Gabella della Segna* for the years 1351-4, integrated with estimates for 1378.

³⁵ Fiumi, *Demografia*, p. 93.

³⁶ Cherubini, *Signori*, pp. 245-7.

³⁷ Own elaboration based on Pirenne, *Le soulèvement*.

in late medieval Tuscany (see Appendix B for a detailed discussion and some data), however fiscal deductions obviously inflate these estimates. Luckily, the sources indicate the value of the deducted properties so, for a selection of 10 communities in the *contado* of Florence, we could reconstruct the ‘real’ patrimony by eliminating the distortion caused by deductions. We identified those taxpayers who really had zero wealth for two dates: 1458-60 and 1504. As can be seen in Table 2, in our sample of 10 communities the share of propertyless households moved from 28.8% in 1458-60 to 26.3% in 1504. In the city of Prato, they were 32.2% in the *catasto* of 1487.

Table 2. *Percentage of propertyless in the Florentine Contado, gross of deductions (% of households)*

Community	Year	
	1450	1500
Borgo S. Lorenzo	62.5%	38.2%
Castel S. Giovanni	19.1%	19.2%
Castelfiorentino	33.6%	21.0%
Cerreto Guidi	16.9%	18.8%
Gambassi	31.3%	23.5%
Monterappoli	31.6%	43.2%
Poggibonsi	37.7%	44.6%
San Godenzo	5.5%	0.9%
San Martino Alla Palma	12.0%	30.3%
Santa Maria Impruneta	38.0%	23.1%
Florentine <i>Contado</i> (overall)	28.8%	26.3%

Sources: archival sources listed in Appendix D1.

Some additional data relating to other parts of Tuscany corroborate these figures. In Pisa in 1428, out of 1,752 households in the *catasto*, 288 were considered miserable and another 203 did not have taxable wealth, for a total of 28% of all taxpayers.³⁸ In the community of Castiglion Fiorentino, the share of *miserabili* (miserable or poverty-stricken citizens) in the third decade of the fifteenth century was 10.9%, while among the inhabitants of the countryside it did not

³⁸ Casini, *Aspetti della vita economica*, p. 120.

exceed 6.9%.³⁹ Even in the community of Lari, in the Pisan countryside, in 1428 the miserable amounted to 15.1%, but as many as 62.8% were evaluated at less than 25 florins.⁴⁰ Similar figures are found for Pescia (10% without anything to declare, while 30% owned an average of 43 florins).⁴¹ The *catasto* of the community of Piuvica, in the countryside of Pistoia, listed 30% of taxpayers with no taxable wealth in 1427.⁴²

Medieval data about the propertyless are very rare for other Italian regions. For the Sabaudian State (the region of Piedmont) we have some information for Turin in 1393 (then a small city), when propertyless households amounted to 9.2% of the total.⁴³ Information becomes more abundant for the early modern times, although it is mostly restricted to the Sabaudian State in the northwest and the Republic of Venice in the northeast. For the Republic of Venice, we have particularly good information about the city of Bergamo in nowadays Lombardy and Padua in Veneto, as some sixteenth- and early eighteenth-century *estimi* also include the propertyless. As can be noticed in Table 3, in these two important cities the propertyless ranged from about 3 to 10%, depending on the period. These numbers for North Italy might seem low compared to those reported above for Tuscany, but they reflect the absence of deductions, the very limited spread of sharecropping in these areas, and also the fact that the early modern *estimi* also recorded tiny properties. So for example, a household of rural labourers who did not own land, rented its house, and was heavily subject to cyclical economic fluctuations but owned a small vegetable garden or a part of a vineyard was not counted among the propertyless. Consequently, the estimates in table 3, as well as those presented below for Piedmont, can be considered a good lower bound for the prevalence of absolute poverty – defined, in this case, according to quite ‘objective’ criteria.

³⁹ Taddei, *Castiglion Fiorentino*, p. 344.

⁴⁰ Tremolanti, *I catasti dei contadini*, p. 145.

⁴¹ Brown, *In the shadow of Florence*, p. 110.

⁴² Herlihy, *Medieval and Renaissance Pistoia*, p. 186.

⁴³ Comba, ‘Méthodes’, p. 28.

Table 3. *Absolute poverty in northern Italy: the propertyless in Bergamo and Padua, 1537-1704 (% of households)*

Year:	Bergamo	Padua	<i>contado</i> of Padua	Province of Padua (city and <i>contado</i>)
1537	3.4			
1555	6.9			
1575		3.0		
1610	10.0			
1627		10.2	3.1	6.9
1640	5.0			
1642				
1694		6.7	8.1	7.4
1704	5.4			

Sources: Alfani and Di Tullio, *The Lion's share*, pp. 65-7.

For the province of Padua, we also have information about the rural areas (*contado*). There, the propertyless households were 3.1% of the total in 1627, and 8.1% in 1694. If we consider urban and rural households together, we can estimate that across the entire province of Padua propertyless households were 6.9% of the total in 1627, and 7.4% in 1694. Also note that the trends in both Padua and Bergamo suggest a sharp reduction in the prevalence of the propertyless as a consequence of the terrible plague of 1630, which killed about 40% of the population of the Republic of Venice. This is not visible in the series for the *contado*, arguably because in the rural areas a growth in the prevalence of the propertyless had resumed from the 1640s or 1650s,⁴⁴ as is also suggested by the more detailed trends in relative poverty discussed in Section V. We have limited information about other Italian areas, but for example in the cities of Moncalieri and Ivrea in the Sabaudian State (Piedmont) in 1613 the propertyless were

⁴⁴ Alfani and Di Tullio, *The Lion's share*, p. 66.

respectively 8.5% and 9.2% of all households:⁴⁵ figures very close to those reported for the Republic of Venice.

Additional interesting details are provided by documentation about charities and poor relief in large cities. In Genoa around the end of the eighteenth century, 5% of the total population was detained in some institution for public assistance.⁴⁶ In Florence in 1632, out of a population of about 66,000 people, 2,382 (3.6%) were interned in institutions created for the hosting (or reclusion) of the poor.⁴⁷ However, these figures don't tell us anything about how many were the *miserabili* who did not benefit from public assistance. Again in Florence in 1643, Pullan reports 1,700 foundlings and women housed at the Ospedale degli Innocenti and 800 beggars living in and outside the Conservatorio of San Salvatore. However, this total of 2,500 poor underestimates the numbers of "perpetual" poor, which Pullan argues fluctuated between 4 and 8% of the total population (thus numbering 3,000-6,000 in our own estimate).⁴⁸ Additionally, we need to remember that beyond perpetual poverty, there was a strong cyclical component, that also shows in the percentage of the population requiring charitable support. For example in the territory of Prato in Tuscany, in 1770 (concomitant with a famine in the area) 69.7% of the population of the city and 45.8% of that of the surrounding countryside was registered in the lists of the poor of the Casa Pia dei Ceppi, a charity, and received support in the form of bread.⁴⁹

How do these figures for late medieval and early modern Italy compare to the data available for the Low Countries? Much like the Italian *estimi*, local tax lists rarely give information on the number of poor individuals that were exempted and omitted from the records.⁵⁰ Mentions of 'paupers' in late medieval and early modern tax lists tend merely to denote a status of exemption from taxation, rather than referring to a consistent definition of poverty.⁵¹ The number of paupers recorded in tax lists could therefore vary from community to community. In Gelre and Zutphen in the Northern Low Countries for instance, tax lists from seven communities in the years 1469-1474 included percentages of poor households as low as 2%, and as high as 59% of the population.⁵²

⁴⁵ Alfani, 'Economic inequality in northwestern Italy', pp. 1063-4.

⁴⁶ Grendi, 'Ideologia della carità', p. 75.

⁴⁷ Lombardi, *Povertà maschile*, p. 203.

⁴⁸ Pullan, 'Poveri, mendicanti e vagabondi', p. 991.

⁴⁹ Pinto and Tognarini, 'Povertà'.

⁵⁰ This is the case for instance with most tax lists preserved for fifteenth-century Flanders. See the discussion in Lambrecht and Ryckbosch, 'Economic Inequality', p. 264.

⁵¹ Van Schaik, *Belasting*, pp. 138-40.

⁵² Based on *ibid.*, pp. 218, 224, 234, 309.

More informative are the hearth censuses occasionally undertaken in the fifteenth and sixteenth centuries, since those were meant to help with the equitable distribution of the tax burden across communities. They tended to enumerate the number of poor households per community so as to have them deducted from the overall assessed fiscal capacity. A summary of the data coming from hearth censuses is presented in Table 4. In Brabant in 1437 the number of poor households stood at 10% in the cities and at 31% in the rural areas. Local variation was high, as in some villages the prevalence of poor households rose to almost 50%, while elsewhere it was no higher than 8%. The available contemporaneous figures from Flanders are surprisingly similar: in the town of Ypres the households considered to be fiscally exempt because of poverty stood at 11%, while in the countryside of Walloon-Flanders in 1432 an average of 22% of households (rising to 27% in 1449) were exempt because they received poor relief.⁵³ A hearth tax from the village of Meerbeke (Flanders) in 1437 also indicates the presence of 29% poor households.⁵⁴

Table 4. *Fiscal poverty in the Low Countries: hearth censuses, fifteenth-sixteenth centuries*

Year	Cities		Rural areas	
	Poor households (%)	Tot households	Poor households (%)	Tot households
Brabant				
1437	10	78,333	31	81,190
1480	21	19,468	31	27,848
1496	20	7,299	31	27,848
1526	29	43,468	26	52,115
Flanders				
1469	26	6,252	24	33,184
Hainaut				
1540			27	34,286

⁵³ Pirenne, *Les dénombrements*; Blockmans and Prevenier, 'Armoede in de Nederlanden', p. 516.

⁵⁴ De Brouwer, *Demografische evolutie*, p. 48.

1562			22	19,710
Holland				
1494	35	10,001	30	8,384

Sources: own elaborations based on the sources listed in Appendix D2.

