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*Measuring economic inequality in Southern Europe:
the Iberian Peninsula in the 14th-17th centuries*

1. INTRODUCTION

Inequality in Western societies has increased immensely in the last two centuries, ever since the Industrial Revolution ushered in a new era characterised by the exponential, practically sustained growth of wealth. This increase was briefly halted or reduced in the few years after each of the two world wars, and more significantly during the third quarter of the 20th century. Since the 1980s inequality has resumed an upward trend, contradicting the predictions in the 1950s by the economist Simon Kuznets and his well-known 'Curve'. It has continued to grow to this day, even during the years following the financial crisis of 2008. Inequality is here to stay. It has increased as never before and there are no foreseeable short- or mid-term solutions to stop or reduce it. For some, as long as capitalism exists there will be no change, with the current economic and social system in place. For others, who see the problem solely as one of the distribution of wealth and are convinced of the system's proven track record in creating wealth, the answer requires increased taxation of the rich, to create a fairer society. This is the view held by Thomas Piketty, an economist and historian who has studied inequality in the last two centuries. He has not been the only one. During recent years the most prominent scholars in the field of the economic and social sciences have competed with one another to offer new insight on inequality in the long term. They include Tony Atkinson, the aforementioned Thomas Piketty, and Branko Milanovic, as well as historians such as Jan Luiten van Zanden, Guido Alfani and Walter Scheidel, whose book, *The Great Leveler*, covers the period from the Stone Age to the 21st century.[1] However, as will be shown later, they have not been the only ones or the last.

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[1] S. KUZNETS, *Economic growth and income inequality*, in "American Economic Review", 45, 1955, pp. 1-28; T. PIKETTY, *Capital in the Twenty-First Century*, Cambridge, MA. 2014; A.B. ATKINSON, T. PIKETTY, T. SAEZ, *Top Incomes in the Long Run of History*, in "Journal of Economic Literature", 49(1), 2011, pp. 3-71; J.L. VAN ZANDEN, *Tracing the beginning of the Kuznets curve: Western Europe during the early modern period*, in "Economic History Review", 48, 1995, n. 4, pp. 643-664; G. ALFANI, *Prima della curva di Kuznets: stabilità e mutamento nella concentrazione di ricchezza e proprietà in età moderna*, in *Ricchezza, valore, proprietà in Età Preindustriale. 1400-1850*, G. ALFANI, M. BARBOT eds., Venice 2009, pp. 143-168; G.

In order to study inequality as we intend to do here, by replacing adjectives with measurements, we have to begin by defining it. Economic inequality is the difference in levels of economic wellbeing between individuals within a group, between groups within a country, and between countries. Economists focus generally on the differences in three measurements: wealth, income, and consumption. We therefore always refer to one measurement. The one most used by historiánes is the Gini coefficient, but there are others. On the other hand, although it might seem a recent topic of research, the scholarly study of economic inequality in the Middle Ages and in the Iberian Peninsula goes back nearly 40 years. Back then studies essentially analysed the structure of property, which could be said to have constituted the culmination and swansong of the great boom in the economic and quantitative history that had been hegemonic during the three decades after the Second World War.

In Spain, the study of the structure of property, and particularly agrarian property, hit a peak during the 1970s, thanks to historians of the Early Modern and Modern periods, who focused their attention on the liberal revolution and the transition from feudalism to capitalism in the 18th and 19th centuries.[2] It was not long before their interest turned to the Middle Ages, in cases where the fiscal sources made it possible, for instance in the Valencian Country and Catalonia. Human geographers and fiscal and economic historians were among the first to discover the importance of these sources, and in particular the registers of wealth (*padrons de riquesa, llibres d'estimes*), for the study of the agrarian landscape and property.[3] Some degree and doctoral theses, written in the 1980s and 1990s, analysed the structure of property and the distribution of wealth in medium-sized towns and rural communities in the late Middle Ages, applying methods used by economists such as the

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ALFANI, *Wealth inequalities and population dynamics in northern Italy during the early modern period*, in "Journal of Interdisciplinary History", 40, 2010, n. 4, pp. 513-549; W. SCHEIDEL, *The Great Leveler. Violence and the History of Inequality from the Stone Age to the Twenty-first Century,* Princeton, NJ, 2016.

[2] A. FLORISTÁN, *Estructura de la propiedad particular en Navarra*, in "Boletín de la Real Sociedad Geográfica", 112, 1976, pp. 217-232; J. VARELA ORTEGA, *Datos sobre la estructura de la propiedad agraria en la España de finales del XIX*, in "Agricultura y Sociedad", 8, 1978, pp. 271-337; M. ARDIT, C. GARCÍA MONERRIS, I. MORANT, P. RUIZ TORRES, *Estructura i crisi del règim senyorial al País Valencià*, in "L'Espill", 3, 1979, pp. 59-87; R. VILLARES, *Evolución de las estructuras agrarias de la provincia de Lugo, 1750-1936: propiedad y rentas de la tierra*, University of Santiago, Doctoral thesis, 1980; J. L. HERNÁNDEZ MARCO, J. ROMERO, *Feudalidad, burguesía y campesinado en la Huerta de Valencia: La estructura agraria de la Particular Contribución de Valencia ante la crisis del Antiguo Régimen*, Valencia 1980; P. RUIZ TORRES, *Señores y propietarios: cambio social en el sur del País Valenciano, 1650-1850*, Valencia 1981; B. BARCELÓ, *La estructura de la propiedad rústica en Mallorca*, in *La propiedad rústica en España y su influencia en la organización del espacio*, Alicante 1981, pp. 355-368; M. PESET, *Dos ensayos sobre la historia de la propiedad de la tierra*, Madrid 1982; J. ROMERO, *Propiedad agraria y sociedad rural en la España mediterránea: los casos valenciano y castellano en los siglos XIX y XX*, Madrid 1983; I. MORANT DEUSA, *El declive del señorío: los dominios del Ducado de Gandía, 1705-1837*, Valencia 1984.

[3] J. SÁNCHEZ ADELL, *Estructura agraria de Castellón de la Plana en 1398*, in "Saitabi", 23, 1973, pp. 147-176; C. DOMINGO PÉREZ, *La Plana de Castellón: formación de un paisaje agrario mediterráneo,* Madrid 1983; E. TELLO, *Pagesos, menestrals i rendistes. Cervera i la Segarra en l'arrencada industrial catalana (1702-1861)*, University of Barcelona, Doctoral thesis, 1987 (with a chapter on the 15th century); M. TURULL, J. RIBALTA, *Ciutat i poder en el feudalisme 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, pp. 79-144.

Gini Index or Lorenz Curve.[4] However, perhaps because we did not yet fully understand the interest of these indicators, we replaced the creation of deciles with the grouping of taxpayers into three main levels, according to what the documentation itself transmitted: that is, the division between the upper, middle and lower orders.

Without having completely abandoned the subject, we returned to it 30 years later with renewed interest, with far more precise and elaborate analytical tools, with a much more solid theoretical and methodological background, the result of the important historiographical output of recent years, with ambitious studies such as those by Piketty and Alfani, and, of course, with the current economic crisis. Our work has been carried out as part of a research project called *Economic Growth and Social Inequality in the Late Middle Ages*, within which we have devoted one line to the statistical measurement of inequalities, once more using Gini coefficients and Lorenz curves as our main analytical tools. Some of the early results of this work were presented individually by Antoni Furió at the European Rural History Conferences in Bern (2013) and Leuven (2017), the World Economic History Congress in Kyoto (2015), and also at an international conference in Milan (2016), in all cases at symposia organised by Guido Alfani.[5] The same team that is presenting this paper contributed a working paper at a workshop on economic inequality in Vitoria (2016) and Valencia (2018), some of whose results have already been published.[6]

Our research project sets out to explore wealth inequality in the whole of the Iberian Peninsula – the kingdoms of Castile, Granada, Navarre and Portugal, and the Crown of Aragon – during the late Middle Ages (1300-1600), for which there are fiscal surveys from the late 13th century onwards, before the Black Death (the oldest record is for 1264, in Olite, Navarre). Inasmuch as direct taxes were paid as a proportion of each taxpayer's wealth, it was necessary to know his assets in order to establish his tax burden, so fiscal registers provide us with very precise data on the

[4] A. FURIÓ, *Camperols del País Valencià: Sueca, una comunitat rural a la tardor de l'Edat Mitjana*, Valencia 1982 (Bachelor's thesis defended in 1980); IDEM, *El camperolat valencià en l'Edat Mitjana: demografia i economia agrària en la Ribera (ss. XIII-XVI)*, University of Valencia, Doctoral thesis, 1986; P. VICIANO, *Poder municipal i grup dirigent local al País Valencià: la vila de Castelló de la Plana (1375-1500)*, University of Valencia, Doctoral thesis, 1994.

