

INTRODUCTION

During the last years, a growing body of literature started to investigate the dynamics of economic inequality, especially in the European territories, in the very long run. In particular, in contrast to the dominant previous literature, the interest to reconstruct the main trends in economic inequality in the preindustrial period has gained much more relevance and importance.¹ The hypothesis suggested by van

* Departamento de Economía, Universidad Pública de Navarra (Pamplona, Spain).

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

¹ See, e.g. G. ALFANI, *Wealth Inequalities and Population Dynamics in Early Modern Northern Italy*, in "Journal of Interdisciplinary History", 40, 2010, n. 4, pp. 513-549; IDEM, *The effects of plague on the distribution of property: Ivrea, Northern Italy 1630*, in "Population Studies", 64, 2010b, n. 1, pp. 61-75; IDEM, *Calamities and the Economy in Renaissance Italy. The Grand Tour of the Horsemen of the Apocalypse*, London 2013; IDEM, *Economic Inequality in Northwestern Italy: a Long-Term View (Fourteenth to Eighteenth centuries)*, in "Journal of Economic History", 75, 2015, n. 4, pp. 1058-1096; IDEM, *The rich in historical perspective. Evidence for preindustrial Europe (ca. 1300-1800)*, in "Cliometrica", 11, 2017, 3, pp. 321-348; G. ALFANI, F. AMMANNATI, *Long-term trends in economic inequality: the case of Florentine state, c. 1300-1800*, in "The Economic History Review", 70, 2017, n. 4, pp. 1072-1102; G. ALFANI, M. BARBOT eds., *Ricchezza, valore, proprietà in Età preindustriale, 1400-1850*, Venice 2009; G. ALFANI, M. DI TULLIO, *Dinamiche di lungo periodo della disuguaglianza in Italia settentrionale: una nota di ricerca*, in "Dondena Working Paper", n. 71, 2015; G. ALFANI, M. DI TULLIO, *The Lion's Share. Inequality and the Rise of the Fiscal State in Preindustrial Europe*, Cambridge 2019; G. ALFANI, W. RYCKBOSCH, *Growing apart in early modern Europe? A comparison of inequality trends in Italy and the Low Countries, 1500-1800*, in "Explorations in Economic History", 62, 2016, pp. 143-153; B. BLONDÉ, J. HANUS, *Beyond building craftsmen: economic growth and living standards in the sixteenth-century Low Countries: the case of 's-Hertogenbosch (1500-1650)*, in "European Review of Economic History", 14, 2009, n. 2, pp. 179-207; J. HANUS, *Real inequality in the early modern Low Countries: the city of 's-Hertogenbosch, 1500-1660*, in "The Economic history Review", 66, 2013, 3, pp. 733-756; P.H. LINDERT, *When did inequality rise in Britain and America*, in "Journal of Income Distribution", 9, 2000, n. 1, pp. 11-25; A.E.C. MCCANTS, *Inequality among the poor of eighteenth century Amsterdam*, in "Explorations in Economic History", 44, 2007, n. 1, pp. 1-21; B. MILANOVIC, P.H. LINDERT, J.G. WILLIAMSON, *Pre-Industrial Inequality*, in "The Economic Journal", 121, 2010, March, pp. 255-272; C. MORRISON, W. SNYDER, *The Income Inequality of France in Historical Perspective*, in "European Review of Economic History", 4, 2000, n. 1, pp. 59-83; E. NICOLINI, F. RAMOS PALENCIA, *Decomposing Income Inequality in a Backward Pre-Industrial Economy: Old Castile (Spain) in the Middle of the Eighteenth Century*, in "The Economic History Review", 69, 2016, n. 3, pp. 747-772; J. REIS, *Deviant behavior? Inequality in*

Zanden (1995) more than two decades ago, on the possible existence of a super Kuznets curve in the economic inequality trend which would start in some European territories already during the early modern period, represented a starting point to make new hypotheses and tackle new debates moving from the building of new datasets.

This recent historiography shares several features which make it different compared to the works which during the previous decades dealt, from different perspectives, sources, and methodologies, with topics such as income or wealth inequality, social stratification or social mobility. First of all, it focuses on the *longue durée* and analyses historical dynamics which embrace several centuries, usually comprised between the Late Middle Ages and the 19th century. Secondly, this literature often deals with inequality in a comparative perspective even, in several cases, carrying out international comparisons. Third, it uses wealth inequality in order to measure economic inequality. This dimension has been largely neglected until recently,² but it gathers some features that make it probably the best option to properly assess long term trends in economic inequality in preindustrial Europe. First, it is probably the only variable that can be measured regularly from the late medieval age to the beginnings of modern economic growth.³ Moreover, wealth inequality is also a good proxy for income inequality since, as noted by Alfani,⁴ in preindustrial societies – in which most of the product was agrarian – the property and/or use of land was a crucial aspect of defining how the total product was generated and distributed. Wealth inequality is also usually more comprehensive in social terms and is based on fewer assumptions than alternative measures such as social tables, the ratio between land rent and unskilled wages or the Williamson inequality index⁵ – i.e., the ratio between nominal output per head and the nominal

Portugal 1565-1770, in “Cliometrica”, 11, 2017, n. 3, pp. 297-319; C. SANTIAGO-CABALLERO, *Income inequality in central Spain, 1690-1800*, in “Explorations in Economic History”, 48, 2011, n. 1, pp. 83-96. A relevant part of these works is being conducted in the framework of the EINITE and SMITE projects, which aim to clarify the dynamics of economic inequality and social mobility in Europe from the late Middle Ages until the beginning of the Industrial Revolution (<http://www.dondena.unibocconi.it>).