For the late fifteenth and the sixteenth century, data from the hearth taxes in Flanders, Brabant, Holland and Hainaut continue to provide a fairly consistent picture of the prevalence of the fiscal poor. In the countryside the figures range from 20 to 30% of households, while in the cities there was greater variation but the norm remains 20-30%. However, there is hardly any evidence from the largest cities. This is because the hearth censuses reflect attempts by central authorities to gain a stronger grip on the distribution of the fiscal burden over subordinate political units. For instance in Flanders, the three largest cities (Ghent, Bruges and Ypres) managed to avoid the 1469 hearth census in an attempt to retain political control over their share in the taxes paid to the Dukes of Burgundy.⁵⁵ Since these cities mostly levied their taxes through excises and the sale of annuities, tax lists indicating the fiscally-exempt households are rare. A hearth census of Ypres in 1431 identified approximately 11% of the households as poor.⁵⁶ The tax lists preserved for late-medieval Bruges probably omitted the poor – or simply allowed a substantial number of insolvent taxpayers to not pay their share. Indeed, a tax roll from 1394-96 Bruges identified only 0.16% of taxed households as poor: a highly improbable figure.⁵⁷ For Ghent we have good data for one parish only in the 1490s, when a comparison between two tax records, levied two years apart and characterized by different degrees of inclusiveness regarding the poorest strata, suggests that 49% of households were considered to be too poor to be taxed by the least inclusive tax. On the other hand, only 18% of the households in the parish were identified as receiving poor relief at the time, which demonstrates how competing definitions of fiscal poverty co-existed and were drawn upon on different occasions.⁵⁸

Hearth censuses became rare in the Low Countries after the sixteenth century, and most sixteenth- and seventeenth-century tax lists continued to omit the poor or to be otherwise

⁵⁵ Prevenier, 'La démographie'.

⁵⁶ Pirenne, *Les dénombrements*.

⁵⁷ De Meyer, 'De sociale structuren'.

⁵⁸ Blockmans, 'Peilingen naar de sociale structuren'.

unusable for our aims. It is only from the very end of the seventeenth century, when population censuses and new types of personal taxes (*capitation* or *hoofdgeld*) were levied more frequently, that information on the fiscal poor becomes abundant again. The data collected in Table 5 come from a variety of fiscal sources and regions within Flanders and Brabant. In some cases the definition of fiscal poverty corresponds to the number of households or individuals supported by the local poor relief institutions, but in other cases more extensive definitions were used. For instance, in the 1755 census in Brabant local authorities counted both the number of households receiving out-door relief, and the households which did not receive aid but were nevertheless considered poor.⁵⁹ The 1702 census in Brussels also listed poor households ‘receiving alms’ or ‘going for bread’, but also those who were simply declared poor ‘at the attestation of the pastor’ or were among the ‘working poor’.⁶⁰ Not surprisingly, in both these censuses the resulting proportion of poor households was very high: 44% in rural Brabant in 1755 and 35% in Brussels in 1702.

All the other estimates collected in Table 5 indicate levels of poverty in the range of 10-15% of all households. This lower figure most likely refers to households that received permanent poor relief from the parish, which was mostly open to specific categories of the deserving poor such as the widowed, sick and elderly.⁶¹ The account books of parochial poor relief institutions themselves indicate that on top of this group of people receiving permanent aid, a large number of households were occasional recipients of relief.⁶² Depending on how poverty was defined on specific occasions, the share of ‘poor’ households could then be considerably higher.

⁵⁹ Cosemans, *De bevolking van Brabant*.

⁶⁰ Analysis based on Heidi Deneweth, ‘Database of the Brussels 1702 census’ (HOST research group, Vrije Universiteit Brussel), based on Swinnen, ed., *De volkstelling*.

⁶¹ See on the role of the physical incapacity to work in English pauper petitions: Healey, *The first century of welfare*.

⁶² Kin, ‘Economische transformaties’, p. 40; Masure “‘Eerlycke huijsarmen’ of “ledichgangers”?’.

Table 5. Fiscal poverty in the Low Countries: fiscal sources and censuses, eighteenth century

Region	Year	Urban/rural	Poor households (%)	Type of source	Locations included
Brabant	1690	Urban	12	Tax	Leuven
Brabant	1702	Urban	35	Census	Brussels
Brabant	1755	Urban	18	Census	Brussels, Leuven, Diest, Meerhout
Brabant	1755	Rural	44	Census	Most of rural Brabant
Flanders	1759	Rural	13	Milling excise	Kasselrij Veurne
Flanders	1771	Urban & rural	11	Milling excise	entire province
Flanders	1800	Urban & rural	10	Census of the destitute	entire province

Sources: see Appendix D3.

In the case of the Low Countries, uneven availability of data across centuries has forced us to jump quite abruptly from the late Middle Ages to the eighteenth century. To partially fill in this gap we can consider the small city of Nivelles in Brabant (about 8,000 inhabitants in the eighteenth century), for which we have exceptionally frequent observations of fiscal poverty, based on a variety of sources (Table 6). These indicate a substantial stability in the prevalence of the poor throughout the sixteenth and the seventeenth centuries, around a level of approximately 30-35% of all households (only the number of households unable to contribute to the provincial excise on grain and beer in 1618 was considerably lower). The observations for the second half of the eighteenth century suggest a growth in poverty. This tendency for poverty to grow during the eighteenth century seems supported by information about the households receiving parochial poor relief in Ghent (Flanders): around 20% in 1740, 29% in 1780, and 36% in 1793.⁶³

⁶³ Kin, 'Economische transformaties', p. 40.

Table 6. *The evolution of fiscal poverty in the town of Nivelles (Southern Low Countries), 1496-1796*

Year	% poor households	Source type	Poverty type
1496	30	Hearth census	Fiscal exemption
1526	34	Hearth census	Fiscal exemption
1618	18	Excise on grain & beer	Fiscal exemption
1629	37	House census for military lodgings	Exemption
1656	33	Excise on grain & beer	Fiscal exemption
1686	35	Cadastral tax	Fiscal exemption
1709	29	Cadastral tax compared to census	Implicit fiscal exemption
1740	32	Administrative document	Poor relief recipients
1747	47	Capitation (head tax)	Fiscal exemption
1755	47	Census	Fiscal exemption
1796	51	Cadastral tax compared to census	Implicit fiscal exemption

Sources: see Appendix D4

The evidence presented so far for Italy and the Low Countries suggests that in preindustrial times, in both the north and the south of Europe, when tax authorities were required to determine how many households should be exempted from taxation they tended to classify 15 to 30% of all households as (fiscally) poor. Only in rural areas were lower percentages occasionally found (compare tables 2 and 4).

However, as the data for North Italy in early modern times suggest, when different and more ‘objective’ criteria were used, which usually consisted in taxing all households, including those owning just morsels of land or other negligible properties, the entirely ‘propertyless’ households were fewer: from a few percent points to around 10% of the total (compare Table 3). The same situation is also found in other European areas characterized by similar fiscal

systems. For example in Germany, propertyless households were very few in the countryside (in the county of Lippe, they grew from less than 1% in 1450 to about 3% in 1600 when their prevalence meets exactly that reported for the *contado* of Padua) and rather more abundant in the cities. In the important city of München, they were 2-5% of the total in the second half of the fourteenth century, and varied between 3 and 11% during the fifteenth century. In some German cities the propertyless might have been much more prevalent in the eighteenth century (20% or more), although fiscal fragmentation across the German area complicates regional and inter-temporal comparisons.⁶⁴

The case of Germany seems to suggest an increase in the prevalence of the propertyless (and probably, of absolute poverty) over time. Indeed, Germany is one of two European areas for which an attempt is underway to reconstruct a time trend in the prevalence of the propertyless across large areas. Alfani, Gierok and Schaff's still-provisional estimates suggest that across Germany, propertyless households were about 1% in 1400, growing to about 2% by 1500 and peaking at slightly over 4.5% around 1600. Thereafter they fell to less than 3% by 1700, subsequently resuming growth and exceeding 7% by 1800. In Germany, a long-run tendency towards growth in absolute poverty was interrupted only by the Thirty Year's War (1618-48) and the terrible plague of 1627-29, presumably due more to over-mortality among the poor and to the destruction of part of the patrimonies of the richest, than to egalitarian redistribution from the top to the bottom of society (see further discussion in Section IV).⁶⁵

Interestingly, these provisional tendencies for Germany match quite precisely those proposed by Alfani and Di Tullio for the Republic of Venice in northeastern Italy (Figure 1), based on the local data discussed above and on additional information.⁶⁶ In the Italian domains of the Republic, the prevalence of propertyless households was 1.5% in 1500 and it reached 4.7% on the eve of the plague which, entering Italy from Germany and France in the autumn of 1629, ravaged the North during 1630 causing the loss of about 35% of the overall population and maybe up to 40% in the Republic of Venice.⁶⁷ The plague seems to have caused an immediate drop in the prevalence of the propertyless (2.3% around 1650), which however by 1700 had already been more than compensated for (7.1%). Across the Italian domains of the Republic, absolute poverty continued to spread during the eighteenth century. These tendencies are coherent with the general literature on poverty,⁶⁸ which argued for a (so far unmeasured)

⁶⁴ Alfani, Gierok, and Schaff, 'Economic inequality'; Alfani, Gierok, and Schaff, *Poverty*.

⁶⁵ Alfani, Gierok, and Schaff, *Poverty*.