[5] A. FURIÓ, *Rural credit, peasant land market and inequality in Eastern Spain in the late Middle Ages. The kingdom of Valencia, 14th-15th centuries*, in *Land- and credit-market participation and inequality - a self-sustaining process?*, in Rural History Conference, Bern, European Rural History Organization, August 19-22, 2013; IDEM, *Inequality and economic development in late medieval Iberia, Catalonia and Valencia, 13th-16th centuries*, in *Inequality(-ies) and economic development in rural societies (middle ages-early 20th century)*, in Rural History Conference, Leuven, European Rural History Organization, September 11-14, 2017; A. FURIÓ, *Economic Inequality in Iberia before and after the Black Death*, in *Economic inequality in pre-industrial Eurasia*, Kyoto, XVIIth World Economic History Congress, August 3-7, 2015; IDEM, *Inequality and the Black Death in Medieval Spain*, in *Economic Inequality in Preindustrial Europe*, Milan, Bocconi University, November 25, 2016.

[6] A. FURIÓ, P. VICIANO, L. ALMENAR, L. RUIZ, G. CHISMOL, *Midiendo la desigualdad. Una aproximación a partir de las fuentes fiscales de la Península Ibérica en la Baja Edad Media. Casos de estudio*, in *Economía, Poder, Materialidad y Desigualdad Social en la Península Ibérica (1400-1550)*, Vitoria, Universidad del País Vasco, November 16-17, 2016; L. ALMENAR, G. CHISMOL, L. RUIZ, *Aproximación a la desigualdad económica a través de fuentes fiscales bajomedievales: Valls (1378), Sevilla (1384) y Palma (1478)*, in "El futuro del pasado: revista electrónica de historia", 8, 2017, pp. 55-82.

distribution of wealth, which is the proxy habitually used by historians to study inequality, given that there is less information available about incomes.[7] These data allow us to contrast the distribution of wealth by sectors, in the countryside and in the city, by social and professional groups, by neighbourhoods and to some extent by gender. Nonetheless, as detailed as the analysis and results may be, we cannot rely entirely on figures, in the global or sectoral Gini coefficient, and its chronological evolution. The indicators are very useful for comparison with other cities and over time, but we need to contextualise them to get a better understanding of them. This historical context will explain the similarities and differences, both spatial and temporal, as well as the increase or reduction of inequality.

For instance, in the late Middle Ages the Iberian Peninsula, which while it was a feudal society like those in the rest of Western Europe, such as Italy or France, nevertheless had unique features, a result of the territorial expansion of the Christian kingdoms at the expense of a retreating Muslim al-Andalus. The 13th and 14th centuries were, in Portugal, Castile and the Crown of Aragon, centuries of conquest and colonisation, of massive movements of settlers from north to south in the peninsula.[8] This is why there were no limits to population growth in Iberia, there was no Malthusian ceiling, as it was applied to Western Europe in the late 13th or early 14th century.[9] These southward movements of population as the Muslims were expelled evened things out and kept the total demographic volume relatively low. This did not entail the complete disappearance of the Muslim population, which remained a subordinate minority, pushed out to rural areas, especially in Andalusia and the kingdom of Valencia. There were even neighbourhoods in the now predominantly Christian cities where Muslims settled, called *moreries* (Moorish quarters) which formed a separate social body, segregated to some extent, like the Jewish

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[7] *La fiscalité des villes au Moyen Âge (France méridionale, Catalogne et Castille). 1: Étude des sources*, ed. D. MENJOT and M. SÁNCHEZ MARTÍNEZ, Toulouse 1996; M. TURULL and J. MORELLÓ, *Estructura y tipología de les 'Estimes-manifests' en Cataluña (siglos XIV- XV)*, in "Anuario de Estudios Medievales", 35, n. 1, 2005, pp. 271-232; A. COLLANTES DE TERÁN and J. A. BONACHÍA, eds., *Fuentes para el estudio del negocio fiscal y financiero en los reinos hispánicos (siglos XIV-XVI)*, Madrid 2010.

[8] A. BARRIOS, *Colonización y feudalización: el desarrollo de la organización concejil y diocesana y la consolidación de las desigualdades sociales*, in *Historia de Ávila. 2. Edad Media (siglos VIII-XIII)*, Ávila 2000, pp. 337-410; G. JOVER, R. SOTO, *Colonización feudal y organización del territorio. Mallorca, 1230-1350*, in "Revista de Historia Económica", 20, 2002, pp. 439-478; M. GONZÁLEZ JIMÉNEZ, *Colonización agraria en los reinos de Córdoba y Sevilla, 1236-1350*, in *La Andalucía medieval. Actas I Jornadas de Historia Rural y Medio Ambiente*, Huelva 2002, pp. 231-248; A. V. FREY SÁNCHEZ, *La Orden de San Juan en la colonización del reino islámico de Murcia. A propósito de una nueva lectura del proceso de conquista del Sharq al-Andalus (1244-1291)*, in *La Orden Militar de San Juan en la Península Ibérica durante la Edad Media*, 2002, pp. 271-291; *Repartiments a la Corona d'Aragó (segles XII-XIII)*, ed. E. GUINOT and J. TORRÓ, Valencia 2007; J. TORRÓ, *Colonizaciones y colonialismo medievales. La experiencia catalano-aragonesa y su contexto*, in *De Tartessos a Manila. Siete estudios coloniales y poscoloniales*, ed. G. CANO, A. DELGADO, Valencia 2008, pp. 91-118; *Trigo y ovejas: el impacto de las conquistas en los paisajes andalusíes (siglos XI-XVI)*, ed. J. TORRÓ and E. GUINOT, Valencia 2018.

[9] For example, E. LE ROY LADURIE, *Réflexions sur une conception néo-malthusienne de l'histoire rurale de l'Occident: (XIVe-XVIIIe siècles)*, in *Mélanges en l'honneur de Charles Morazé*, Toulouse 1979, pp. 259-266. Conversely, J. DAY, *Malthus démenti? Sous-peuplement chronique et calamités démographiques en Sardaigne au Bas Moyen Âge*, in "Annales. ESC", 30, 1975, pp. 684-702; and *Crisis in the Later Middle Ages Beyond the Postan-Duby Paradigm*, ed. J. DRENDEL, Turnhout 2015.

ones. However, this exceptional status soon came to an end, in the middle of the 14th century, when the economic performance and the levels of inequality in Iberian cities were comparable to those in other parts of Europe. There were no longer any significant differences, either in the economic and social structure or in the Gini indexes.[10]

This Iberian singularity enables us to study the causes of inequality in detail, both those that helped to increase it and those that helped to reduce it or keep it low. Included in the former, above all, was the fact that medieval Spain was – as it has been defined – a society organised for war.[11] It was very militaristic, very hierarchical, and the feudal and ecclesiastical aristocracy played a predominant role in it. Despite the strength of this feudal social, legal and political order, in the cities, and in the great Mediterranean metropolises particularly, sharp inequality was a result of large concentrations of people (and with it, increased rates of urbanization, at levels very similar to European ones, and a greater social and technical division of labour), and of capital and taxation.[12] On the contrary, the characteristics of a frontier society, with warrior peasants who had taken part in the conquest of their land or contributed to its defence, endowed with self-sufficient tenures and with freedoms and privileges granted by kings and lords in order to attract settlers to the new lands, were conducive to lower inequality.[13]