² Despite a certain tradition of studies, mainly local in nature or only for a particular date, focused on measuring wealth inequality (see, e.g. L. SOLTOW, *Wealth Distribution in Denmark in 1789*, in “Scandinavian Economic History Review”, 27, 1979, n. 2, pp. 1-18; IDEM, *Wealth Distribution in Norway and Denmark in 1789*, in “Historisk Tidsskrift”, 59, 1980, pp. 221-235; IDEM, *The distribution of wealth in Belgium in 1814-1815*, in “The Journal of European Economic History”, 10, 1981, n. 2, pp. 401-414; IDEM, *The Swedish Census of Wealth at the Beginning of the 19th Century*, in “Scandinavian Economic History Review”, 33, 1985, 1, pp. 1-24; L. SOLTOW, J.L. VAN ZANDEN, *Income and wealth inequality in the Netherlands, 16th-20th centuries*, Amsterdam 1998; J.L. VAN ZANDEN, *Tracing the beginning of the Kuznets curve: Western Europe during the early modern period*, in “The Economic History Review”, 48, 1995, n. 4, pp. 643-664) only in the last few years has the topic has returned to academic debates.

³ G. ALFANI, *Wealth Inequalities and Population Dynamics in Early Modern Northern Italy*, cit.; IDEM, *Economic Inequality in Northwestern Italy: a Long-Term View (Fourteenth to Eighteenth centuries)*, cit.; P.H. LINDERT, *When did inequality rise in Britain and America*, cit.

⁴ G. ALFANI, *Wealth Inequalities and Population Dynamics in Early Modern Northern Italy*, cit., p. 514; IDEM, *Economic Inequality in Northwestern Italy*, cit.

⁵ J.G. WILLIAMSON, *Real Wage Inequality and Globalization in Latin America before 1940*, in “Revista de Historia Económica-Journal of Iberian and Latin American Economic History”, 17, 1999, special

unskilled wage rate. Furthermore, wealth inequality has recently gained prominence in the economic debate on questions such as the relationship between economic growth and inequality, the sources of economic growth in the long run or the interaction between economic growth and population dynamics, among others.⁶ These questions are being analyzed now over unusually long periods of time, from the 18th century onwards, and therefore they can be linked, at least to a certain extent, with historical debates related to preindustrial times.⁷ Fourthly, it is worth mentioning that the investigations belonging to this historiographical literature use more intensively concepts and analytical tools which are borrowed from the Economics as well as statistical and econometric methods.

This work on Catalonia can be included into this avenue of research. In particular, even though it is still in a preliminary version, the paper aims to lay down the empirical and methodological bases to sketch the trends in economic inequality since the Late Middle Ages to the eve of the Industrial Revolution in Catalonia. This area represents an interesting case study both for its importance as one of the first Spanish regions to be consistently studied in the long run and for the quality of the available sources. Moreover, two other reasons make the Catalonian case relevant. The first one, is that its sources present similar features to the sources used in the investigations on wealth inequality in other European areas, and especially in Central-Northern Italy and in Southern France, which makes it possible to analysis the results of this study in a comparative perspective. Secondly, Catalonia was the first region in Spain to go through a process of industrialization, itself following a significant phase of “preindustrial growth”.

The paper is structured as follows. After this introduction, the second section provides a detailed description of the sources, the database and the methodology used in the work. The third section is devoted to present and analyze a case study, namely the community of Balaguer. With respect to this community, the work focuses on the main trends in wealth inequality in some benchmark years since the decades which followed the Black Death to the mid-18th century and, at the same time, analyses the outcomes in the light of the main “stylized facts” provided by the literature on this topic. The fourth section concludes by summarizing the main findings.

SOURCES AND METHODOLOGY

Following a system that was probably imported from Northern and Central Italy and/or Southern France,⁸ from the 14th century until, at least, the early 18th

issue, pp. 101-142; J.G. WILLIAMSON, *Land, Labor and Globalization in the Third World, 1870-1940*, in “Journal of Economic History”, 62, 2002, 1, pp. 55-85.

⁶ T. PIKETTY, G. ZUCMAN, *Capital is Back: Wealth-Income Ratios in Rich Countries, 1700-2010*, in “Quarterly journal of economics”, 129, 2014, n. 3, pp.1255-1310, 1255.

⁷ G. ALFANI, M. DI TULLIO, *The Lion's Share. Inequality and the Rise of the Fiscal State in Preindustrial Europe*, cit.

⁸ M. TURULL RUBINAT, J. MORELLÓ BAGET, *Estructura y tipología de las “estimes-manifests” en Cataluña (siglos XIV-XV)*, in “Anuario de Estudios Medievales”, 35, 2005, n. 1, pp. 271-326, 280.

century⁹ some Catalan local councils evaluated and registered the wealth located in a specific community and its territory that was owned by inhabitants or households, institutions, or foreigners.¹⁰ This was a long-lasting tradition that endured until, at least, the introduction of the Borbon cadastre, after the War of Spanish Succession (1701-1714)¹¹. In these property registers, called *llibres d'estimes*, *manifests*, or *vàlues* (hereinafter *estimes*), the real estate property and, in some communities and periods, the movable property, was evaluated. Indeed, books of *estimes* were used as a property register or wealth cadastre, i.e., as a basis from which to distribute the fiscal burden of local and Crown direct taxes and rates (such as the *talla* or the *questia*), which were quite frequently – but not always – paid in proportion to wealth (*per sou e per lliure* or *per solidum et per libram*).¹² Moreover, the *estimes* could also be used for other administrative and political purposes.¹³

The wealth of information comprised in this kind of sources and its huge potential for investigating several aspects of fiscal, legal, political, demographical, social and economic history of Late Medieval and Modern Catalonia have not gone unnoticed for historians. In this sense, a considerable team of historians dig up and analysed, during the 1990s and 2000s, a substantial part of these kind of documents conserved in various local and regional Catalan archives.¹⁴ These sources allowed

⁹ Several testimonies confirm the existence of a system of direct taxation and, therefore, wealth assessments, already in the decades which preceded the Black Death. Nevertheless, the largest number of documents related to this period is lost at the present day. Only the community of Cervera preserves, even it is not in good conditions, a wealth assessment for 1340 on one of the four districts in which it was divided for fiscal purposes for 1340 (M. TURULL RUBINAT, J. RIBALTA I HARO, *Ciutat i poder en el feudalism declinant a la Catalunya baixmedieval (Diferenciació social i distribució social de l'espai urbà a Cervera, 1340-1382)*, in “Anuario de Estudios medievales”, 22, 1992, n. 1, pp. 79-144).