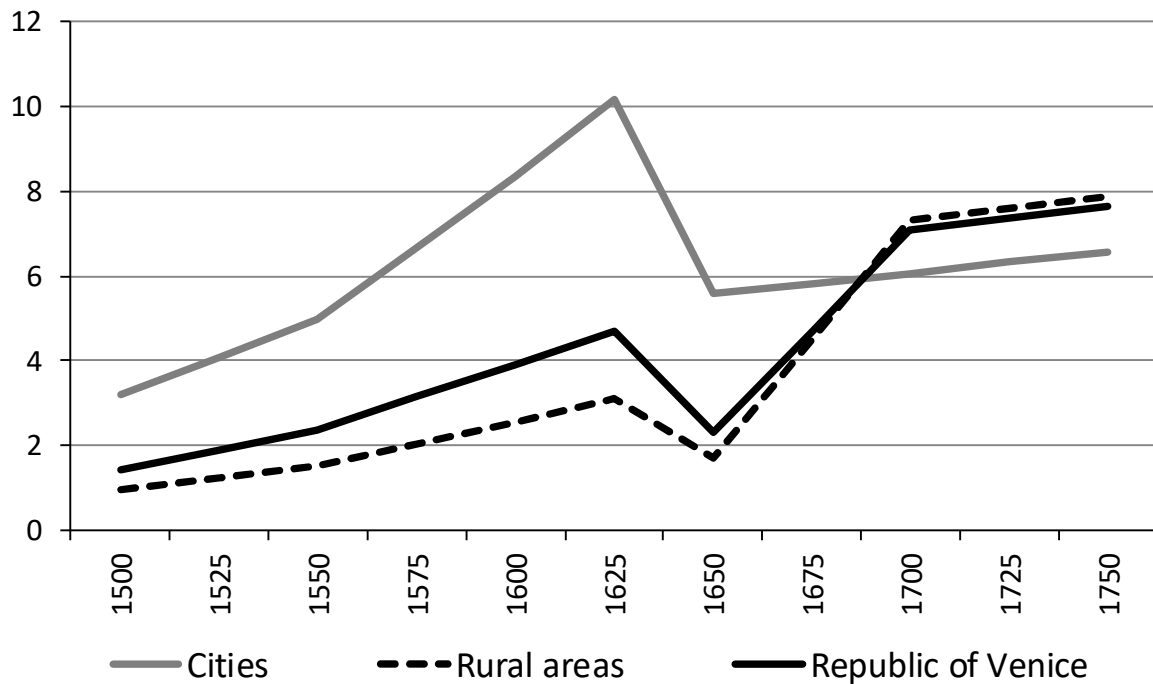
⁶⁶ Alfani and Di Tullio, *The Lion's share*, pp. 193-5.

⁶⁷ Alfani, 'Plague in seventeenth century Europe'.

⁶⁸ Pullan, 'Poverty, mendicanti e vagabondi'; Woolf, *The poor in Western Europe*.

tendency for poverty to spread in continental Europe in the centuries immediately preceding the onset of the Industrial Revolution, and are also coherent with the picture offered by trends in relative poverty, as discussed in the next section.

Figure 1. *Absolute poverty in Italy: the prevalence of the propertyless in the Republic of Venice, 1500-1750*



Sources: elaboration based on data from Alfani and Di Tullio, *The Lion's share*.

IV: From absolute to relative poverty

The information from fiscal sources, amply used by past studies of poverty, has obvious limitations both in terms of its comparability, and of its ability to capture trends over time across European regions. This is mostly due to the subjective character of most fiscal definitions of poverty (heavily reliant upon the judgement of tax authorities or of local bodies, including charitable institutions). Only a subset of this information, which identifies as fiscally 'propertyless' just those households that actually did not own any property, seems to have a more objective character and to be able to capture, albeit imperfectly, trends in the prevalence of absolute poverty.

However, these absolute measures will unavoidably under-estimate the actual prevalence of poverty, which did not only involve those households lacking a stable access to the resources

necessary to ensure subsistence or enjoying conditions only slightly better than mere subsistence. An additional problem is that direct and high-quality information about the propertyless is quite rare, as in most instances they were omitted from the fiscal records. Consequently, we propose to look at the notion of relative poverty, amply used to study poverty today but only rarely employed for preindustrial times. This approach builds upon the new systematic research on inequality, which has reconstructed distributions of income, and more often of wealth, for a growing number of European areas.

As will be recalled from Section II, when adopting the concept of relative poverty a household is considered poor if its level of income or wealth is much below a specific point in the overall distribution. In other words, ‘a household (or an individual) is classified as poor if it is too far from the prevailing conditions of a given society’.⁶⁹ The threshold for poverty is usually defined as a given percentage of the median value of the distribution⁷⁰. Setting the threshold in reference to the median not only corresponds to the best practices in measuring relative poverty in modern societies, but has some specific virtues when applied to the available historical sources. Indeed, as has also been observed in a study of the prevalence of the rich (Alfani 2017), the median value proves quite robust to some distortions typical of the wealth (or income) distributions available for preindustrial societies.

To measure relative poverty, we adopt a simple “headcount” approach. Formally, the population share of the poor, P^{HC} , calculated on the wealth or income distribution \mathbf{x} , is:

$$P^{HC}(\mathbf{x}) = \frac{1}{n} \sum_{i=1}^n 1_{x_i < \delta} = \frac{p}{n}$$

with $1_{x_i < \delta} = 1$ for $x_i < \delta$ and $1_{x_i < \delta} = 0$ elsewhere, n being the number of households, p the number of poor households, and δ the relative poverty line. This simply means that all those who fall below the relative poverty line are considered to be poor, and no further distinction is made among them.

Based on the literature, the income-poverty line can be placed at 50% of the median. Very few studies exist of relative wealth-poverty, mostly because information about the wealth distribution in modern societies is scant, and many recent studies have focused on providing

⁶⁹ Alfani and Di Tullio, *The Lion's share*, p. 67.

⁷⁰ Houghton and Khandker, *Handbook*; OECD, *Growing Unequal?*

tentative estimates of the wealth shares of the richest only, without modelling the kind of complete distribution needed to study the poorest parts of society.⁷¹ We follow the approach developed by Alfani and Di Tullio in their study of the Republic of Venice, itself inspired by Azpitarte.⁷² To the wealth-poverty line set by Azpitarte at 13% of the median (i.e. about one-quarter of the most common income-poverty line) we add a higher line set at 25%. This higher line helps to solve the technical problem, typical of many preindustrial wealth distributions, of having large ‘steps’ at the bottom, that is, a large number of households all assessed for the same value. This could lead to some instability in the measures calculated with the 13% wealth-poverty line. For the same reason, it is highly advisable to calculate relative poverty measures on relatively large distributions only: major cities, entire *contadi*, or even at the level of entire regions or states.

For Italy, the European area for which we currently have the largest amount of reliable reconstructions of wealth distributions, particularly interesting cases are those of the large cities of Bergamo and Padua. This is because for these cities, and for the *contado* of Padua as well, we can also glimpse the trend in absolute poverty (measured as the share of propertyless households), which is found to be increasing throughout the early modern period with a temporary interruption caused by the 1630 plague (compare Table 3 and the related discussion). Exactly the same trend is found for relative poverty. In Bergamo, a condition of relative poverty (calculated on distributions that exclude the propertyless, who were not recorded at all dates) involved 8.3% of all households in 1537 if we use a 13% poverty line, 18.6% if we use a 25% poverty line. Around 1610, these figures had increased to 11.4%/21.6% respectively. By 1704, they had grown significantly, to 13% when using the 13% poverty line, and more modestly, to 21.9%, when using the 25% poverty line. In Bergamo, the plague of 1630 does not seem to have had a clear-cut impact (see Appendix C for further data), but this might be due to some property trickling down to the pre-plague propertyless, who consequently would have entered the distributions used for calculating post-plague relative poverty (as seen in the earlier section, the prevalence of propertyless households halved in Bergamo between 1610 and 1640: from 10 to 5%). In another major city of the Republic of Venice, Padua, we find the same trend towards growing poverty, which the 1630 plague seems to have only temporarily interrupted. There, the prevalence of the relative poor, using our two poverty lines, was 11.7%/21.1% in 1575, 17.6%/25.3% in 1627, dropped to 15.9%/23.6% in 1642, and reached the recorded

⁷¹ For a synthesis, Roine and Waldenström, ‘Long run trends’.

⁷² Alfani and Di Tullio, *The Lion's share*, pp. 68-70; Azpitarte, ‘Measuring poverty’.

maximum at the time of the last available observation, in 1694, at 20%/28.9%. The same trend is found in the *contado* of Padua, although with a lower tendency towards a growth in relative poverty in the second half of the seventeenth century.

We find basically the same tendency towards growth in relative poverty in the cities of other Italian states. For example in Prato in Tuscany, 4%/11.3% of households were poor in 1546, 17%/21.1% in 1621, 25.5%/30.1% in 1671 and 31.8%/34.9% in 1763. In Cherasco in Piedmont, the figures are 1.6%/7.9% in 1530-48, 5.5%/14.6% in 1648, and 7.9%/16.7% in 1711. Regarding North Europe, trends in the prevalence of relative poverty can be estimated for the Low Countries. However, in this case we have to resort to a different kind of fiscal sources: the taxes on the rental value of houses which have been used extensively by previous studies of inequality.⁷³ These taxes were levied frequently enough, and are sufficiently homogeneous over time as to allow for the reconstruction of long-run trends. The downside is that these taxes used housing units as the principle unit for taxation, and comparison with census and probate data indicates that this might lead to the implicit exemption of poor individuals who shared a house with others, lived in attics or cellars, or in sheds placed in the backyard. It is therefore possible that especially in times of strong population growth, when the housing market could not meet growing demand – this was for example the case at the end of the eighteenth century – these sources become less reliable indicators of poverty. Moreover, since rental values of houses have been shown to be a good proxy for the distribution of income instead of wealth, we need to adopt a different income-poverty line. We resort here to the standard used in studies of modern societies: 50% of the median.

The available information allows us to reconstruct a trend covering most of the early modern period for 5 cities of the southern Low Countries (see details in Appendix C). For all of them, the tendency was orientated towards a growth in relative poverty. From the mid-sixteenth century to circa 1800, the percentage of households with an income below 50% of the median rose from 11.5 to 25.8% in Aalst, from 20.2 to 27.4% in Den Bosch, from 17.8 to 24.7% in Kortrijk and from 19.8 to 21.9% in Nijvel. If instead of looking at single cases we focus on broader aggregates, namely by using the overall distributions of income inequality across cities of the Low Countries developed by Alfani and Ryckbosch,⁷⁴ the general trend towards a slow but quite constant increase in the prevalence of the income-poor is confirmed: from 20.9% of all households in 1550, to 21.1% in 1650, and to 24.6% in 1750. These results are reported in

⁷³ Van Zanden, 'Tracing'; Ryckbosch, 'Economic inequality and growth'.

⁷⁴ Alfani and Ryckbosch, 'Growing apart'.

Table 7, where they are compared with the measures of wealth-poverty that can be computed from distributions related to a range of Italian states. While the Italian cases differ from the Low Countries because they refer to wealth instead of income, the method used in the aggregation is the same⁷⁵.