These apparently contrasting interpretations – although with the corresponding qualifications, they could be complementary – give a far better explanation of the nature of the inequality, its increase or reduction, than the traditional neo-Malthusian narratives, too simplistic and focused mainly on demographic evolution. Population growth caused inequality to rise, while the opposite reduced it. Hence, as the main – if not the only – factors in the reduction of inequality, historians have given preference to wars, plagues and other calamities and catastrophes (floods and

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[10] J.L. VAN ZANDEN, *Tracing the beginning of the Kuznets curve*, cit. E.J. HAMILTON, *Money, prices and wages in Valencia, Aragon and Navarre, 1351-1500*, Cambridge, MA 1936; F. GARCIA-OLIVER, *Terra de feudals. El País Valencià en la tardor de l'Edat Mitjana*, Valencia 1991; C. ASTARITA, *Del feudalismo al capitalismo. Cambio social y política en Castilla y Europa Occidental, 1250-1520*, Valencia 2005; P. VICIANO, *Els peus que calciguen la terra. Els llauradors del País Valencià a la fi de l'edat mitjana*, Valencia 2012; H. CASADO ALONSO, *¿Existió la crisis del siglo XIV? Consideraciones a partir de los datos de la contabilidad de la catedral de Burgos*, in *Castilla y el mundo feudal. Homenaje al profesor Julio Valdeón*, I. DEL VAL VALDIVIESO, P. MARTÍNEZ SOPENA eds., Valladolid 2009, pp. 9-26; A. FURIÓ, *La primera gran depresión europea*, in *España en crisis. Las grandes depresiones económicas, 1348-2012,* E. LLOPIS, J. MALUQUER DE MOTES eds., Barcelona 2013, pp. 17-58.

[11] E. LOURIE, *A Society Organized for War: Medieval Spain*, "Past & Present", 35, 1966, pp. 54-76; J. F. POWERS, *A Society Organized for War: The Iberian Municipal Militias in the Central Middle Ages, 1000-1284*, University of California Press 1992.

[12] P. IRADIEL, *Metrópolis y hombres de negocios (siglos XIV y XV)*, in *Las sociedades urbanas en la España medieval (XXIX Semana de Estudios Medievales de Estella)*, Pamplona 2003, pp. 277-310; A. RIERA MELIS, *Barcelona, 985-1317. La construcció d'un empori i d'una capital a la Mediterrània occidental*, in "Afers", 30, 2015, pp. 63-82; A. FURIÓ, *València, 'mare e cap de tot lo regne'*, in "Afers", 30, 2015, pp. 148-179.

[13] The main defender of this line of interpretation was Claudio Sánchez Albornoz, who affirmed the massive existence in Castile of "small free owners" who made it "an islet of free men in a feudal society" and who only centuries later would be dispossessed of their lands. Cf. C. SÁNCHEZ ALBORNOZ, *España, un enigma histórico*, Buenos Aires 1956, chapter "Inmadurez del feudalismo español", and also "La frontera y las libertades de los castellanos", in *Siete ensayos*, Barcelona 1977.

earthquakes) that caused death on a huge scale. Without denying the importance of these disasters, which hit the Iberian Peninsula as hard as anywhere else in Western Europe (the death rates due to the Black Death in Catalonia and Navarre were among the highest on the continent;[14] war was chronic, endemic, throughout the 14th century: against the Muslims, against the Genoese, between Castile and the Crown of Aragon, between Castile and Portugal).[15] Other elements also influenced the rise or fall of inequality. The aforementioned colonisation process (which also involved the reclamation of new lands) was also aided by the existence of extensive consolidated peasant ownership, a system of divisible inheritance shared equally (which split holdings and hindered accumulation), and self-organised institutions (such as the communities of irrigators, especially in the rich Mediterranean *huertas*, the guilds or the municipalities themselves).[16]

Economic, social and political factors, and others spread across all three, such as taxation, also played a part of course. Fiscal extraction played an ambivalent role, at both local and state level. On the one hand, the increase in fiscal pressure from the end of the 13th century, first with extraordinary taxes, and then, from the middle of the 14th century, with regular taxes with which to pay the interest (*annuities*) on public debt, deprived peasants of most of the benefits of economic growth, and caused agrarian rents to fall (due to the change from kind to cash, and to inflation).[17] Kings, lords and urban landowners used taxation – or '*pensions*', the interest paid to investors in public debt, secured by taxes – to offset the loss of their agrarian income. In towns and in rural communities it was the peasants and artisans who benefited, leasing taxes or buying annuities;[18] not only the well-off farmers or the more affluent craftsmen, but also some of the most disadvantaged sectors of society, including widows and orphans, who invested in debt as a form of pension or so-

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[14] O. J. BENEDICTOW, *The Black Death 1346-1353: The Complete History*, Woodbridge 2004.

[15] F. GARCÍA FITZ, *War in the Iberian Peninsula, 700-1600*, London 2018.

[16] M. BORRERO, *Las transformaciones de la estructura de la propiedad de la tierra en la Baja Andalucía en la segunda mitad del siglo XV*, in *Andalucía entre Oriente y Occidente (1236-1492)*, ed. E. CABRERA, Córdoba 1988, pp. 191-208; T.F. GLICK, *Irrigation and Society in Medieval Valencia*, Cambridge, MA. 1970; *Cofradías, gremios y solidaridades en la Europa medieval (XIX Semana de Estudios Medievales de Estella)*, Pamplona 1993; H. R. OLIVA, *La Tierra de Campos a fines de la Edad Media: economía, sociedad y acción política campesina,* Valladolid 2002; A. FURIÓ, *Reproducción familiar y reproducción social: familia, herencia y mercado de la tierra en el País Valenciano en la Baja Edad Media*, in *Tierra y familia en la España meridional, siglos XIII-XIX*, Madrid 1998, pp. 25-43; A. FURIÓ and F. GARCIA-OLIVER, *Household, peasant holding and labour relations in a Mediterranean rural society. The Valencian country in the late Middle Ages*, in *Agrosystems and labour relations in European rural societies (Middle Ages-20th century)*, ed. E. Landsteiner, pp. 31-56.

[17] M. A. LADERO, *La hacienda real de Castilla, 1369-1504*, Madrid 2009; M. SÁNCHEZ MARTÍNEZ, *El naixement de la fiscalitat d'Estat a Catalunya: segles XII-XIV*, Vic 1995; *Corona, municipis i fiscalitat a la baixa Edat Mitjana,* M. SÁNCHEZ MARTÍNEZ, A. FURIÓ eds., Lleida 1997; *Fiscalidad real y finanzas urbanas en la Cataluña medieval*, Barcelona 1999, ed. M. SÁNCHEZ MARTÍNEZ; M. SÁNCHEZ MARTÍNEZ, A. FURIÓ and A. SESMA, *Old and New Forms of Taxation in the Crown of Aragon (13th-14th centuries),* in *Fiscal Systems in the European economy from the 13th to the 18th centuries (Prato 2007)*, ed. S. CAVACIOCCHI, Firenze 2008, pp. 99-130; A. FURIÓ, *El deute públic municipal al Regne de València en la Baixa Edat Mitjana: un assaig de quantificació*, in *El País Valencià en la Baixa Edat Media: estudios dedicados al profesor Paulino Iradiel*, D. IGUAL, G. NAVARRO eds., Valencia 2018, pp. 71-136.