¹⁰ The rest of the territories of the Crown of Aragon produced similar fiscal sources as well, which are therefore useful in order to investigate the evaluation of wealth and its distribution. See, for instance, M. SÁNCHEZ, A. FURIÓ, J.Á. SESMA MUÑOZ, *Old and New Forms of Taxation in the Crown of Aragon (13th-14th Centuries)*, in *La fiscalitat nell'economia europea. Secs. XIII-XVIII. – Fiscal systems in the European Economy from the 13th to the 18th Centuries*, ed. S. CAVACIOCCHI, Firenze 2008 (Firenze University Press), pp. 99-130. C. LALIENA CORBERA, *El impuesto antes del impuesto en el reino de Aragón a comienzos del siglo XIII: fisco, reforma y legitimidad*, in *Fisco, legitimidad y conflicto en los reinos hispánicos: (siglos XIII-XVII) : homenaje a José Ángel Sesma Muñoz*, C. LALIENA CORBERA, M. LAFUENTE GÓMEZ, Á. GALÁN SÁNCHEZ eds., Zaragoza 2019 (Prensas Universitarias de Zaragoza), pp. 67-91.

¹¹ On paper, the entrance into force of the Borbon cadastre should have implied the end of the use of books of *estimes* in the Catalan communities. However, reality is more complex. Local and regional archives conserve, in some cases, sources defined as “*estimes*” also for the 18th century and the first half of the 19th century. It should be ascertained on a case-by-case basis whether the adoption of this term is simply the outcome of inertia in using a word which was empty of its original content, or the result of new direct wealth assessments related, for instance, to local taxes.

¹² As reflected in the books of the *talla* (*llibres de la talla*) where the payments were recorded, based on the previous evaluation recorded in the *estimes*.

¹³ According to Turull and Morelló (M. TURULL RUBINAT, J. MORELLÓ BAGET, *Estructura y tipología de las “estimes-manifests” en Cataluña (siglos XIV-XV)*, cit.), the *estimes* were not only used for fiscal purposes, they were also used like a population and social census in order to consider an individual's “citizenship”; military duties depend on the social category and the right – and how – to participate in local politics.

¹⁴ For a detailed state of the art of this literature, which embraces several tens of publications, in particular those works more related to the books of *estimes*, see M. TURULL RUBINAT, J. MORELLÓ

them to study especially those aspects which referred to the functioning of local fiscal systems, their relationship with the Crown fiscal system as well as the institutional transformation of towns and cities in Medieval Catalonia and their prerogatives. Topics such as demographical trends, socio-occupational dynamics, social and spatial stratification, and, in short, economic and social history issues have received less attention.¹⁵

This literature, even though focused almost exclusively on the Medieval period and, in the vast majority of cases, on aspects which are secondary as far as the purposes of this paper are concerned, represents a rigorous and essential basis to understand the origin of this kind of sources, their features, their transformation during the Medieval period and, ultimately, the potential and limitations of *estimes* as sources to tackle a quantitative analysis of the dynamics of wealth inequality in Catalonia in the long run, especially in the period included between 1350 and 1500.

As far as the information included in the *estimes* is concerned, first of all it is worth considering who were included in this kind of documentation. To this respect, it is necessary to specify that the source clearly complied with local rules and regulations which changed over time. However, this does not prevent from detecting some basic, shared, patterns. In general, the *estimes* were hearth-by-hearth (*foc per foc*) evaluations of property. Therefore, except in the case of some groups and specific persons which I will mention hereafter, every head of family, widow, or orphan owning a legacy living in the community, were included. Accordingly, these kind of assessments involved the largest majority of cases.

In the beginning, the inclusion of clergy properties was controversial and frequently subject to judicial verdicts. However, according to Turull and Morelló¹⁶, since the 15th century onwards, their wealth tended to be included in the *estimes*,

BAGET, *Estructura y tipología de las "estimes-manifests" en Cataluña (siglos XIV-XV)*, cit. See also M. TURULL RUBINAT, P. VERDÉS PIJUAN, *Gobierno municipal y fiscalidad en Cataluña durante la Baja Edad Media*, in "Anuario de historia del derecho español", 76, 2006, pp. 507-530.

¹⁵ Among the literature more strictly related with the usual topics of debate in economic history, including in some cases aspects related to the study of economic inequality for a certain community and period, it is worth mentioning the works by Vilalta for Balaguer (M.J. VILALTA ESCOBAR, *Balaguer a la Catalunya Moderna. Creixement econòmic i estabilitat social (Segles XVII i XVIII)*, 1990 Lleida), Turull and Ribalta (M. TURULL RUBINAT, J. RIBALTA I HARO, *Ciutat i poder en el feudalism declinant a la Catalunya baixmedieval (Diferenciació social i distribució social de l'espai urbà a Cervera, 1340-1382)*, cit.) and Tello (E. TELLO, *Cervera i la Segarra al segle XVIII*, Lleida 1995) for Cervera, Torras (M. TORRAS, *La crisi del segle XV a Manresa. Una aproximació a partir del llibres de manifests*, Manresa 1996) and Fynn-Paul (J. FYNN-PAUL, *The rise and decline of an Iberian bourgeoisie. Manresa in the Later Middle Ages, 1250-1500*, Cambridge 2016; IDEM, *Family, work, and household in late medieval Iberia. A social history of Manresa at the time of the Black Death*, New York 2018) for Manresa or the most recent ones by Brea and Pujades (G. BREA-MARTÍNEZ, J. PUJADAS-MORA, *Transformación y desigualdad económica en el área de Barcelona, 1715-1860*, in "Revista de Historia Económica - Journal of Iberian and Latin American Economic History", 36, 2018, n. 2, pp. 241-273; IDEM, *Estimating long-term socioeconomic inequality in southern Europe: The Barcelona area, 1481-1880*, in "European Review of Economic History", forthcoming) for the Barcelona area.