Table 7. *Relative poverty in Italy and the Low Countries, 1450-1800, %*
(25% wealth-poverty line for Italy, 50% income-poverty line for the Low Countries)

	Sabaudian State	Republic of Venice	Florentine State	Southern Low Countries (cities only)
1450			8.0	
1500	14.8	12.7	8.0	20.9
1550	14.8	16.7	9.0	21.7
1600	16.9	19.4	11.0	21.1
1650	15.8	11.6	20.0	23.9
1700	16.0	13.3	29.0	24.6
1750	16.7	16.0	30.0	23.3
1800	16.8			24.8

⁷⁵ Introduced in Alfani, 'Economic inequality in northwestern Italy', and described step-by-step in Alfani and Di Tullio, *The Lion's share*, Appendix.

For Italy as well, the estimates collected in Table 7 confirm the general trend which has been detected while looking at single communities. The prevalence of the relative poor (25% poverty line) is found to be slowly growing in the Sabaudian State, from 14.8% in 1500 to 16.8%, with a phase of decline only around the middle of the seventeenth century, probably triggered by the 1630 plague. The plague-induced drop in relative poverty is even stronger in the Republic of Venice, which was more heavily affected by the 1630 epidemic than Piedmont (Alfani and Percoco 2019) but here, too, relative poverty is found to be somewhat higher when last we can observe it (16% in 1750) compared to the beginning of the series (12.7% in 1500), although still far from the peak reached in the immediate pre-plague period. Finally in the Florentine State the growth in the prevalence of relative poverty is found to be monotonic from 1500 to 1750. Starting from a relatively low spread of relative poverty in 1450-1500 (8%), by the end of the observed period the Florentine State stands out for having the highest prevalence of poverty (30%), although admittedly the trend is partly driven by the spread of sharecropping. An interesting feature of the Florentine series is that the 1630 plague (affecting this part of Italy in 1631) does not have the same poverty-reducing impact as elsewhere, possibly because the plague was much less severe in this area.⁷⁶

Also for Germany we have some provisional data about the time trend in relative poverty. The measures are based on aggregate distributions which again have been produced using the same method as those for Italy and the Low Countries. Also in Germany, relative poverty tended to spread from the fifteenth century to the turn of the seventeenth (from 9.2% in 1450 to 25.3% in 1600, again using a 25% wealth-poverty line), but then the combination of plague and of the Thirty Year's War led to a sharp drop, down to about 18% in the second half of the seventeenth century. Relative poverty resumed growing at a brisk pace from the mid-eighteenth century, exceeding 19% by 1800.⁷⁷

Our measures of relative poverty and, more importantly, the reconstructed trends, are quite robust to the main possible distortion in the available distributions: the absence of the propertyless. These were, generally speaking, the poorest part of the population - and yet, the impact of their exclusion on estimates of relative poverty, which are percentages, depends on the fixation of the median and on the structure of the distribution in the region surrounding the median value. If in this region the distribution is continuously growing, or at least if it is

⁷⁶ Compare Alfani, 'Plague in seventeenth century Europe'.

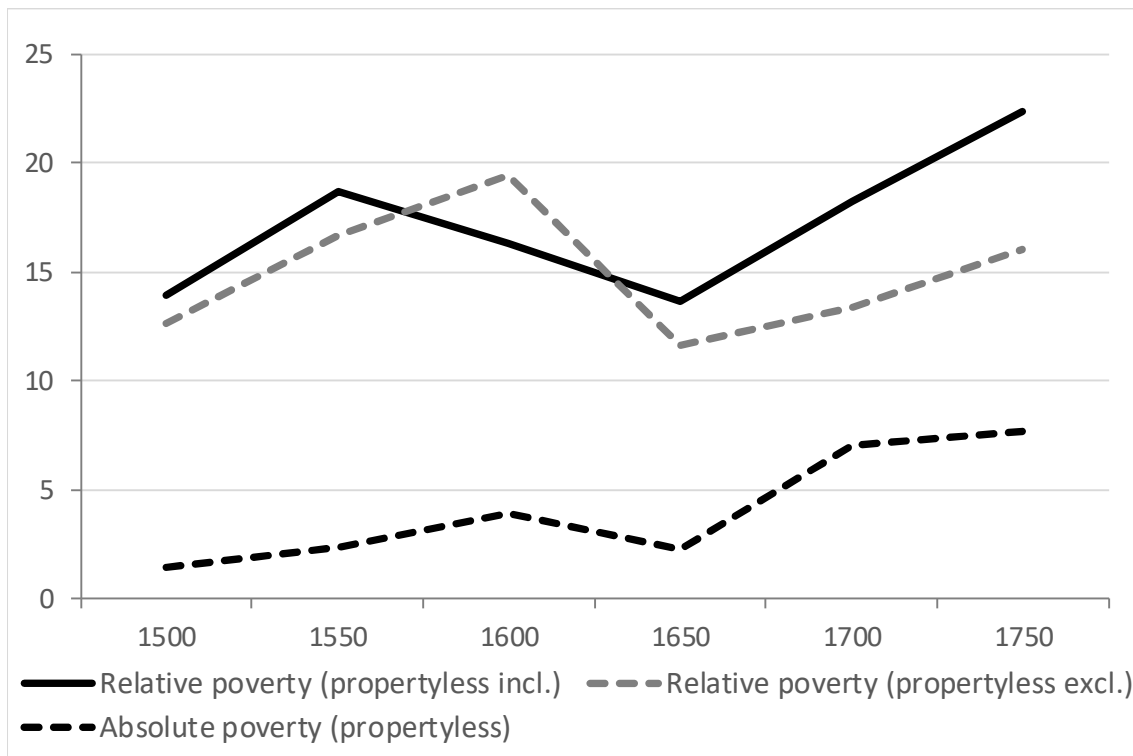
⁷⁷ Alfani, Gierok, and Schaff, *Poverty*.

characterized by small steps in the values (i.e. few households in the region around the median are assessed for exactly the same values), and if the prevalence of the propertyless is modest, then the measures of relative poverty will not change much whether the propertyless are included or not. In their study of the Republic of Venice, Alfani and Di Tullio demonstrate that this is the case for single communities, like Padua or Bergamo where differences between measures of relative poverty with or without the propertyless are invariably below one or two percent points, with an empirical maximum of 4.8 percentage points found for Padua in 1627 when the propertyless were an exceptionally high share of the overall population (10.2% of households). Importantly, including or excluding the propertyless never changed the trend.⁷⁸ A more systematic analysis can be performed for the Republic of Venice as a whole. As can be seen in Figure 2, when adding the propertyless to the distribution it is usually found that the estimates of relative poverty increase: when using a 25% poverty line, from a minimum of 1.3 percentage points in 1500 to a maximum of 6.4 percent points in 1750. For one year (1600) the estimates are found to be declining by 3 percent points, however a careful examination of the distribution suggests that this is a glitch caused by the presence of some steps in the distribution around the median values. Indeed, when using either a 13% or a 50% poverty line the estimates including the propertyless are found to be monotonically growing from 1500 to the eve of the 1630 plague. The plague itself seems to have caused a decline in the prevalence of poverty, both measured in a relative or an absolute way. After the plague, the prevalence of poverty began to rise again, peaking at 22.4% when the propertyless are included. For the eighteenth century, adding the propertyless to the estimates leads to a slightly different picture than when looking at estimates that exclude them, because it suggests that poverty probably reached its maximum spread in the final century of existence of the Republic of Venice (a finding that is entirely coherent with what we know of the Republic's general economic tendencies from the mid-seventeenth century⁷⁹). The prevalence of absolute poverty leads in the same direction, while if we looked only at relative poverty without the propertyless we would conclude that the maximum values were reached immediately before the 1630 plague. This being said, the general conclusion of a baseline tendency for poverty to spread in north-eastern Italy throughout the early modern times is confirmed whatever measurement method we use.

⁷⁸ Alfani and Di Tullio, *The Lion's share*, pp. 70-2.

⁷⁹ Ibid.

Figure 2. *Relative and absolute poverty in the Republic of Venice, 1500-1750 (% of households)*



The general trends that can be detected from relative poverty measures, further corroborated by the information available about absolute poverty and especially about the prevalence of the propertyless, can be considered in the light of recent debates on the determinants of long-term distributive dynamics. The poverty-reducing impact of the 1630 plague suggests that we begin with the role played by major pandemics, starting inevitably with the Black Death of 1347-52. Many recent works have underlined the ability of that plague to trigger a phase of inequality decline, based on a limited, but steadily growing amount of evidence.⁸⁰ While it seems reasonable that trends in relative poverty follow those in inequality as measured with indexes like Gini, this is not a statistical necessity. Surely in the case of the Black Death, given its well-known effect of having rebalanced a relationship between population and resources that had become quite precarious in most of Europe, we would expect a reduction in absolute poverty. This is what seems to have happened in England (see discussion in Section II, based on Broadberry et al. 2015).⁸¹ But trends in relative poverty have to be measured directly, as on principle they might follow a divergent trend. However, in the very few cases when we can

⁸⁰ Alfani and Ammannati, 'Long-term trends'; Scheidel, 'The Great Leveller'; Alfani, 'Economic inequality in preindustrial times'; Alfani, 'Epidemics, inequality and poverty'.

⁸¹ See discussion in Section II, based on Broadberry et al., *British economic growth*.

produce such measures we find confirmation that the Black Death tended to reduce relative poverty. For example, in the city of Toulouse in southern France, 8.6% of households were poor in 1335, but in 1398 the figure was close to zero. In Cherasco in north-western Italy, poor households were 18.2% around the plague years, but just 14.9% at the end of the fourteenth century (for both cases a 25% wealth-poverty line has been used).