[18] A. FURIÓ, *Las élites rurales en la Europa medieval y moderna. Una aproximación de conjunto*, in *El lugar del campesino. En torno a la obra de Reyna Pastor*, ed. A. RODRÍGUEZ LÓPEZ, Valencia 2007, pp. 391-421.

cial security.[19] Public debt was after all a way of redistributing taxation, something that, conversely, mainly benefited the upper classes, in whose hands pensions were concentrated. This increased inequality, and on the other hand provided a minimum income, a kind of allowance, for some of the have-nots (*nichil habentes*, according to the Latin expression in the documents). Taxation and public debt thus played an ambivalent role, increasing (especially) or reducing inequality, something that has not always been taken into account. Nor has the scale factor been considered, since, if power was more oligarchic in the large cities, where rates of inequality were higher, in the smaller towns and in the rural communities the number of people that participated in local government was proportionately greater and fiscal policy was not so damaging for the underprivileged.[20]

In this paper, we present the first results of the ongoing project on inequality in late medieval Iberia, focused on a specific sample of towns and rural communities. Firstly, we discuss the available sources, mainly fiscal ones, as well as the methods used to obtain and analyse the data. Secondly, we present the results of the study, analysed by urban topography, by the difference between city and countryside, by professional occupation, by sex, and even by ethnic and religious condition (Christians, Muslims and Jews). Finally, we will attempt to contextualise and interpret these results and offer some preliminary and provisional conclusions, pending further research.

2. SOURCES AND METHODS

As we said, our contribution is part of a research project on economic inequality in the Iberian Peninsula from the 13th to the 17th century. In this paper, however, we will focus especially on the Crown of Aragon and the largest city in southern Castile, Seville. As mentioned earlier, studies of the pre-industrial period focus more on the distribution of wealth than on income,[21] due to the availability of adequate sources; in this area, as in many others, Iberia was not a uniform territory, but it had a great variety of state regimes and administrative practices that reflected different economic and fiscal realities. We cannot count, therefore, on a single unitary type of source with which to work for all the cases we have studied, but we must accept this variety of sources and tackle it by understanding what is being taxed in each one and how we can study inequality from it. In fact, the data that we will present here have been obtained through the analysis of diverse sources that estimate

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[19] J.V. GARCÍA MARSILLA, *Vivir a crédito en la Valencia medieval. De los orígenes del sistema censal al endeudamiento del municipio*, Valencia 2002; A. FURIÓ, *Impôt et dette publique. Système fiscal et stratégies financières à Valence à la fin du Moyen Âge*, in *L'impôt dans les villes de l'Occident méditerranéen, XIIIᵉ-XVᵉ siècle. Colloque tenu à Bercy les 3, 4 et 5 octobre 2001*, Paris 2005, pp. 39-62; P. VICIANO, *Deute públic i renda censalista al País Valencià en el segle XV. Una proposta d'interpretació*, in "Anuario de Estudios Medievales", 48, 2018, pp. 925-953.

[20] P. VICIANO, *Gestión financiera y coyuntura socioeconómica: la villa de Castellón ante las demandas de la Corona (siglo XV)*, in *Fiscalidad de Estado y fiscalidad municipal en los reinos hispánicos medievales*, M. SÁNCHEZ MARTÍNEZ, D. MENJOT eds., Madrid, 2006, pp. 391-412.

[21] B. MILANOVIC, P. H. LINDERT, J. WILLIAMSON, *Measuring pre-industrial inequality*, Cambridge 2007.

the wealth of the taxpayers in different ways for diverse purposes. These are wealth registers (*padrones de riqueza*), records of the taxable base (*llibres de la peita*) and those recording only the amount paid by each person (*llibres de les talles*). In any case, in order to measure inequality in pre-modern times the important thing is for the taxes to be proportional to the wealth/assets of each individual, and in all these sources they are.

Map. 1. **Locations of the cities studied**

This kind of taxation has a long history. Direct taxation proportional to wealth first appeared in Italy at the end of the 12th century, and one century later it was present in the Crown of Aragon, although the earliest records of its collection date from the 14th century. In the same century, they also appear for Castile, through Murcia and Seville.[22] For a description of the nature and content of these fiscal sources, it is worth noting that the oldest ones – still extraordinary – are closely linked to military spending. Until well into the 14th century there was no permanent, stable fiscal system, and taxes were collected for a specific purpose, whether at the

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[22] D. MENJOT, A. COLLANTES DE TERÁN, *La génesis de la fiscalidad municipal en Castilla: primeros enfoques*, in "Revista d'Història Medieval", 7, 1996, pp 1-29; M. TURULL RUBINAT, *El impuesto directo en los municipios catalanes medievales*, in *Finanzas y fiscalidad municipal. V Congreso de Estudios Medievales*, Ávila 1997, pp. 73-133; P. VICIANO, *Producción agraria e impuesto municipal directo. La tasación de la tierra en los padrones de riqueza valencianos (siglos XIV-XV)*, in *Los tributos de la tierra. Fiscalidad y agricultura en España*, R. VALLEJO, A. FURIÓ eds., Valencia 2008, pp. 245-263; A. FURIÓ, *Avant le cadastre. Les livres d'estimes du royaume de Valence au bas Moyen Âge*, in *Estimes, compoix et cadastres. Histoire d'un patrimoine commun de l'Europe méridionale*, J.-L. ABBÉ, F. HAUTEFEUILLE, J. LE POTTIER eds., Toulouse 2017, pp. 200-231.

behest of the crown, usually because of a military emergency, or for a communal necessity.[23] This is the case with the registries of Valencia, Barcelona and Seville. Those of Valencia were produced because of the war for control of Sardinia between the Crown of Aragon and Genoa; those of Barcelona, on the occasion of the war against Castile; and the one from Seville, due to the war between Castile and Portugal. The burden of taxation fell on all the inhabitants of the city, except (but not in all cases, as in Seville) the nobility and the clergy, so the sources do not usually include them. The amount payable, established in advance, was set for each taxpayer, according to how wealthy he was, hence the need to ascertain in detail and calculate the value of their assets and properties. In the 13th century, the calculation of assets was still based on the taxpayer's declaration, but from the beginning of the 14th century this function was entrusted to specialised commissions. For example, in the case of Valencia, two to four *probi homines* in each parish were charged with calculating the taxable value of their neighbours' assets.

Focusing now on the cases for which we present the results here, we will try to explain the reason that gave rise to each estimate of wealth or proportional payment and the mechanism that was used. The oldest documents are those from Valencia. These are two forced loans and a *taille*, required by the city council to deal with the military situation at the time, the war with Genoa and Sardinia (1351-1354) and the war with Castile (1356-1375). In response to King Peter IV's requests to finance these wars, Valencia was forced to grant three important subsidies in a very short period (1353, 1355 and 1364), whose amounts were distributed among the city's residents according to their assets and in the form of a refundable loan. In the case of the 1353 collection, we know that the rate was half a penny in the pound (roughly 0.6%). This involved the preparation of two documents, one registering all the goods of all the taxpayers and their tax base and the other listing the amount paid by each "lender". In the 1355 collection, the city council appointed a committee of 22 notables (*probi homines*) – later reduced to 12 – along with four representatives from each parish who were charged with determining what their neighbours would have to "lend".[24]

The source for Barcelona dates back to 1359, when the Catalan parliament, meeting in Cervera, approved the grant of a subsidy to the king to finance the war against Castile. The amount was distributed among the towns of Catalonia, regardless of whether or not they were part of the royal domain, thus giving rise to the first general poll tax (*fogatge*) in Catalonia (the first general register of hearths). In each locality, the amount to be paid was distributed among the inhabitants according to their movable and immovable assets. In the case of Barcelona, the records of two of the four quarters into which the city was divided, both written in 1363, have survived. They are the quarters of Santa Maria del Mar and Santa Maria del Pi. In each quarter, taxpayers are grouped by blocks (*illes*) and, within each block, by

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[23] M. SÁNCHEZ MARTÍNEZ and P. ORTÍ, *La Corona en la génesis del sistema fiscal municipal en Catalunya (1300-1360)*, in *Corona, municipis i fiscalitat*, cit., pp. 233-278.