¹⁶ M. TURULL RUBINAT, J. MORELLÓ BAGET, *Estructura y tipología de las "estimes-manifests" en Cataluña (siglos XIV-XV)*, cit., p. 299

especially real estates. In fact, an in-depth examination of our sources reveals the regular presence throughout of religious institutions and clergymen.¹⁷

Respect to the presence of the wealth of the nobility Turull and Morelló¹⁸ argues that nobles were generally exempted at the beginnings of direct taxation, but soon their properties were evaluated – although only regarding the real estate they had bought from commoners (“*de pagesia*”). Empirically, in the *estimes* we include in the EINITE/SMITE database we did find a certain number of nobles (*cavallers*, *donzels*). Consequently, I will presume that all the real estate properties, that the nobility acquired from commoners and were located within the jurisdictional limits of a certain community, are included.

Other specific situations regarded the cases of those individuals which were exempt from paying taxes due to the fact they were recent inhabitants of that land (*enfranquits*), or of the Jewish population. For what concerns the former case is concerned, properties of *enfranquits* were actually assessed regularly even though they were temporarily exempt from paying taxes.¹⁹ As far as the Jewish population is concerned, in some communities and years, during the 14th and 15th centuries, it is also possible to find, usually in a separated list, mention to the assessments of the Jewish population’s wealth. In these cases, usually, only the real estate properties located out of the Jewish quarters (*calls*) and those, of the same kind, which had been purchased to Christian inhabitants were assessed.²⁰

Finally, institutions – including the religious ones, which were by a great deal the most numerous – began to be fully included in the 14th century; therefore, they were always evaluated in our data.

More important and potentially problematic, and quite usual in this sort of source,²¹ could be the absence of the poorest, the bottom of the wealth distribution. Nevertheless, in the Catalan case, not infrequently the books of *estimes* comprise, in addition to the wealth assessments, some indications about the poorness of some individuals as in the case of Balaguer in 1412/13 (*paupers*), Cervera in 1476 or Reus in 1541 (*nichil*). This evidence might suggest that every owner with any quantity of wealth located in a certain community was included in the source. Even because we have to take into account that the evaluations of wealth included in the *estimes* did not implied necessarily the payment of a tax. On

¹⁷ See also J. MORELLÓ BAGET, *La comunitat de preveres de Reus i el seu encaix dins fiscalitat municipal*, in “Anuario de estudios medievales”, 35, 2005, n. 2, pp. 863-906; and P. VERDÉS PIJUAN, *La contribución eclesiástica a la fiscalidad municipal en Cataluña durante la época bajomedieval*, in *Financiar el reino terrenal: la contribución de la iglesia a finales de la Edad Media (siglos XIII-XVI)*, ed. J. MORELLÓ BAGET, Barcelona 2013, pp. 131-168

¹⁸ M. TURULL RUBINAT, J. MORELLÓ BAGET, *Estructura y tipología de las “estimes-manifests” en Cataluña (siglos XIV-XV)*, cit., pp. 299-300.

¹⁹ *Ibid.*, pp. 300-301.

²⁰ For instance in the case of Balaguer in 1412. See M. CASAS NADAL, *Els jueus de Balaguer en el Llibre de l’Estima de 1412*, in *Actes del 1er col·loqui d’historia dels jueus a la Corona d’Aragó*, Lleida 1991, pp. 321-333.

²¹ See, for instance, G. ALFANI, *Economic Inequality in Northwestern Italy: a Long-Term View (Fourteenth to Eighteenth centuries)*, cit. and G. ALFANI, F. AMMANNATI, *Long-term trends in economic inequality: the case of Florentine state, c. 1300-1800*, cit.

top of this, both in the real estate and in the movable properties, it was quite usual that even people with tiny amounts of wealth were assessed. A further argument to support the possible widespread inclusion of poor individuals is represented by the fact that, at the best of my knowledge, in no case do the *estimes* mention the existence of a minimum exempted from the evaluation.

A second major issue related to the main features of the source is related to the understanding of which kinds of properties were included in the assessments. It is worth stressing that, evidently, the main component of wealth in this historical period was represented by real estates and, in particular, by the land. This kind of wealth, moreover, in contrast with wealth originated from movable goods or financial wealth, was always assessed in all the books of *estimes* of all the communities over centuries, with no exceptions. Therefore, it makes it possible to carry out more homogeneous comparisons on the dynamics of (real estate based) wealth inequality among communities and over centuries.

The real estate property (*siti* in the documents) included – often in very detailed lists which comprise all the properties of each evaluable owner – every urban and rural property located within the municipal territory, including houses, mills, warehouses, barns, ovens, wine cellars, other places devoted to storage and preservation of agrarian products (oil, cereals, honey...), workshops, and, of course, all kinds of lands in the countryside. Another issue, which is especially relevant to deal with in the Catalan case due to the wide diffusion of contracts of emphyteusis, is the distinction, as far as real estate is concerned, between leaseholders and owners, and their respective ownership. To this respect, it is quite clear that, during the 14th century, the general rule was that lands were assigned to the leaseholder (and comprised in his assessment), while the rent was included in the owner's evaluation.²²

Movable wealth represents a second item comprised in the assessments. In particular, in the majority of cases, movable wealth was included in the evaluation during the late medieval period and for the 16th century but, for unclear reasons, movable wealth assessments disappeared in most of cases in the following century.²³ As far as movable wealth is concerned, it is worth asking a fundamental question: which items were included in the evaluations of this sort of wealth? Generally speaking, money in cash, agrarian stock, livestock, tools, jewels, clothes, furniture and even slaves were included in this category. However, minor differences across communities and over time can be detected, especially about what items were evaluated in this kind of wealth, how they the evaluations recorded in the documents and, finally how were they taxed. To this respect, in some cases, above all during the 14th and 15th, detailed lists with every movable item assessed were included, but in some others movable wealth appears grouped in major concepts (furniture, agrarian stocks or cash) or, more frequently, just as a total sum.