We have more abundant information for the last great plagues affecting Europe in the seventeenth century. As has already been discussed, these terrible events seem to have led to some reduction in relative poverty, at least in the most affected areas like north Italy, or Germany where their impact might have been amplified by war. Probably this reduction was partly due to plague affecting more severely the poorest strata. Additionally, some previously-unobservable propertyless households entered the fiscal records in the years immediately following the plague, when they inherited or managed to buy tiny bits of property. This would tend to increase our measures of relative poverty, because the previously-unobserved poor households are fed to the bottom of the distribution. Indeed, the case of the Republic of Venice (Figure 2) is telling, as there the post-1630 fall in relative poverty seems deeper when the propertyless are excluded from the calculations than when they are included (this because the measures including them are robust to small upward movements at the very bottom, of the kind ‘from zero to very low’). But the most important point to underline is that, differently from the Black Death, the seventeenth-century plagues were unable to cause a large-scale and lasting reduction in the prevalence of relative poverty. This is consistent with recent literature arguing that the distributive impact of large-scale crises largely depends on the context and particularly on the institutional framework in place at the onset of the crisis.⁸²

Another important body of literature providing useful insights about the factors influencing the prevalence of poverty regards the historical process known as “proletarianization”, that is the process which, throughout the early modern period, led to a growing part of the European population losing the ownership of the means of production and becoming dependent on selling their labour for wages. This view, which has obvious roots in the Marxist school of economic history, in more recent times has been promoted by Charles Tilly and has been closely considered by scholars working on inequality.⁸³ Especially for those areas where most or all the available information is about wealth-poverty, losing the means of production (mostly land) will tend to displace labourers towards the bottom of the distribution, and quite possibly much

⁸² Alfani, ‘The effects of plague’; Alfani and Di Tullio, *The Lion’s share*; Alfani, ‘Economic inequality in preindustrial times’.

⁸³ Tilly, ‘Demographic origins’; Alfani and Ryckbosch, ‘Growing apart’.

below the median value (tending to increase estimates of relative poverty) or even down to zero (tending to increase estimates of absolute poverty). Indeed, for areas of southern Europe where property tax records were widespread, we have many studies confirming the tendency of small ownership (and of the commons) to disappear. For example, in Italy small ownership has been found to be declining from the second half of the sixteenth century, when population pressure on the available resources became acute. Often, the process was accelerated by famines,⁸⁴ that is precisely by the kind of crisis that has been often credited by earlier research as being particularly effective in bringing that large component of the population which was always “at risk” of poverty into an actual state of destitution.⁸⁵ Proletarianization was a European phenomenon, consequently it seems a useful perspective from which to consider what appears to have been a continent-wide growth in relative poverty. But it was also a cyclical process, coming in waves⁸⁶ which were usually connected to demographic trends, ‘as phases of acute crisis of small ownership tend to coincide with major famines on a continental scale (...) and these usually occurred in periods of intense demographic pressure on resources’.⁸⁷ Therefore, as a general explanation for the spread of poverty in early modern times proletarianization has the intrinsic limitation that a cyclical process could not easily lead to what was, quite possibly, an almost-monotonic trend towards a larger and larger prevalence of poverty. This is also why proletarianization is arguably an unsatisfactory explanation for preindustrial inequality growth.

As an alternative, recent inequality studies have focused on institutions as potentially crucial factors in shaping distributive dynamics in the long run. Indeed, institutional change after the Black Death (particularly changes in inheritance systems and practices) could explain why the seventeenth-century plagues were much less able to reduce both inequality, and relative poverty. But to explain the observed upwards-orientated trends in both variables, other institutions might be more relevant. Fiscal systems, for example, could have exerted a poverty-increasing pressure throughout the early modern times, due to constant increases in the per-capita fiscal burden combined with a regressive structure of taxation (leading the poor to pay more taxes, in proportion to their income, than the rich). This point, which has been made by a few studies on areas of Italy and the Low Countries⁸⁸ has recently been better elucidated

⁸⁴ Cattini, *I contadini*; Alfani, *Calamities*, pp. 76-7.

⁸⁵ Pullan, *Rich and poor*; also see discussion in Section III.

⁸⁶ Tilly, ‘Demographic origins’, pp. 26-36.

⁸⁷ Alfani and Di Tullio, *The Lion’s share*, p. 143.

⁸⁸ Alfani, ‘Economic inequality in northwestern Italy’; Alfani and Ryckbosch, ‘Growing apart’.

(based on the case of the Republic of Venice) and generalized by Alfani and Di Tullio⁸⁹. However, the same authors point out that when referring to poverty, some ambiguity remains as indeed, while a large part of the population might have been progressively pushed by regressive fiscal policy towards a condition of relative poverty, the actual access to resources of the poorest could not have changed as much. This is because those who are at subsistence or close to it will not be pushed below hope for survival without rebelling. So, the loss of formal ownership of wealth (or of the means of production) was probably compensated for by an increase in charity, especially of the private kind, which led part of the resources increasingly concentrated at the top to trickle down towards the lower strata.⁹⁰ This ensured social stability across the centuries – but it did not prevent the poor from becoming ever more dependent on the goodwill of the rich, the society as a whole from becoming less mobile, and poverty from looking ever more like an unescapable trap.

V: Conclusions

This article has offered an overview of long-term trends in the prevalence of poverty in different European areas from the fourteenth to the eighteenth century. After having clarified the distinction between objective or subjective definitions of poverty, and between absolute or relative measurement criteria, an overview has been provided of the information available about “fiscal poverty”, that is, about the poor as they were enumerated or singled out by fiscal sources. These sources are those most commonly used in the literature but, as they rely upon subjective definitions of poverty, they provide information that is difficult to compare across space and time. This is maybe why we lack comparative studies of the prevalence of preindustrial poverty, and why poverty is generally considered to be a somewhat intractable and indefinite subject.

To solve this problem, this article proposed a new approach, which consists of looking at objective measures: of absolute poverty, in the fairly rare instances when they are available, or of relative poverty. The second approach can be applied systematically to many states or regions of preindustrial Europe, thanks to recent research on inequality that has made available a growing number of wealth or income distributions for single communities or for broader territorial aggregates. By using this approach, we detected a tendency towards an increase in the prevalence of relative poverty, both in the south and in the north of continental Europe.

⁸⁹ Alfani and Di Tullio, *The Lion's share*.

⁹⁰ *Ibid.*

This finding is also supported by what information we have available about absolute poverty. Indeed, although differences might exist between north and south which could be identified only based on more data, we believe that the most important aspect to underline is the existence of a common tendency towards more widespread poverty. This trend was only temporarily interrupted by large-scale catastrophes, like the severe plagues affecting south, and partly central, Europe during the seventeenth century. But the impact of the fourteenth-century Black Death seems to have been much stronger and to have lasted much longer.

Our findings about the growing prevalence of poverty in preindustrial Europe constitute a memento for the recent literature on living standards: rising living standards do not automatically imply better conditions for all, and without a direct assessment of distributive dynamics any assumption about the actual conditions experienced by large masses of the population would be quite risky and potentially ungrounded. From this point of view, our approach integrates recent studies of inequality, confirming that the concentration of both income and wealth in fewer and fewer hands as the early modern times advanced not only deprived a large part of the population of the potential benefits of progress, but actually pushed larger and larger strata of the population down, towards a condition of relative, and sometimes of absolute, poverty. The prevailing institutional framework might have favoured this process, for example by means of higher per-capita taxation of the regressive kind, thereby weighing relatively more on the poor than on the rich. Of course, this picture might be softened were it possible to consider the extent of public, and even more of private, charity. But the fact remains that, as the centuries passed, the European poor found themselves in a condition of ever greater dependency, and escaping the poverty trap became harder and the harder.

Admittedly, these conclusions would require additional research to be fully supported, and the methods proposed by this article to measure poverty are meant to provide the premises for more collaborative and comparative research on poverty in the future. However, what we can glimpse right now about our past seems to speak quite directly to debates about our present. As for inequality, the tentative conclusion is that history does not support the view that without direct, targeted action, economic growth alone will tend to reduce poverty: not across the world, and not even in the wealthy West.

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Appendix A: Defining the fiscal poor in preindustrial Europe

In the fiscal records drawn up by local administrations across late medieval and early modern Europe, there were several ways in which the poor could be dealt with. In many cases the poor, or at least a significant part of them (like the ‘propertyless’ excluded from direct taxation on real estate) were simply omitted from the fiscal records, leaving little or no trace as to how they were defined, nor as to how prevalent they were.⁹¹ In other cases the poor were included in the records, but without being labelled specifically as such. In these cases it is hard to assess whether they did indeed contribute the taxes that they were quoted for, and where the poverty line should be situated. A third scenario is the most useful for our objective: in some records the poor are included and explicitly labelled as exempt based on their poverty, or they are recorded with ‘zero’ values.

A striking feature of late medieval fiscal records across Europe, is the large degree of local variation in how poverty-related exemptions were dealt with. The case of the Low Countries is particularly instructive. A survey of different late medieval tax lists preserved for two northern Dutch provinces, Gelre and Zutphen, indicates that administrators did not use a single, clear-cut definition of poverty to define the fiscally exempt. Some local tax collectors simply omitted those deemed too poor to pay, others included them with various marginal labels: *pauper*, *puer arm*, *verarmt* (impoverished), *totus pauper*, *schemell arm* (shamefully poor), *schemell* (shameful), or *gaen om broit* (fetch their bread). Some were simply deemed of ‘too little worth’ to pay – referring to their disposable wealth, yet in other cases the definition of poverty is slightly more complex.⁹²

A survey of the households and economic activities in the villages and towns of Holland carried out in 1494 also reveals a striking variety in how the fiscal poor were defined locally. The *Enqueste ende informatie* enquired about the fiscal capacity of each village or town in the County of Holland, in order to be able to determine a fair distribution of the fiscal burden. As a result, each village or town listed the number of households it deemed capable of being taxed, as well as the number deemed to be too poor. Despite the uniformity in the contents of the *Enqueste*, it is striking that the way in which the fiscal poor were defined and identified was very heterogeneous.⁹³ About half of the locations referred simply to poverty or destitution (37%), or to household’s ‘inability to pay’ (16%) as absolute and objective criteria for poverty.

⁹¹ About the propertyless, see for example Alfani and Di Tullio, *The Lion’s share*, pp. 63-5 for Italy, or Alfani, Gierok and Schaff, ‘Economic inequality’ for Germany.

⁹² Van Schaik, *Belasting*, pp. 138-40.

⁹³ Fruin, *Enqueste*.

Other places referred not to an implicit poverty line, but to the criterium of being dependent on poor relief: some referred to the parochial *tables of the holy spirit* as the criterium for fiscal poverty (19%), other places mentioned simply alms (14%) or bread distributions (14%).