[24] The sources for Valencia, kept in the Municipal Archives, have been published in *Antroponímia valenciana del segle XIV. Nòmines de la ciutat de València (1368-69 y 1373). Estudi, edició i índexs*, M. RODRIGO, A. RUBIO eds., Valencia 1997.

streets. After the name of the taxpayer, there is the amount that he has to pay each month, for 12 months. The problem with this source is that it does not contain all the quarters in Barcelona, nor does it include certain population groups, such as the nobility, Jews, Muslims, foreigners and poor people.[25]

The third city analysed is Valls, also in Catalonia, for which the *llibre d'estimes* of 1378 has been studied. This book records the wealth of 542 taxpayers. Twenty-five of them were exempt due to their being *nichil* – i.e. having no assets – so only the remaining 517 can be studied in order to measure the rates of inequality. Of all of them, about 16% (86 individuals) were women, usually identified through their relationship with a male, as daughters, mothers-in-law, wives or widows. Nine of them were *nichil*, which leaves 77. The source measures the movable and immovable property of the inhabitants, as well as their debts and the amount that was to be paid. For this paper, only the total assessment has been taken. As stated above, most of the taxpayers were male, but the significant number of women enables us to study the levels of inequality among them. It should be pointed out that the women who appear in the fiscal registers were those who managed, for legal purposes, their own patrimony, whereas in the majority of cases married women were invisible in these sources, given that only their husbands figured as the head of the household. This means that, as it is impossible to know the patrimony of the female population as a whole, a gender study cannot be made that would allow us to compare the situation of women with respect to that of men. It is pertinent, however, to study inequality within the group of women, especially widows, who were economically independent and were acknowledged to be taxpayers in their own right. On the other hand, the source rarely specifies the professional occupation of taxpayers, except in isolated cases.[26]

With regard to Seville, the *padrón* of 1384 is the earliest one to have survived and it is unique for the medieval period in that it covers all of the city's quarters, with the exception of the Jewish district. The later ones were notebooks made about the parish or quarter, and not all of them have survived. This does not mean that the 1384 *padrón* is a complete register, since the clergy and the vast majority of the poor do not figure in it. The register was prepared in the context of the war between Portugal and Castile, resulting from the dynastic conflict that broke out on the death of King Ferdinand I of Portugal in 1383.[27]

In Castelló, in the kingdom of Valencia, a total of 35 registers (*llibres de la peita*, similar to Castilian *padrones de riqueza*), whole or in part, have survived from 1371 to 1785. Twelve survive for the medieval period, and 20 up to the end of the 16th century. Each book comprehensively records immovable property and more loosely movable goods, including livestock and loans. There is no evidence that any noblemen were exempt from paying the tax, and the few local knights paid like every-

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[25] The sources for Barcelona have been published in *Censos de población del territorio de Barcelona en la década de 1360*, ed. E. PIQUER FERRER, Tübingen 2005.

[26] The sources for Valls have been published in J. MORELLÓ BAGET, *Les estimes de Valls de 1378: repartició de la riquesa i sistema contributiu*, in "Historia et documenta", 7, 2003, pp. 9-74 (esp. 37-74).

[27] The sources for Seville have been published in M. ÁLVAREZ, M. ARIZA, J. MENDOZA, *Un padrón de Sevilla del siglo XIV. Estudio filológico y edición*, Seville 2001.

one else. Most of these gentry were ennobled lawyers and merchants. The clergy also paid for their private, inherited or purchased goods. We have not included religious institutions in our analysis. The source for Castelló, then, does not include those exempt from above (the noble or privileged), but it does include those exempted from below: residents with less than half a quarter of a pound of the tax base, which is the taxable minimum.[28]

Finally, in the case of Mallorca, the source analysed is the *Talla general de la ciutat de Mallorca* for the year 1478, kept in the Archive of the Kingdom of Mallorca.[29] The taxpayers, whose profession – although not always – and the amount that they paid are noted down, were listed by parishes, five in total, and within each parish by blocks, the names of which are usually those of the richest residents. A large number of women appear, usually linked to a male, although with notable exceptions among the richest female taxpayers.

From these sources we have obtained data about the names and surnames of the taxpayers, the quarter or parish in which they reside, their profession, their gender and, finally, the amount they contribute to the public treasury, or their tax base. In the majority of cases studied, those described as *nichil*, with insufficient assets to be taxed, do not appear in the tax registers, and when they do they represent a small proportion of the population as a whole, less than 5%.[30] For the purpose of standardising the data of the Iberian cases and comparing them to those from the rest of Europe, these *nichil habentes* are not included in our study. In the case of the wealth register of Seville, and contrary to what happens in all the other cases, the nobility *is* included, so we have two sets of data, one with and the other without, in order to make the results homologous with those of other cases. We place taxpayers in order according to the amount declared or paid, from lowest to highest, and we group them into ten deciles, which have served as a basis, along with the number of taxpayers that constitute each decile, for calculating the Gini index. However, beyond the mere obtainment of a number, we wished to insist on the intermediate deciles for the purpose of ascertaining their economic strength, since we consider this group to be a key element in the institutional and social dynamics of the societies that we are studying. Similarly, we wished to measure other more specific differences apart from the general one, such as the gaps between the women that appear in our sources, for which we dispensed with the male taxpayers and focused only on the female ones. The women are usually identified by their husband's or father's profession, but in Seville we find a variety of situations – wives, widows, professional women, weavers, drapers, a physician, and even some men identified by their wife's profession, such as Pedro Fernández, husband of the innkeeper Isabel Ruiz.

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[28] The sources for Castelló have been published for 1398 and 1468 in C. DÍAZ DE RÁBAGO, J. DOMÉNECH, M. C. JOLI, C. RABASSA, *La ciudad y su gente: vecindario y propiedad urbana en Castelló según los padrones de riqueza (siglos XIV-XVIII)*, Castelló 1998, vol. I, and for 1497, see Arxiu Municipal de Castelló, Llibres de Vàlues de la Peita, 9.

[29] ARXIU DEL REGNE DE MALLORCA, AH-2100.

[30] The only cases in which *nichils* appear, but they have not been taken into account, are those in Castelló and Valls.

We have thus been able to analyse in detail the inequalities within the same professional category; in the case of Mallorca, for example, the 48 notaries and the 256 wool carders registered in the city. In the case of Seville we have distinguished the professions (butchers, fishermen, weavers and scribes) from the gentry, as a particular social group, while in Castelló, as in other towns and rural communities, most of the taxpayers, although not explicitly identified, are peasants (farmers, agricultural workers). Millers, butchers and bakers are included in the group of artisans, while merchants, apothecaries, shopkeepers, grocers, notaries, lawyers and doctors are in that of the liberal professionals. Finally, we have also attempted to calculate spatial inequality between the different parishes or quarters of the same city. In this respect, although it is true that the medieval population was stratified by height above ground – rich and poor living in the same building, but on different floors – there is also a geographical distribution of wealth between the different neighbourhoods of the city.

3. PRESENTATION OF THE RESULTS: GINI INDEX AND DECILES

The first result that we can provide from our data and analysis is that the values of the Gini index for Iberian cities – all of them located on the east coast and in the south of the peninsula, in regions with a large population and economically very dynamic – are very similar to those that were common throughout urban Europe in the late Middle Ages, that is, between 0.6 and 0.7. By the middle of the 14th century, in 1354-1364, the Gini index was 0.60 in Valencia, a value very close to that of Barcelona in 1363, which stood at 0.62 (table 1). This proximity undoubtedly reflected the similarities of their social and economic structures as capital cities of the kingdom of Valencia and the Principality of Catalonia, both focused on Mediterranean trade. A century later, in 1478, the city of Mallorca, the other large commercial centre of the "Catalan triangle", showed an even higher level of inequality, with an index of 0.72 (table 1), but which still came within the parameters recorded for northern Europe and the Italian peninsula. Conversely, in another economic and territorial context, the Atlantic region and the kingdom of Castile at the end of the 14th century, inequality was higher than in the Mediterranean capitals of the Crown of Aragon. In 1384, in Seville the Gini index was up to 0.80, but it was an extraordinary situation, since that year, because of the war against Portugal, the great nobles were forced to contribute in taxes. In exceptional cases like this one, the source included the property of the great aristocrats, which explains the high level of inequality, attributable to the presence of wealthy taxpayers. In fact, if the nobles were not counted, in order to facilitate a homogeneous comparison with other cities, the Seville index would drop to 0.56 (table 1), almost equivalent to the 0.6 in Valencia and Barcelona at the same time.