²² M. TURULL RUBINAT, J. MORELLÓ BAGET, *Estructura y tipología de las "estimes-manifests" en Cataluña (siglos XIV-XV)*, cit., p. 305.

²³ The community of Reus, where the book of values (*estimes*) of 1700 still specifies that all goods, both real estate and movable goods ("*llibre de valia feta sobre tots los bens axi mobles com immobles...*"), represents an exception in this sense.

Therefore, while the *siti* always received a close attention, over time *moble* goods were more poorly assessed, and the trend was to reduce the number of items which were considered in this category as well as to provide only a figure on their total amount.

Two important clarifications concerning the data collection must be made before describing in detail the features of the database built by the EINITE/SMITE Project on Catalonia: first, main cities, such as Tarragona, Lleida and, above all, Barcelona, had apparently abandoned local direct taxation as early as the 14th century.²⁴ Thus, the available evidence *a priori* must be basically limited to medium and small communities. On the other side, small communities usually preserved their historical funds to a lesser degree than the big ones. Hence, finally, the sample of available communities is basically constrained to towns that, for Catalonian historical standards, were medium-sized and, in some cases, to some small villages under their jurisdiction. Moreover, only a handful of communities have preserved these sources with a time span large and regular enough to capture the movement of economic inequality in the short, medium and long term.²⁵ Scattered evidence for specific years or limited periods exists, however, for a good number of locations.

In this work I will use, as Map 1 shows, data for the eleven communities on which the EINITE/SMITE project is working at the moment. Some of them – Reus, Manresa, and Cervera – can be considered, at least for some periods, urban or semi-urban. Even though they were below the usual limit to be considered urban (5,000 inhabitants), at least until the 18th century, at the same time, in the context of a scarcely urbanized region as Catalonia was until then, they had significant importance as centers or capitals of different sub-regions. Reus, even though not formally a city until the 19th century, was the capital of the *Baix Camp* area, and after a sequence of war, economic decline, and plague during the first half of the 17th century it became the second most populated city in Catalonia in the 18th century, thanks to an economic boom in the textile sector, wine and liquor production, and trade. Manresa, which was juridically a city since the 13th century, was the capital of the Bages region, located in central Catalonia. After a golden age in the decades before the Black Death, it recovered its importance only in the 18th century, when it became one of the most important industrial textile centers on the eve of the Catalonian industrial revolution. Cervera was the capital of the *Segarra* region, in inland Catalonia. It became a city formally only in 1702 and had a university from 1740. Tarrega and Balaguer, medium-sized towns, were the regional capitals of the Urgell and Noguera regions. Artesa de Segre and Tiurana were independent communities in fiscal terms but they were very small towns or villages. Finally, Almofter, Castellvell, Tudela de Segre and Vergos, deserve different consideration: They were villages placed under the jurisdiction of Reus, in the case of Almofter

²⁴ M. TURULL RUBINAT, J. MORELLÓ BAGET, *Estructura y tipología de las “estimes-manifests” en Cataluña (siglos XIV-XV)*, cit., p. 318.

²⁵ A very different picture arises with respect to the Bourbonic Cadastre in the 18th century, in which much more information is conserved.

and Castellvell, Artesa in that of Tudela de Segre and Cervera, in the case of Vergos.

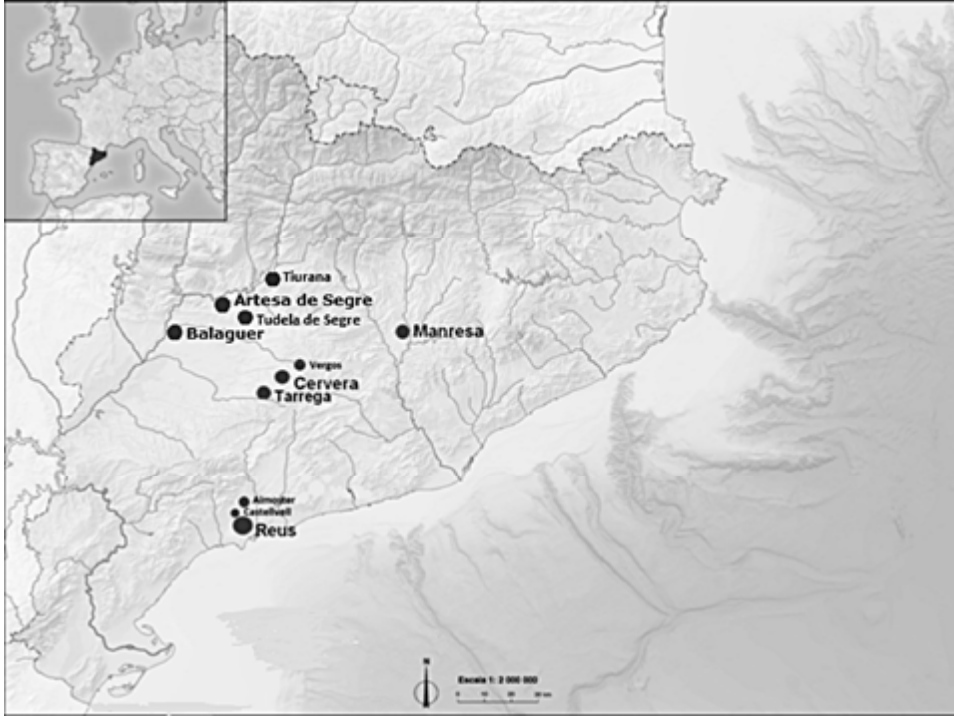
To sum up, Catalan *estimes*, given their main features, offer a high degree of social comprehensiveness and are similar to the most detailed and richest sources available across Europe, in particular the Italian and French ones.