The situation was similar in late medieval Flanders: each village used its own guidelines to deal with the fiscal exemption of the poor. Usually this means that the poor either did not pay the tax they were quoted, or were omitted from the records altogether. Only in rare cases, such as in the town of Gistel in 1485, were reasons for exemption explicitly provided: *aerem* or ‘poor’, *taerem* or ‘too poor’, and *verarmt* or ‘impoverished’.⁹⁴ In the *hearth censuses*, which were of a nature similar to the *Enquete* of Holland, local tax units (villages or towns) indicated the number of poor households compared to the total. The Flemish census of 1469 sometimes mentioned the fiscal poor, and sometimes those on relief to identify the fiscally exempt. In some exceptional cases reference was made to both. For instance in the town of Ostend, 8% of households received relief while another 14% were considered to be destitute as well – thus accounting for a total of 22% poor households to be exempted.⁹⁵ When examining those distinctions in more detail, it appears that low numbers of reported households on poor relief were correlated with higher reported numbers of destitute households. The combined total of exempted households was therefore relatively constant. The rural region of Ypres (*Kasselrij Ieper*) for instance had no less than 17% of its households on poor relief, but counted only 6% non-supported poor households according to the census.⁹⁶ This indicates that various definitions could be used in combination, but that the overall number of exempted households seems broadly comparable.

The variation in definitions of poverty is not simply the result of poverty lines placed at different points on a single continuum of welfare. Some regulations suggest using somewhat more objective definitions, whereas others seem to be much more subjective. For instance, the references to ‘shamefulness’, ‘impoverishment’, or the receipt of bread from poor relief probably do not refer to the very poorest in society – those financially unable to pay – but to those who had experienced downward social mobility, usually as a result of illness or unemployment, and were in danger of becoming destitute. The overrepresentation of widows among the poor also suggests that subjective categories played a role in the implicit poverty definitions used by administrators.

⁹⁴ For instance State Archives Bruges, *Bundels Brugse Vrije*, n° 272. We would like to thank Thijs Lambrecht (Ghent University) for kindly pointing this out to us.

⁹⁵ Blockmans and Prevenier, ‘Armoede in de Nederlanden’, p. 513.

⁹⁶ *Ibid.*, p. 515.

In this perspective, it is important to note that eligibility for local poor relief remains the most frequently used definition of poverty leading to tax exemption in the late medieval Low Countries. Indeed, tax collectors often used eligibility for poor relief as a short-hand way of identifying the households worthy of fiscal exemption. This was explicitly the case, for instance, with the sixteenth-century hearth taxes levied in Hainault.⁹⁷ A seventeenth-century manual on the collection of taxes in Flanders mentions that ‘Roman law freed the poor from [local fiscal] burdens’. According to the manual’s author, each ‘had to contribute according to their estate, faculty and ability’, but this did not apply to the *schaemele lieden* (‘shameful people’) who were considered exempt.⁹⁸ However, the author did not provide guidelines on how to identify such *schaemele lieden*, probably leaving this – like the legislator – to local custom.

In many European states the early modern period was characterized by prolonged conflicts and legislative initiatives of the state to circumscribe and gradually curtail the fiscal exemptions extended to the clergy and nobility. It is striking that there is no trace of similar initiatives regarding fiscal exemptions for the poor. In the Low Countries for instance, there appears to have been no attempt to determine a fixed definition of poverty to be applied for all taxes. On the one hand, there was a continued reliance on the subjective and local criterium of poor relief as a tool for identifying the poor. When the central Habsburg authorities in 1550 ordered a survey in order to gather better information on the size and distribution of the taxable population in the County of Flanders, they wished to know ‘the number of communicants who had a household, alone, with two, or more in a house; and how many of these lived from poor relief or alms’.⁹⁹ When in seventeenth- and eighteenth-century Brabant population censuses organised by the Estates of Brabant identified the poor, they almost invariably referred to those households supported by the local poor relief (the so-called *disarmen* listed in the ‘poor tables’).¹⁰⁰ In the instruction for the *capitation (hoofdgeld)* levied in the Duchy of Brabant in 1747, the only exemption for poverty was extended to ‘les pauvres et nécessiteux vivant de la table du Saint-Esprit’ – i.e. those being supported by the local poor relief institutions coordinated by the parish (the tables of the holy spirit).¹⁰¹

Although practices of this kind seem conceptually clear (both for contemporary census takers and for modern historians), they don’t do much to clarify what this kind of poverty

⁹⁷ Arnould, *Les dénombremets*, p. 283.

⁹⁸ Stalins, *Het Vlaems setting-boecxken*.

⁹⁹ *Placcaetboek van Vlaenderen*, vol. 3, p. 374, ordonnance 23 august 1550.

¹⁰⁰ Cosemans, *De bevolking van Brabant*, pp. 44, 71-2.

¹⁰¹ Gachard, ed., *Recueil des ordonnances des Pays-Bas autrichiens*. Ordonnance de August 28, 1747.

actually entailed. Many have argued that the status of poor relief recipients was far from fixed, that they were not necessarily among the poorest members of society, and that many others existed who were just as poor but did not receive any ‘poor relief’. According to the individual declarations of poor relief recipients in 1755, a ‘poor’ household could in some cases even possess two horses, a housemaid, or a servant.¹⁰² As has been pointed out by social historians, early modern poor relief often benefited primarily the (lower) middling classes in danger of downward social mobility, rather than the most destitute. Moreover, it is hard to tell who was considered to be ‘on poor relief’. In eighteenth-century Flanders for instance, the number of poor relief recipients could easily double from year to year, and fluctuated from season to season. A very small number of relief recipients could be fully supported by regular distributions of the basic necessities of life, whereas most were only occasional recipients.¹⁰³

Even though eligibility for poor relief became the main criterium for fiscal exemption by the end of the eighteenth century, other criteria for defining the poor did not disappear entirely. In a survey of the rural surroundings of the town of Furnes in Flanders in 1759, the fiscal poor were defined as the ‘destitute’ or ‘needy’, rather than as those receiving relief. Other records, such as the receipts of the grinding excise (*maalderijgeld*) from three Flemish villages in 1740-46, refer simply to ‘insolvency’ as the criterium for exemption.¹⁰⁴

Identifying those who were entitled to tax exemption was thus never a straightforward nor a clear-cut matter in the early modern Low Countries. Above all, it remained a subjective judgement left to the discretion of parish priests, overseers of the poor, and local fiscal administrators. A census held in Brussels in 1702 sometimes referred to a *testimonio*: a declaration of poverty signed by the parish priest or the local *hundredmen* (the person charged with setting the quotes within a specific quarter of the city).¹⁰⁵

As in northern Europe, also in the South in most tax records the fiscal administrators did not systematically include and identify the poor in their lists. However, a few exceptions allow us to delve deeper into the definitions of poverty used, and to provide some basis for using these fiscal estimations to get some glimpses about the prevalence and the spread of preindustrial poverty. We will now focus on Italy as representative of southern Europe, due to the relative abundance of useful historical sources. In several registers of direct taxation on real estate from fourteenth- and fifteenth-century Tuscany (and beyond), the poor are included and

¹⁰² Cosemans, *De bevolking van Brabant*, p. 72.

¹⁰³ Chavatte, ‘Armoede en bedelarij in Oudenaarde’, pp. 79-92.

¹⁰⁴ Dalle, *De bevolking*.

¹⁰⁵ Swinnen, ed., *De volkstelling*, p. 25.

explicitly labelled as such. They were usually called *pauper*, and even though the precise criterium for the application of this label is unstated, in all evidence it was based on an implicit absolute poverty line: those who lacked the essentials to survive, in terms of food, shelter and clothing.¹⁰⁶ Wealth or asset ownership – the basis of taxation – did not necessarily form the basis of this poverty assessment. For instance, even households who owned a small piece of (unproductive) land could be seen as paupers, whereas sharecroppers who did not own any real property could be seen as better off if they were settled on good land.¹⁰⁷ In some cases we get more explicit information about the criterium of fiscal exemption for poverty. For example the Florentine law of the *Gabella fumantium* of 1342 identified as ‘poor and miserable people’ those ‘who own no land, no house, no property of value greater than 100 lire and do not exert any art or office’ (our translation).¹⁰⁸

One of the best documented cases is that of the city of Verona in the Republic of Venice in 1558. There the administrators explicitly mentioned the *pauperes* in their records, and counted 370 household (or 4% of the total) of them. The small share of *pauperes* households over the total has led some to argue that also those estimated at the lowest *estimo* values (5 and 6 *soldi*) should be counted among the poor,¹⁰⁹ notwithstanding the stricter criterium for exemption used by the contemporary tax collectors. Verona is an exceptional case, due to the specificity of its local fiscal sources. In most other cases, we are forced to rely on those who were recorded without wealth and property – sometimes registered as *nichil habentes* or ‘propertyless’ in the sources, like in the fourteenth-century *contado* of Florence. Although it can be assumed that the vast majority of these households lived in conditions of poverty or close to it, the *nichil habentes* were not necessarily exempted from taxation based on their poor condition. For example, in the 1325 tax records from Prato several *nichil habentes* were estimated *ex officio* from 50 to 100 *lire*, thus showing that they were assumed to at least possess some ability to pay. The same was true for the Florentine *estimo* of 1327 (a short-lived attempt to re-introduce direct taxation in the city): those who had no land, house, or furniture were still registered as regular taxpayers with a *lira d’estimo* between 15 *soldi* and 15 *lire*, unless they were beggars.¹¹⁰ As a consequence, these Tuscan *nichil habentes* constitute a less straightforward fiscal category than the Veronese *paupers*.

¹⁰⁶ La Roncière, *Tra preghiera e rivolta*.

¹⁰⁷ Pinto and Tognarini, ‘Povertà e assistenza’; La Roncière, *Tra preghiera e rivolta*; Cherubini, *Signori*, p. 441.

¹⁰⁸ Stella, *La révolte des Ciompi*, p. 188.

¹⁰⁹ Lanaro, ‘Radiografia’, pp. 51-5; Alfani and Di Tullio, *The Lion’s share*, pp. 64-5.

¹¹⁰ Fiumi, *Demografia*, p. 338.