In all the cases mentioned, the cities were large population centres with tens of thousands of inhabitants. Was the level of inequality different in small towns or even in rural villages? With the cases of Valls and Castelló, two localities with fewer than a thousand hearths, we are able to consider the relationship between population size and inequality. Valls was a small town in Catalonia that in 1378, with about

500 taxpayers, presented a Gini index similar to that of large urban centres, 0.66 (table 1). In contrast, Castelló, a town in Valencia of almost 900 taxpayers in 1398, was somewhat more egalitarian, with an index of 0.54. The explanation for this divergence is that, although Castelló had a larger population than Valls and despite it having clear urban functions, it was markedly agricultural in nature, as can be seen in its socio-professional structure, in which small peasant owners made up the majority of taxpayers (tables 27 and 28). On the contrary, Valls, in spite of its relatively modest population, was a true urban centre, defined by commercial activities and textile production.[31] In general, the more rural a population was, the more inequality tended to be limited, something that became more pronounced in cities where, on the contrary, the effects of the market and the concentration of power were conducive to the accumulation of wealth in the upper echelons of the social hierarchy. However, along with the urban nature of a locality, population and economic growth also gave rise to increased inequality. It is significant that in a rural town such as Castelló, the Gini index tends to decrease with the reduction of the number of taxpayers, from 0.54 in 1398 to 0.49 and 0.50 in 1468 and 1497 (table 1), while, at the threshold of the 16th century, when a phase of demographic expansion ended, the indicator for 1599 reached 0.61, similar to that of the highly urbanised centres of the late Middle Ages.

Graph 1. **Gini coefficient for Iberian cities, 14th-16th centuries**
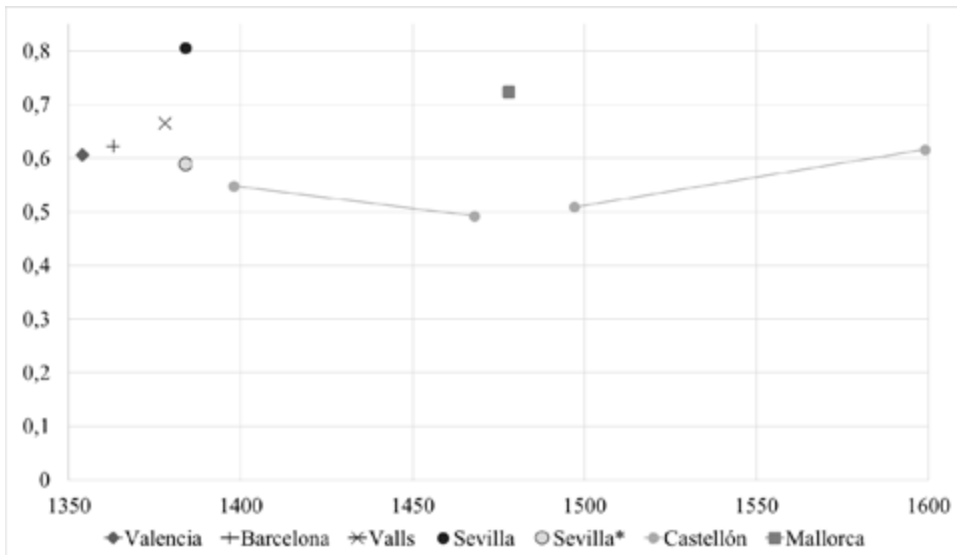
* Seville without knights.

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[31] On the different socio-professional structure of both towns, see P. VICIANO, *Poder municipal i grup dirigent local*, cit., and J. MORELLÓ, *Fiscalitat i deute públic en dues viles del camp de Tarragona. Reus i Valls, segles XIV-XV*, Barcelona 2001.

Beyond the aggregate calculation of the Gini index, the information provided by fiscal sources also allows us to analyse sectoral inequality, from a gender perspective, as well as by urban topography and the different ethnic or socio-professional groups. Women that owned properties, in the first place, were less wealthy than men; they accounted for 11-20% of taxpayers, but only controlled 7-12% of the wealth. Only in the case of a large city like Seville was the presence of women close to the percentage of wealth that they accumulated. Nevertheless, if women were, on average, less wealthy than men, their internal distribution was more unequal. The Gini index for women tended to be significantly higher than the general value for each locality, with remarkable cases such as Valls, where the female index was 0.73 while the general one was 0.66, or Mallorca, where the respective values were 0.78 and 0.72 (table 2). This level of inequality reflected a situation in which most of the female taxpayers were widows with little property, but among them there was a rich minority that, exceptionally, inherited their deceased husband's properties.

The differences in wealth between the quarters of a city did not have in premodern times the significance that they would attain in the bourgeois cities of the 19th century. However, fiscal sources make it possible to capture not only the average wealth curves in the urban topography, but also the inequality within each district measured by the Gini index. The neighbourhoods where inequality was higher than for the city as a whole were those with the wealthiest taxpayers, with a maximum level of wealth higher than that of the most egalitarian districts. In Barcelona, the *quarter* de la Mar, where the important merchants resided, had a Gini index of 0.63, while the *quarter* del Pi was 0.59 (table 3), when the maximum wealth was, respectively, 166 and 50 *sous*. In Mallorca, the most unequal district was that of Santa Creu (0.79), and the most egalitarian was that of Sant Miquel (0.56), with a maximum of 800 and 360 *sous*, respectively (table 4). This was also the reality in smaller towns and rural areas such as Castelló in 1468, where the parish with the lowest Gini index was Sant Nicolau (0.40) and the one with the highest was Sant Agustí (0.56), which corresponded, respectively, to a maximum of 57 and 70 pounds (table 5). The differences in inequality in urban areas, then, did not depend on the poorest taxpayers, present everywhere, but rather on the concentration of the richest taxpayers in certain neighbourhoods.

Inequality within a socio-professional sector, in general, tends to be lower than that of the population as a whole. In Mallorca, where the general index was 0.72, the corresponding one for notaries dropped to 0.29 and that for weavers to 0.20, regardless of whether those professionals had higher average status, superior to that of simple craftsmen. Merchants, on the other hand, formed a more unequal sector, although their Gini index (0.64) was also lower than the general one (table 6). In Seville, the most unequal social sector was the knights (0.79), very close to the general value, which reflected the preponderance of the high nobility among the highest taxpayers. Among scribes (*escribanos*) (0.49), and fishermen and craftsmen especially (0.36-0.43), there was far less inequality (table 7). It could be said that the larger the socio-professional group, the closer its Gini index will be to the general

one. This was the case in Castelló in 1468, where the peasants, representing 66% of taxpayers and 63% of wealth, had an index of 0.45, similar to the general one (0.49), but higher than that of the merchants and liberal professionals (0.40) and, above all, than that of the minority of Muslim peasants, who were the most egalitarian group (0.37) (table 8). This Muslim minority lived segregated in a separate district of the city, the *moreria* (Moorish quarter), but they were peasants, landowners, who contributed to the common tax burdens, and they therefore appear in the same fiscal register as the Christians. They were a relatively close-knit, poorer social group, in which the mechanisms of differentiation through the market had less impact than among the Christian majority.[32] Thirty years later, in 1497, although the general index had increased, the situation was largely similar. The remarkable thing, however, was the greater inequality among craftsmen, who in 1497, with an index of 0.54, formed the most unequal socio-professional group in Castelló, even exceeding the general value (0.50) (table 9). This evolution reflected a process of differentiation within craftsmen caused by the emergence of carders-entrepreneurs (*paraires*), craftsmen able to amass property and with a growing presence in the corridors of municipal power.