Tab. 1. **Population²⁶ in the communities included in the EINITE/SMITE CATALONIA DATABASE (years with censuses)**

	1497	1515	1553	1717	1787
Almoſter	48	72	96	286	524
Artesa and Tudela de Segre	154	156	259	794	888
Balaguer	1868	1668	1476	1620	3634
Castellvell	56	72	136	298	444
Cervera and Vergos	1932	2108	2112	2325	4808
Manresa	1220	1260	1412	5669	8421
Reus	1416	1816	2180	2056	14514
Tarrega	1140	1292	1240	1413	3909
Tiurana	30	43	29	221	213

²⁶ For 1497, 1515, and 1553 the population was calculated multiplying the number of fires (*focs*) times four. The censuses reported the population of Cervera and Vergos and Artesa and Tudela de Segre together

Map. 1. Location of the communities included in the EINITE/SMITE CATALONIA DATABASE (March 2019)



WEALTH INEQUALITY IN BALAGUER, 1400-1750: A CASE STUDY

This section aims to outline the main findings of the research conducted in the framework of the EINITE and SMITE Projects on the trends of economic inequality in the long run in Catalonia moving from the case study of the town of Balaguer. More specifically, the features of the data comprised in the *estimes* books of this community will be discussed in detail in the first part of this section, in a second step the methodology adopted to analyze the data will be described and, finally, the main results of the investigation will be presented in the light of the main hypotheses and findings suggested by the international literature.

The town of Balaguer, located in inland Catalonia (see Map 1), holds among its historical documents some books of *estimes* which allow to outline, moving from some benchmark years, the dynamics of wealth inequality in the very long run, i.e. since the early 15th century to the late 17th century, and, with the help of the documents of the Borbon cadastre, extend the series up to at least the middle of

the 18th century.²⁷ More specifically, books of *estimes* are available for 1412, 1435, 1506-1509, 1588, 1659 and 1699, making it possible to have at our disposal a benchmark year approximately every 50 years, with the exception of the mid-16th century, and therefore to assess the dynamics of the main trends in economic inequality.

In the first place, the book of *estimes* of 1412, presents a mixed structure including both features of a book of *estimes* and a book used for tax collection. Indeed, it comprises both information on the assessed amount of wealth and on the amount which “households” were supposed to pay for a specific tax, probably a *talla*. The evaluation of wealth includes both real estate as well as movable goods and, only in a few cases, is broken down by each component of real estate.

The 1435 record is characterized by a structure which is very similar to the previous one. Once again, it is evident its usefulness both as a wealth census and for fiscal purposes. Wealth evaluations are also in this case split into real estate and movable wealth and, differently from the previous book of *estimes*, in this one the different components of real estate are quite often broken down by each one of its items. On the other hand, differently from the book of 1412, this book of *estimes* is not complete. Despite the wealth evaluations of more than 300 “households” are available, there is no information which can allow me to assess the impact of the possible bias caused by the incompleteness of data on the representativeness of the calculations on wealth distribution. Therefore, our findings, especially in this case, should be considered cautiously.

As far as the early 16th century is concerned, two books of *estimes* have been preserved up to the present day, i.e. 1506-1507 and 1508-1509. These volumes are quite similar in the sense that both share a common structure in which real estate wealth is broken down in each one of its components and, on the other hand, movable wealth has not been broken down and is represented by only one figure.

At the end of the same century, the volume which refers to 1588 is also available. The structure of this book is different from the ones of the early 16th century in that only real estate wealth, which is broken down in all its components without a final total sum, is included. On the other hand, the volume is organized following the place of residence of the tax payer in terms of the quarter and street.

Already in the 17th century it is possible to consult two books of *estimes*, referring to 1659 and 1699.²⁸ The former is a sort of draft which, in the light of

²⁷ However, to be precise, in this case both sources have a different nature. While the *estimes* included direct valuations of wealth, the Bourbon cadastre – after eliminating any assessment of personal income- included tax payments based on an estimation of the value of the real estate properties. Therefore, although cautiously, it is reasonable to think that the value of the property was directly related to the amount paid for the tax and, consequently I believe that the results obtained from both sources should be roughly comparable.

²⁸ The information comprised in both books represents a key content of the analysis conducted by Vilalta on the economic and social history of Balaguer in the 17th and 18th centuries. See M.J. VILALTA ESCOBAR, *Balaguer a la Catalunya Moderna. Creixement econòmic i estabilitat social (Segles XVII i XVIII)*, cit.

changes and notes,²⁹ could be used as a starting point for further modifications. It includes only real estate, which is broken down in all its components without providing a general sum of the assessed real estate wealth, and, in some cases, the amount of money which had been paid for a tax known as the “sequiatge”. The latter, focusing on the *estimes* of 1699, shares basically the same features of the 1659 volume with the peculiarity of including a much minor number of modifications and changes than the former one.