Nevertheless, the propertyless are important for two reasons. First, they often provide us with a lower bound to the number of the poor (as in many instances, also those declaring to own properties with very small value can be considered to be ‘poor’). Secondly, their estimation is usually a requirement to assess the overall reliability of attempts to measure long-term trends in economic inequality – as unfortunately, in the vast majority of cases the propertyless were simply omitted from fiscal records. It is in this second perspective that they have been focused on in recent studies about other areas of Italy, from the Sabaudian State to the Florentine State, the Republic of Venice and the Kingdom of Naples.¹¹¹

Indeed, those cases when the *nichil habentes* were still subject to taxation do not suggest that the propertyless are not a valid category for measuring the prevalence of poverty – but they do remind us that often, when assessing poverty, fiscal collectors considered a broader concept of fiscal capacity of the household than simply the value of their real estate, especially in the Middle Ages. For example in late medieval Florence, if any owner was recorded among the propertyless this was due to the high amount of his debts, which often exceeded his assets, and his condition in general was precarious and constantly close to destitution.¹¹² In other words: the category of the propertyless or *nichil habentes* included in several Tuscan tax records does provide a good indication of poverty, based on an exemption criterium that was sufficiently broad to capture overall welfare, and not only wealth. Additionally, the notion of propertyless becomes more streamlined when moving from the late Middle Ages to the early modern period, when in Italy as well as in much of southern Europe the propertyless can be defined simply as those who have no taxable wealth. The downside of this streamlining, is that usually in this period the propertyless are simply omitted from property tax records, as they had no real estate to be recorded. For early modern times, beyond Tuscany particularly good information is available for the Republic of Venice, where for a few cities, including Bergamo and Padua, time series of the prevalence of the propertyless can be reconstructed (see Section 3 in the main text). In other Italian areas, like the Sabaudian State (Piedmont) in the northwest, information about the poor is sometimes very deep and detailed, but also very unfrequently available and scattered in time.¹¹³

The situation in Italy and the Low Countries was analogous to that of most other European regions. The case of Germany, in particular, seems quite similar to the Italian one, as in many

¹¹¹ Alfani, ‘Economic inequality in northwestern Italy’; Alfani and Ammannati, ‘Long-term trends’; Alfani and Di Tullio, *The Lion’s share*; Alfani and Sardone, ‘Long-term trends’.

¹¹² La Roncière, *Tra preghiera e rivolta*, p. 201.

¹¹³ Alfani, ‘Economic inequality in northwestern Italy’; Alfani and Di Tullio, *The Lion’s share*;

areas direct local taxation employed tax records very similar in nature to the Italian *estimi*. Consequently, as for many Italian pre-unification states, it is often possible to estimate the lower bound of poverty for the German area by looking at the propertyless.¹¹⁴ Interestingly, the German literature on poverty considers estimates of the prevalence of the propertyless the best possible indicator of the real extent of poverty given the surviving documentation, preferable for example to alternatives like the records of individuals or households benefiting from poor relief (*Pfründeregister*).¹¹⁵

The case of England is partially different from the others mentioned so far. There, different criteria for tax exemption for the poor were used for different types of taxation. Even in the better-documented cases, such as the 17th-century hearth taxes (1662-90), no uniform criterium for the identification of the exempt was enforced throughout England.¹¹⁶ Although amendments to the instruction for the hearth tax included absolute and objective poverty lines based on the total value of property owned and on the yearly rental value of the house occupied, exemptions could also be claimed based on the exemption from contributing to local poor and church rates. Consequently poverty continued to be defined by local, relative criteria: similarly to what has been detailed above for the Low Countries. As a matter of fact, when using English fiscal sources – from the lay subsidies of the thirteenth and fourteenth century, to the Tudor subsidies of the sixteenth century and finally, the hearth taxes of the seventeenth century – a major problem is that the bar for exemption from (direct) taxation is usually placed at such a high level (given the overall distribution of wealth across the country) that it has been estimated that, depending on the county, the percentage of missed households exempted from taxation, hence missing from the records, was invariably over 60% in 1327-32, and almost always over 40% in 1524-25.¹¹⁷ This leads to technical problems that seem to be specific to the case of England. Indeed, while it is still possible to get some tentative insights on the extent of poverty by using the English fiscal sources (see Section IV), it is also clear that these “fiscal poor” could not be meaningfully used as indicators of the extent of poverty across the country. Better opportunities seem to be offered by the documentation related to poor relief, in particular when the poor relief accounts included some information about how many benefited from relief.¹¹⁸

¹¹⁴ Alfani, Gierok and Schaff, ‘Economic inequality’.

¹¹⁵ Dirlmeier, ‘Untersuchungen zu einkommensverhältnissen’, p. 503; von Hippel, *Armut*, p. 18.

¹¹⁶ Arkell, ‘The incidence of poverty’, pp. 32-36.

¹¹⁷ Alfani and García Montero, ‘Wealth inequality in preindustrial England’.

¹¹⁸ See also the recent work by Healey, *The first century of welfare*.

Appendix B: Additional information about the fiscal poor in fifteenth-century Tuscany

Thanks to the introduction of the *catasto* system in 1427, we have quite abundant information about household wealth for late-medieval Tuscany. This information has often been used to attempt to estimate the prevalence of poverty, however, due to a complex systems of fiscal deductions the resulting figures tend to be inflated. This is why in the main text we have focused on a selection of communities for which we could remove deductions from the evaluations (reported in Table 2). Here we report a synthesis of earlier research on Tuscan poverty based on the *catasto*, and in Table B1 we provide a synopsis of estimates of the prevalence of the fiscal poor obtained without controlling for deductions – and consequently are less reliable than those discussed for Tuscany and other Italian regions in the main text.

However, it should also be noted that while in the capital city of Florence citizens were allowed to deduct the very significant amount of 200 florins for each member of the family, households of the *contado* were allowed to deduct only their house of residence, so the resulting distortion in the estimates is rather smaller. In general, those who did not have *sovraabondante*, that is an assessment above zero after all deductions, could be declared *miserabili* if in the opinion of the fiscal officers they were not able to pay any tax, or could be registered for a sum agreed with the tax authorities.¹¹⁹ Another problem lies in the fact that sharecroppers of the countryside, who for the most part did not declare any property, often enjoyed other benefits from their condition.¹²⁰

In rural Tuscany, as a whole, 21% of households were recorded in the 1427 *catasto* without even a florin (net of deductions), while almost two thirds were taxable under 100 florins. In the central area of the *contado* of Florence, where more than half of the land was involved in sharecropping, the percentage of taxpayers recorded at zero was more than 50%. Not surprisingly, sharecroppers were the 47% of those who had nothing, even before deductions. Around the middle of the fourteenth century, on average 25.3 to 29.6% of the households of the countryside were involved in sharecropping (data for 1427 and for 1469 respectively, the latter being a 10% sample¹²¹). Changes in the spread of sharecropping contribute to determine the differences in the prevalence of households assessed at zero, reported in Table B1 for the four parts in which the Florentine *contado* was divided, plus selected communities from other Tuscan areas subject to Florence (and belonging to the so-called *distretto*).

¹¹⁹ Conti, *L'imposta diretta*, p. 146.

¹²⁰ Herlihy and Klapisch-Zuber, *Tuscans*, p. 104.

¹²¹ *Ibid.*, pp. 118-20.

Table B1. *Fiscal poor in Tuscany in 1427-29 (households with no sovrabbondante and assessed at zero)*

	Households (n.)	Households assessed at zero (n.)	Households assessed at zero (%)
<i>Contado of Florence (four quartieri)</i>			
Santo Spirito	7206	2043	28.4
Santa Croce	5370	1559	29.0
San Giovanni	6979	953	13.7
Santa Maria Novella	7218	1469	20.4
Santa Maria Novella (city of Prato only)	951	170	17.9
TOTAL	26773	6024	22.5
<i>Territory of Pistoia</i>			
Pistoia (city)	1247	~300	~24.1
Pistoia (countryside)	2529	272	10.8
Valdinievole (all Podesterie)	1273	104	8.2
<i>Other areas of the Distretto of Florence</i>			
Caprese (<i>Podesteria</i> *)	278	16	5.8
Castiglion Fiorentino (<i>Castello</i> *)	396	43	10.8
Castiglion Fiorentino (<i>Podesteria</i> *)	160	11	6.9
Chiusi (<i>Podesteria</i> *)	377	19	5.0
Colle Val d'Elsa (town and countryside)	565	86	15.2
Foiano (<i>Castello</i> *)	251	17	6.8

Foiano (<i>Podesteria</i> *)	64	3	4.7
Lari	39	258	15.1
Montagna (<i>Capitanato</i> *)	491	28	5.7
Montepulciano (<i>Castello</i> *)	547	35	6.4
Montepulciano (<i>Podesteria</i> *)	170	7	4.1
Monte San Savino (<i>Castello</i> *)	276	17	6.2
Monte San Savino (<i>Podesteria</i> *)	94	8	8.5
Pescia	416	46	10.0
San Gimignano (city and countryside)	573	146	25,5
Verghereto (<i>Podesteria</i> *)	199	21	10.6
Volterra (city)	797	218	27.4
Volterra (countryside)	667	100	15.0
Volterra (mountain)	90	26	28.8

Notes: * the terms *Capitanato* and *Podesteria* refer to rural areas, usually comprising a scatter of minor settlements. The term *Castello* refers to larger settlements (but smaller than cities). For some territories, for example that of Montepulciano, the available sources list separately the households residing in the main settlement (*Castello*) and in the surrounding rural areas (*Podesteria*).

Sources: For the *contado* of Florence, elaborations based on data from Conti, *La formazione*, pp. 248-341. For Prato, see Fiumi, *Demografia*, p. 113. For the territory of Pistoia, elaborations based on data from Pinto and Nelli, eds., *I comuni*, pp. 398-400, 431-5 and (for the city of Pistoia) Herlihy, *Medieval and Renaissance Pistoia*, p. 188. For the other areas of the *distretto* of Florence: Caprese, Chiusi and Verghereto: Cherubini, *Signori*, pp. 141-2; Colle Val d'Elsa: Pinto and Nelli, eds., *I comuni*, p. 438; Castiglion Fiorentino: Taddei, *Castiglion Fiorentino*, p. 344; Foiano, Montepulciano, Monte San Savino: Taddei, 'I centri minori', pp. 120-5; Lari: Tremolanti, *I catasti dei contadini*, p. 145; Pescia: Brown, *In the shadow*, p. 110, Pinto and Nelli, eds., *I comuni*, p. 438; San Gimignano, Fiumi, *Storia economica e sociale*, p. 177; Volterra: Fiumi, *Volterra*, pp. 200-1.