The influence of a locality's more or less urban nature on its inequality levels was also reflected in the socio-professional composition of the wealthiest taxpayers. Only in small rural towns such as Castelló were peasants among the top 3% of wealthy owners, so much so that in 1497 they accounted for 40% of the highest taxpayers. Notwithstanding this, the wealthiest group was the merchants and liberal professionals, which in 1468 accounted for 60% and in 1497 for 45% of the top 3% (table 10). Squires (*donzells*) and knights who began to appear at this higher level around then were actually merchants or their ennobled sons, so these two sectors together would account for 55% of the richest taxpayers at the turn of the 16th century. On the other hand, craftsmen, who in 1398 represented at least 20% of the wealthiest people, despite their growing internal polarization, shrank and almost disappeared from the ranks of the wealthy in 1497. In contrast, in large cities such as Barcelona, craftsmen had a larger presence of around 2% of the major taxpayers, but they were clearly outnumbered by merchants – including cloth merchants (*drapers*) and moneychangers (*canvistes*) – and, above all, by the royal officials residing in Barcelona, the capital of Catalonia and, in many respects, of the whole Crown of Aragon (table 11). However, it is likely that most of the major taxpayers without a stated profession were citizen rentiers, in keeping with the social structure of these cities. This was similar to the case of Mallorca, although there we see a group of noblemen inheriting land in the countryside (table 12). This presence of the nobility was overwhelming in Seville, where about 80% of the wealthiest taxpayers were knights, followed by public officers (10%), and far behind, by cloth merchants (7%) (table 13). This difference with respect to the large cities in Catalonia was undoubtedly due to the fact that in Seville the nobility was exceptionally taxed, but it must

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[32] In fact, they are evidently little represented in the local credit market. See P. VICIANO, *Endeudarse para consumir e invertir. La función económica de las obligaciones en una villa rural valenciana (Castellón de la Plana en 1499)*, in "Historia agraria: Revista de agricultura e historia rural", 61, 2013, pp. 13-44.

be borne in mind that in the late 14th century the large Mediterranean cities were far more commercially oriented than the Andalusian capital.

Gini coefficients do not show important, subtle differences that can be seen through an analysis of wealth distribution by deciles. Although Gini coefficients are evidently an arithmetic expression of these, we are convinced that deciles are expressive indicators that need to be considered, since they show us the importance of the lower and middle layers in wealth distribution.

Our data reveal that the wealthiest decile in the Iberian populations we are studying tended to amass between a third and a half of the wealth. This was particularly clear in the large Iberian capital cities in the second half of the 14th century. The levels are slightly higher in the big cities of the Crown of Aragon. In Valencia and Barcelona they were close to 50% (49.9% and 48%), while in Seville they would have been around 43%. This is based on the values that exclude noble families that pay tax, something that is reasonable given that they do not appear in any of the records of the other cities under study. This smaller concentration of wealth in the upper decile logically goes hand in hand with the greater importance of the lower and particularly the median layers. This can be seen by comparing the case of Seville with that of Valencia and Barcelona: deciles 1 and 2 in Seville concentrate twice as much wealth as their counterparts in the other two cities, while deciles 4 and 5 show levels 1.5 higher (table 14; see also table 15).

A second aspect to point out is that inequality appears to be lower in the towns and cities whose inhabitants were more closely tied to agricultural labour. Castelló is a representative case of this. At the end of the 14th century, Castelló was one of the largest towns in the kingdom of Valencia, although its population consisted essentially of farmers and agricultural workers (*llauradors*).[33] Here the upper decile accumulated 36% of the wealth in 1398, a figure significantly lower than those seen in Barcelona and Valencia around then. The concentration in this upper decile increases as one looks at cases with a more diversified occupational structure. We can appreciate this in Valls. This Catalan town was known for its cloth industry, which became particularly important in the region. It also had a market and a fair. Considering the occupational structure of other nearby towns, such as La Selva and Reus, it is reasonable to think that half of its population consisted of peasants, while the other half did manufacturing and commercial work. Some noble families also had their residence there.[34] The concentration of wealth in the upper decile here is estimated to be 47%, putting it on a par with political capitals such as Valencia and Barcelona, whose territorial influence and reach clearly went beyond the regional (table 14; see also table 16).

It is important to stress also the chronology of inequality. Most of the cases that we have studied in our project and which have been analysed already are in the second half of the 14th century. Yet we have also been able to include some 15th-century data so as to establish comparisons; these come from Majorca and, particu-

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[33] Castelló could have had more than 5,000 inhabitants during the first quarter of the 15th century, of which about 60-70 per cent would have been peasants and agricultural workers (*llauradors*). See P. VICIANO, *Els peus que calciguen la terra*, cit., p. 49, n. 6.

[34] J. MORELLÓ BAGET, *Fiscalitat i deute públic en dues viles del camp de Tarragona*, cit., pp. 301-302.

larly, Castelló, for which we have more figures for the late medieval and Early Modern period. In keeping with the findings for other European regions, these cases suggest there was a higher concentration of wealth among the better-off taxpayers in the 15th and 16th centuries. In other words, inequality was growing during the transition from the late medieval to the Early Modern period. In Majorca, for instance, our data reveals that the concentration of wealth was 56% in 1478, greater than the values for Valencia and Barcelona of a hundred years earlier. In Castelló, for which we have most available data at the moment, the concentration in the upper decile decreased between the late 14th and the late 15th century. From 36% in 1398 it fell to 32% between 1468 and 1497, in line with a greater accumulation of fiscal wealth in the middle deciles (see deciles 4 to 6, 1-2% higher) (table 14). At the end of the 16th century, though, we can again find significantly high levels of accumulation in the upper decile, of about 40%.

The case of Castelló, from which we can extract the most chronological considerations, agrees with the dynamics that have been established in other parts of Europe, essentially through Gini coefficients. Everything suggests that inequality increased during most of the late Middle Ages, a trend that was only interrupted in the decades immediately following the Black Death. In the centre and north of Italy, among the areas most studied inequality in 1350 could be established with a Gini coefficient of 0.6, being 0.5 a century later, when it started to rise again. The levels of 1350 had been reached by 1550, and in 1600 the Gini coefficient stood at around 0.7.[35] It is a similar process to the one in the southern Low Countries. Here, inequality was established with a 0.5 Gini coefficient in the last decades of the 14th century, a level that remained similar at the end of the 15th century, and lower in the first decades of the 16th (c. 0.35), when it started to grow unstoppably.[36]

An advantage of studying these sources from a more detailed and short-term perspective is that we can see how inequality manifested itself in other aspects. Particular attention is paid in our project to studying inequality among women. The women in our records are mostly widows, who are mentioned next to the name of their deceased husband and his occupation. The distribution of wealth among women per decile seems more unequal, for instance, in Valls, Seville, Majorca and Castelló (tables 17 and 18). This is probably a result of the higher concentration of wealth in the affluent stratum of well-off widows like these. In places like Valls and Majorca the concentration in the upper decile could be 10% higher than the general figures including male and female taxpayers. In other places such as Castelló, though, the accumulation did not differ much.

Another original aspect to which we pay attention is inequality within particular occupational groups. This is an approach that enables us to appreciate how far the general dynamics and changes in inequality were global or the result of growing

[35] F. AMMANNATI, D. DE FRANCO, M. DI TULLIO, *Misurare la diseguaglianza economica nell'età preindustriale: un confronto fra realtà dell'Italia centro-settentrionale*, "Rivista di Storia Economica", 31, 2015, n. 3, pp. 309-340.