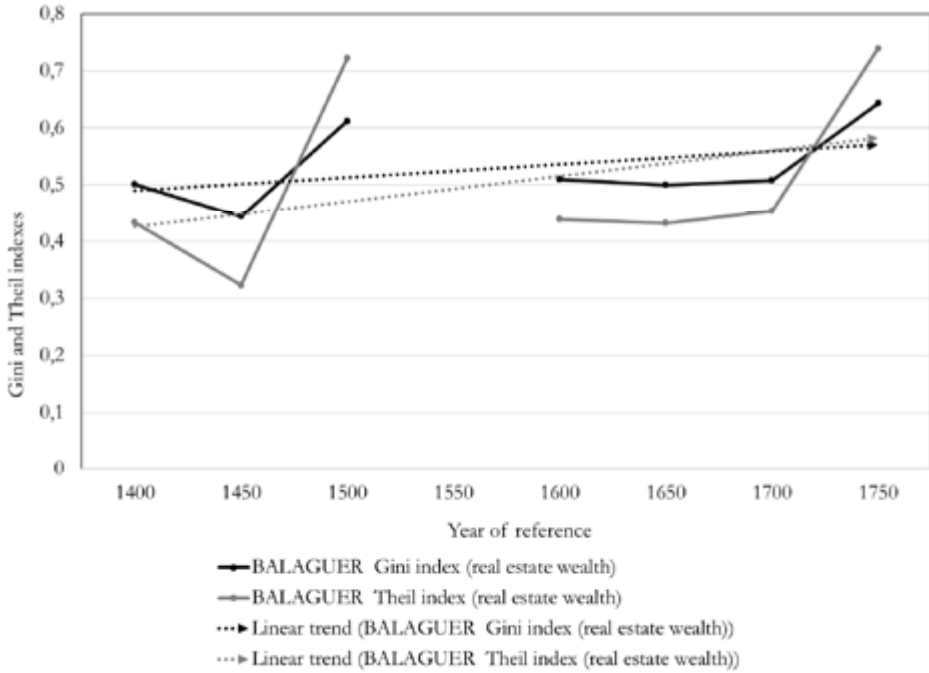
Lastly, in order to extend the series up to the middle of the 18th, another source, i.e. the Borbon cadastre, has been employed. More specifically, I used the volume which refers to 1748 and comprises information on the real estate wealth.

All things considered, the books of *estimes* which refer to the town of Balaguer, with all their limitation and peculiar features, perfectly fit in the general patterns of the Catalan books of *estimes* described in the second section of this work, and make it possible to outline a case study on economic inequality in the long run in Catalonia between the 15th and the 18th centuries.

In order to analyze the data gathered in the documents which have been described in the previous section, I will use, in a first step, two indicators which are mostly employed to measure inequality in wealth distribution: the Gini Index and the Theil Index. Graph 1 shows the trends of both indexes since the early 15th century to the mid-18th century in Balaguer for real estate wealth.

²⁹ The calculation of the Gini Index and the Theil Index, however, presents only minor changes if we take (or not) into account the items which have been crossed out and modified.

Graph 1. Long-term trends in wealth inequality in Balaguer, 1400-1750 (Gini and Theil indexes)



Source: own elaboration based on Balaguer books of estimates, Arxiu comarcal de la Noguera.

In particular, both indexes show that, after a significant drop in inequality in the first half of the 15th century, a relevant increase in inequality occurred in the second half of that century. We should however be cautious when considering this result, since, as mentioned in the previous section, the book of *estimes* of 1435 is not complete. The series reappears around the year 1600, showing much lower levels of inequality, which don't differ notably from the ones detected in the early 15th century, and displays a stalemate during the 17th century from which it doesn't recover up to the mid-18th century.³⁰ The general assessment of both indexes, as the trend lines show, is very similar and indicate a slight increase in inequality in the long run, which is a bit more relevant in the Theil Index.

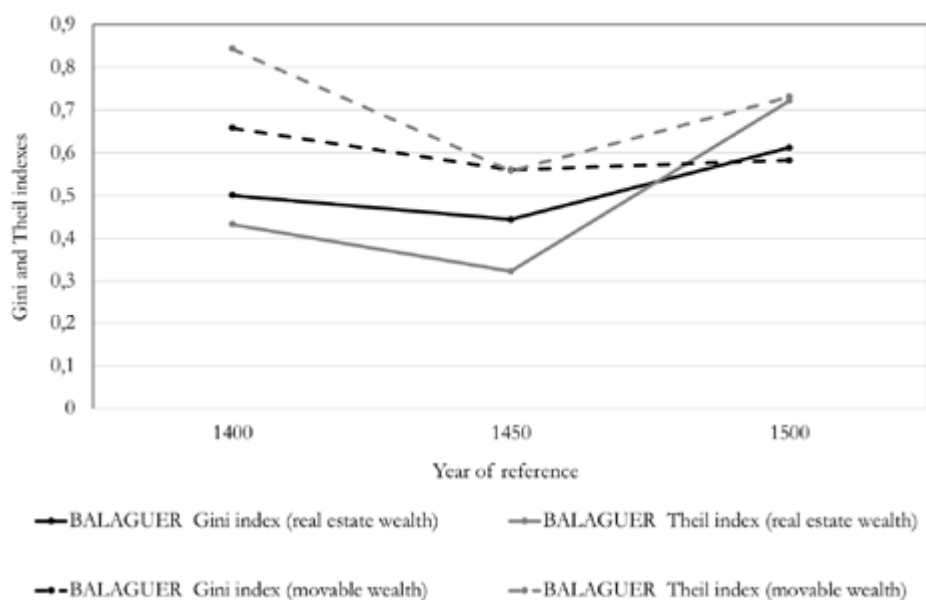
Thus, the trend followed by economic inequality was similar to the one of the main economic trends in the long term. As pointed out by Vilalta,³¹ there were two

³⁰ Vilalta comes to similar conclusions on the evolution of socioeconomic inequality in the 17th and 18th centuries based on another kind of indicators. See M.J. VILALTA ESCOBAR, *Balaguer a la Catalunya Moderna*, cit., pp. 89-115.