The data reported in the table are informative of what seem to be two general characteristics of preindustrial poverty: the territorial variability in its prevalence (which in Tuscany is complicated by the uneven spread of sharecropping) and its concentration in cities. In the territory of Pistoia, households assessed at zero were about 24% in the cities, versus just 10.8% in the countryside (even less in the Valdinievole area: 8.2%). In the territory of Volterra, these fiscally-poor households were 27.4% in the city, then double those in the countryside (15%) – although in the mountainous areas close to Volterra they reached 28.8%.¹²² Fiscal deductions, however, obviously inflate these 1427 measures, as has been discussed above.

¹²² Note that the older view that the medieval Tuscan mountains were poor has been challenged by Cohn, ‘Inventing’.

Appendix C. Additional information about relative poverty in cities of Italy and the Low Countries

The aim of this Appendix is to provide further information about the prevalence of relative poverty in cities of Italy and the Low Countries, providing more detail and additional evidence supporting the discussion in the main text, Section IV. Table C1 includes information about seven cities from three distinct Italian states: the Sabaudian State in the northwest, the Republic of Venice in the northeast, and the Florentine State in the centre of the Peninsula. Table C2 includes information for four cities in the southern Low Countries. To increase opportunities for comparison, in both tables we include measures of relative poverty based on the 25% and 50% poverty lines, plus (only for Italy) the 13% poverty line. However, it should be remembered that for the Italian states, whose distributions refer to wealth, the most proper poverty lines are 13% and 25% while for the southern Low Countries, whose distributions refer to income, the 50% poverty line should be considered instead (see discussion in the main text).¹²³

¹²³ Estimates for Nijvel in 1800 using a poverty line of 25% of median are not reported because the characteristics of the distribution lead to clearly artificial results.

Table C1. *The prevalence of relative wealth-poverty in Italy, 1450-1800 (percent)*

	Sabaudian State			Republic of Venice		Florentine State	
	Carmagnol a	Cherasco	Moncalieri	Bergamo	Padua	Arezzo	Prato
Poverty line = 13% of median							
1450	3.4 (1461)	5.7 (1447-50)	5.8 (1452)	6.7 (1448)		0.4 (1443)	
1500	4.5 (1491)		6.1 (1504)	8.3 (1537)		0.3 (1501)	
1550		1.6 (1530-48)	3.5 (1542)	8.5 (1555)	11.7 (1549)	15.6 (1558)	4.0 (1546)
1600	7.6 (1579)	7.7 (1585)		11.4 (1610)	17.6 (1627)	12.1 (1602)	17.0 (1621)
1650		5.5 (1648)	6.6 (1639)	10.6 (1640)	15.9 (1642)	10.6 (1650)	25.5 (1671)
1700		7.9 (1711)	6.7 (1707)	13.0 (1704)	20.0 (1694)	23.0 (1710)	
1750	10.2 (1734)						31.8 (1763)
1800						32.9 (1792)	
Poverty line = 25% of median							
1450	14.4 (1461)	14.9 (1447-50)	13.8 (1452)	6.7 (1448)		0.6 (1443)	27.0 (1428)
1500	14.4 (1491)		13.7 (1504)	18.6 (1537)		0.5 (1501)	
1550		7.9 (1530-48)	10.0 (1542)	20.0 (1555)	21.1 (1549)	23.7 (1558)	11.3 (1546)
1600	16.8 (1579)	18.1 (1585)		21.6 (1610)	25.3 (1627)	21.8 (1602)	21.1 (1621)
1650		14.6 (1648)	13.9 (1639)	23.1 (1640)	23.6 (1642)	21.2 (1650)	30.1 (1671)
1700		16.7 (1711)	16.1 (1707)	21.9 (1704)	28.9 (1694)	30.6 (1710)	
1750	19.3 (1734)						34.9 (1763)
1800						36.9 (1792)	
Poverty line = 50% of median							
1450	28.5 (1461)	30.7	29.6 (1452)	23.8 (1448)		31.4 (1443)	45.3 (1428)

1500	29.3 (1491)		27.5 (1504)	35.6 (1537)		31.9 (1501)	
1550		23.7	23.9 (1542)	34.8 (1555)	34.1 (1549)	35.9 (1558)	28.9 (1546)
1600	29.1 (1579)	33.4		34.6 (1610)	38.3 (1627)	35.3 (1602)	31.1 (1621)
1650		30.8	28.4 (1639)	36.5 (1640)	36.7 (1642)	36.3 (1650)	38.3 (1671)
1700		32.9	32.3 (1707)	34.9 (1704)	38.5 (1694)	40.1 (1710)	
1750	32.6 (1734)						39.7 (1763)
1800						43.5 (1792)	

Sources: Alfani and Di Tullio, *The Lion's share*, p. 69 for the Republic of Venice; EINITE database for the Sabaudian State and the Florentine State.

Notes: measures organized around reference years when needed. Actual year between parentheses.

Table C2. *The prevalence of relative income-poverty in the Low Countries, 1450-1800 (percent)*

	Aalst	Den Bosch	Kortrijk	Nijvel
Poverty line = 25% of median				
1450				
1500		11.6 (1506)		
1550	0.7 (1572)	2.4 (1547)	2.0 (1571)	3.4 (1525)
1600		5.4 (1636)		
1650	2.4 (1672)	5.7 (1656)		2.3 (1667)
1700	6.9 (1705)		1.1 (1686)	2.4 (1686)
1750	3.3 (1740)		7.0 (1761)	
1800	6.4 (1790)	3.4 (1775)		
Poverty line = 50% of median				
1450				
1500		26.7 (1506)		
1550	11.5 (1572)	20.2 (1547)	17.8 (1571)	19.8 (1525)
1600		23.2 (1636)		
1650	21.5 (1672)	25.3 (1656)		18.9 (1667)
1700	24.0 (1705)		14.7 (1686)	15.0 (1686)
1750	23.2 (1740)		24.7 (1761)	
1800	25.8 (1790)	27.4 (1775)		21.9 (1800)

Sources: archival sources listed in Appendix D5

Appendix D. Additional information about sources

D1. Archival sources used for Table 2

Archivio di Stato di Firenze (Florence National Archive):

Catasto:

- 842 (1458, Gambassi)
- 846 (1458, Santa Maria Impruneta)
- 847 (1458, San Martino alla Palma)
- 852 (1458, Castelfiorentino, Monterappoli)
- 856 (1458, Poggibonsi)
- 871 (1458, Cerreto Guidi)
- 883 (1458, Borgo San Lorenzo)
- 886 (1458, San Godenzo)
- 947 (1469, Castel San Giovanni)

Decima repubblicana:

- 272 (1504, Castelfiorentino)
- 274 (1504, Gambassi)
- 277 (1504, Poggibonsi)
- 281 (1504, Santa Maria Impruneta)
- 283 (1504, San Martino alla Palma)
- 289 (1504, Monterappoli)
- 299 (1504, Castel San Giovanni)
- 325 (1504, Cerreto Guidi)
- 373 (1504, Borgo San Lorenzo)
- 377 (1504, San Godenzo)

D2. Secondary sources used for Table 4

Blockmans and Prevenier, ‘Armoede in de Nederlanden’.

Arnould, *Les dénombremments*.

De Brouwer, *Demografische evolutie*.

van Schaik, *Belasting*.

Cuvelier, *Les dénombremments*.

D3. Secondary sources used for Table 5

- Leuven 1690: Cosemans, *De bevolking van Brabant*, p. 35.
- Brussel 1702: Heidi Deneweth, 'Database of the Brussels 1702 census' (HOST research group, VUB), based on Swinnen, ed., *De volkstelling*.
- Brussel 1755: Cosemans, *De bevolking van Brabant*, pp. 88, 95.
- Leuven 1755: Bonenfant, *Le problème du paupérisme*, pp. 13, 17, 28 ; Cosemans, *De bevolking van Brabant*, p. 161.
- Diest 1755: Bonenfant, *Le problème du paupérisme*, pp. 28 ; Cosemans, *De bevolking van Brabant*, p. 161.
- Meerhout 1755: Cosemans, *De bevolking van Brabant*, p. 161.
- Rural Brabant 1755: Calculation based on Cosemans, *De bevolking van Brabant*, pp. 122-174.
- Veurne 1759: Dalle, *De bevolking van Veurne-Ambacht*.
- Flanders 1771: Bonenfant, *Le problème du paupérisme*, pp. 13-17.
- Flanders 1800: Calculation based on Gyssels and van der Straeten, *Bevolking, arbeid en tewerkstelling*, p. 109.

D4. Secondary & archival sources used for Table 6

Cuvelier, *Les dénombremments* (1496, 1526)

State Archives Louvain-la-Neuve

Archives de la Ville de Nivelles

- 181 (1656)

- 1197 (1755)

- 1305 (1618)

- 2224 (1796)

State Archives Brussels

- Staten van Brabant, Registres, 326 (1629)

- Staten van Brabant, Cartons, 399 (1709)

D5. Secondary and archival sources used for Table C2

Hanus, 'Affluence and inequality' (Den Bosch 1506-1656)

Municipal Archives Gent

Oud Archief Stad Gent

- reeks 28, 1 (3) (1572, Aalst)
- reeks 28, 34 (145) (1571, Kortrijk)

Municipal Archives Aalst

Oud Archief Stad Aalst

- 264 (1672, Aalst)
- 265 (1602, Aalst)
- 269 (1705, Aalst)
- 273 (1742, Aalst)
- 277 (1791, Aalst)

State Archives Kortrijk

Oud Stadsarchief Kortrijk

- 342 (1761, Kortrijk)
- 784 (1686, Kortrijk)

State Archives Louvain-la-Neuve

Ville de Nivelles

- 268 (1525, Nijvel)
- 1192 (1680, Nijvel)
- 1382 (1667, Nijvel)
- 2224 (1800, Nijvel)

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