³¹ *Ibidem*.

sharp trends in the economic evolution of Balaguer during the Early-Modern period: crisis and stagnation from the second half of the 16th century to the beginning of the 18th century, and recovery and rise during the 18th century. On the other hand, as discussed in the second section of this work, our sources make it possible to differentiate real estate from movable goods during the 15th and early 16th century. Graph 2 displays the outcome of the comparison of inequality measured by these two different kinds of wealth. The trend followed by both indicators and kinds of wealth was overall the same one. Wealth distribution tended to be more equalitarian in the first part of the 15th century and less equalitarian in its second part. It is worth mentioning that, in this case, the level of inequality in the distribution of movable wealth was higher than the level of inequality related to real estate with the only exception of the Gini Index around the year 1500, and that the Theil Index shows stronger fluctuations than the Gini Index.

Graph 2. **Trend in real estate and movable wealth in Balaguer, 1400-1500 (Gini and Theil indexes)**



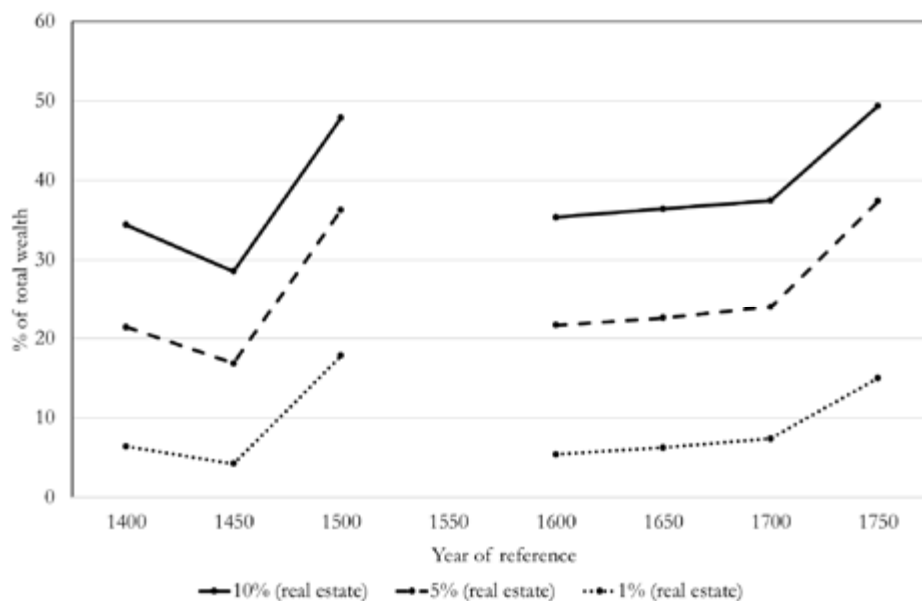
Source: Source: own elaboration based on Balaguer books of estimates, Arxiu comarcal de la Noguera.

A “stylized fact” which became basically a commonplace in the recent economic literature³² consists in the statement that economic inequality trends are

³² See, for instance, A.B. ATKINSON, T. PIKETTY, E. SAEZ, *Top Incomes in the Long Run of History*, in “Journal of Economic Literature”, 49, 2011, n. 1, pp. 3-71 and F. ALVAREDO, A.B. ATKINSON, T.

determined in the long run by the share of income or wealth owned by the top 1%, 5%, or 10% richest individuals or households. This circumstance has also been recently confirmed for some areas of Europe in the late Medieval and Early Modern period, like the Italian regions of Piedmont, Tuscany, or eastern Lombardy and Veneto.³³ Does the case of the town of Balaguer share these dynamics? As Graph 3 shows, the overall wealth inequality trend is similar to the trend observed as far as the percentage of total wealth owned by the 1%, 5% and 10% richest part of the population in this town in each benchmark year is concerned. This means that Balaguer is no exception to the above-mentioned historical “law”. Inequality trends followed very closely the trends of the total wealth owned by the richest people.

Graph 3. Share of real estate wealth owned by the top richest 1%, 5% and 10% (1400-1750)



Source: own elaboration based on Balaguer books of estimates, Arxiu comarcal de la Noguera.

PIKETTY, E.SAEZ, *The Top 1 per Cent in International and Historical Perspective*, in “Journal of Economic Perspectives”, 27, 2013, n. 3, pp. 3-20.

³³ See respectively, G. ALFANI, *Economic Inequality in Northwestern Italy: a Long-Term View (Fourteenth to Eighteenth centuries)*, cit.; G. ALFANI, F. AMMANNATI, *Long-term trends in economic inequality: the case of Florentine state, c. 1300-1800*, cit.; and G. ALFANI, M. DI TULLIO, *The Lion's Share. Inequality and the Rise of the Fiscal State in Preindustrial Europe*, cit.

CONCLUSIONS

This paper represents a first attempt to measure the main trends in wealth inequality in Catalonia in the long run, ca. 1400-1800, focusing in particular on the town of Balaguer as a specific case study. Therefore, the investigation belongs to a recent and growing historiographical field, which is centered on the study of the dynamics in economic inequality in preindustrial Europe by employing, especially, fiscal sources that include wealth assessments. To this respect, a first contribution of this work is provided by the description and analysis of the features of the Catalan sources (*estimes*), which are of a similar nature as their equivalents in the Center and North of Italy, the rest of the territories of the Crown of Aragon in Spain and in the South of France.

Even though only one case study is considered, and still in a preliminary way, the empirical evidence gathered for Balaguer matches quite well with some widely known patterns identified by previous studies on other European territories. In particular, as in the vast majority of the other European series, a secular trend of increasing wealth inequality is detected. Within this general tendency, however, data display falls and rises in economic inequality over the centuries. At the same time, the importance of the trend followed by the share of wealth owned by the wealthiest owners as a good indicator – or even a determinant – of the general economic inequality trends is confirmed.

As far as possible explanatory hypotheses are concerned, the local evidence provided by the town of Balaguer indicate an important correlation between the trend followed by the economic conjuncture as a whole and the trend followed by wealth inequality. Nevertheless, this does not mean that other factors considered in the international literature, as for instance an increase in the extraction rate or the impact of a specific epidemic, which has not been tested yet in the Catalan case, might have played a relevant role in modulating the intensity of this correlation.