[36] W. RYCKBOSCH, *Economic inequality and growth before the industrial revolution: A case study of the Low Countries (14th-19th centuries)*, Working Papers 067, 'Carlo F. Dondena', Centre for Research on Social Dynamics (DONDENA), Università Commerciale Luigi Bocconi, 2014 in ftp://ftp.dondena.unibocconi.it/WorkingPapers/Dondena_WP067.pdf, p. 17.

inequality within specific occupations. This cannot be done in all cases, because not all fiscal records specify the occupations of their respective taxpayers. We can use a few cases, however, such as Seville, Majorca and Castelló (tables 22-25). These clearly show that the presumably richer occupational groups also tended to be more unequal. In 14th-century Seville 60% of the wealth was concentrated in the upper decile of knights, while only 25% was in the case of butchers, fishermen and weavers. This of course was the result of greater accumulation in the middle deciles (particularly from decile 5 to 7), which together possessed some 30% of the wealth. The case of Majorca in 1478 shows us a similar hierarchy, in which merchants were at the top. Their upper decile possessed 50% of the wealth of taxpaying merchants, levels of inequality that double those of the weavers and wool-carders in the same place.

Castelló, again, deserves attention for the possibility of establishing comparisons in chronological terms, particularly between 1468 and 1497. Inequality was practically the same in global terms in both years (32%), but there were changes within occupational groups. Indeed it was effectively growing within most groups. The better-off 10 % of the agricultural workers, craftsmen and Muslims of Castelló experienced a slight rise in inequality, 3-5% higher in 1497 (tables 24 and 25). Meanwhile, inequality among merchants seems to have decreased, since the upper decile accumulated 4% less of the wealth. It is essential to stress the relevance of this phenomenon, since it shows that processes of wealth accumulation were not necessarily representative of societies as a whole. The increased inequality of some groups could offset the reduction among others, creating a false picture of stability over time. The case of Castelló is also illustrative, since most residents here were agricultural labourers, and they experienced increased inequality that is not reflected in the global figures.

4. FINAL REMARKS

Although, as has been said, our contribution is part of a larger research project on the Iberian Peninsula as a whole from the 13th to the 17th century, in this paper we have focused on six case studies, two from Catalonia, two from the Kingdom of Valencia, one from Mallorca and one from Seville. What these cases show first and foremost is the absolute correspondence between the levels of inequality we find in late medieval Spain and those of Western Europe. Indeed, in the Iberian cases and in those of the large European cities collected by Jan Luiten Van Zanden, and those of north-central Italy studied by Guido Alfani, the Gini index ranges between 0.6 and 0.7.[37] Even so, Barcelona (0.62 in 1363) and Valencia (0.60 in 1354) lagged far behind the levels of inequality of Paris (0.79 in 1313) and London (0.76 in 1319) prior to the Black Death, or Florence (0.79 in 1427) after it. Barcelona and Valencia were large cities, but not major European capitals, and their inequality indexes are closer to those of small Italian cities (Chieri, San Gimignano...). Nor did they have

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[37] J.L. VAN ZANDEN, *Tracing the Beginning of the Kuznets Curve*, cit.; G. ALFANI, *Prima della curva di Kuznets*, cit.; G. ALFANI, *Wealth Inequalities and Population Dynamics in Northern Italy during the Early Modern Period*, in "Journal of Interdisciplinary History", 40, 2010, n. 4, pp. 513-549.

such a high index of wealth concentration. In London and Paris, more than half of the wealth was in the hands of the richest 5%, a percentage that in Florence accounted for almost two-thirds of the wealth. Conversely, in Barcelona and Valencia, the top 5% owned around a third, almost the same as in the second-tier Italian cities.

The study has also allowed us to back up the following observations: first and foremost, the larger the city, the greater the inequality. In all the large cities in our sample, half or more of the wealth was in the hands of the top 10% of the population. Secondly, economic polarisation influenced not only the demography, that is, the size of the city, but also its economic activities and socio-professional diversity. Therefore, although Castelló (4,000 inhabitants) was larger than Valls (2,500), inequality was greater in the latter, because it had a more urban and commercial nature, while the former had a more agrarian profile. Thirdly, unlike large modern cities, especially from the 19th century onwards, there was not such a great topographical difference in wealth distribution. It cannot be said that the richest were concentrated in the centre while the poorest resided in the outskirts. Rich and poor lived side by side in the centre, while the outskirts were the domain of the destitute. Finally, as regards women, the analysis shows them to have been poorer on the whole, but polarisation among them was greater than among men.

We can summarise the causes of inequality and its evolution in four main points:

In the first place, there was the demography and the size of the cities. Valencia, Barcelona, Mallorca and Seville were large economic centres and important Mediterranean (or Atlantic, in the case of Seville) ports, with dynamic manufacturing and important service sectors, which attracted numerous migrants. The great opportunities offered by the labour market in large cities were highly attractive for workers, qualified or not, who flitted in and out of employment. Two more structural factors were responsible for the increase in inequality and the advance of pauperisation: an inheritance system that shared the father's assets out equally among his children. This led to the fragmentation of the family's property upon the father's death and to an active land market. Finally, an equally important factor was the increased tax burden, of which the documentary sources used in this study are in practice a result. Taxation developed enormously from the mid-14th century onwards, as a result of continuous, almost permanent wars, and inasmuch as fiscal policy was devised by the ruling elites who owned most of the wealth, this policy was designed to benefit their interests over those of the poorer classes who were progressively dispossessed.

Lastly, a few words on how inequality developed. The sources we used in our work give us a picture of economic inequality in a medieval city at any given time. Such an image is immediately very valuable if we consider the scarcity of such sources for the medieval period, at least outside Italy. It is also important and interesting to be able to observe the long-term development of inequality. For that, we need to extend our analysis beyond the Middle Ages, something we have only been able to do in this paper with Castelló, for a period of two centuries from the end of the 14th century to the end of the 16th century. Starting from relatively low levels of inequality, with a Gini index of 0.54 in 1398, the demographic decline of the early

15th century implied a tendency for this indicator to decrease (table 26 and the following one).

Year	Taxpayers	Gini	D1	D10
1398	886	0.54	0.75	36.70
1468	729	0.49	0.83	32.28
1497	653	0.50	0.66	32.25
1599	1,239	0.61	1.66	40.33

In 1398 there were 886 taxpayers, but by 1468 this number had fallen to 729, with a parallel reduction of the index, which stood at 0.49. The attenuation of inequality can also be observed by the fact that the wealthiest taxpayers, the top 10%, went from possessing 36.7% of the wealth to 32.28%. This evolution, then, would be consistent with the idea well established in other places that at a time of demographic recession inequality tended to fall. During the second half of the 15th century, the population of Castelló continued to decline, although less intensely. In contrast, the Gini index increased, albeit not as markedly as it had previously decreased, rising to 0.50. However, this slight increase should be matched with other indicators such as deciles. In fact, rather than a simple increase in inequality, this was a redistribution of wealth in favour of the middle strata, since the participation of the richest 10% remained practically stable (32.2%), while the poorest yielded their share of wealth to the middle strata. Nonetheless, the differences between the two dates are so small that we should rather be talking about the stability of the level of inequality despite demographic decline. This would suggest that the impact of demographic trends on wealth distribution was not mechanical, but other economic and social factors came into play. During the second half of the 15th century, although Castelló continued to be on the whole rural, some manufacturing activities intensified – such as the textile sector – and the town consolidated itself as the commercial centre of the neighbouring shires. At the same time, an oligarchic class became politically consolidated. This certainly included a few well-off farmers, who tended to accumulate rents and properties. Therefore, the growing impact of the market and the political transformations cancelled out the levelling effects that population decline would initially have had. With the recovery of population growth and that of the main economic indicators in the 16th century, the link with inequality became apparent again, since the rise from the 653 taxpayers of 1497 to the 1,239 of 1599 was accompanied by an increase of the Gini index from 0.50 to 0.61, a value equivalent to that of large urban centres in the late Middle Ages. Likewise, the upper layer of taxpayers came to own 40.3% of the wealth.

Broadly speaking, it can be said that demographic trends influenced inequality levels, even in societies, such as the Iberian, where no Malthusian ceilings had been reached by the end of the 13th century. The impact of the plague in 1348 and the subsequent calamities that led to a significant reduction of the population until the middle of the 15th century were accompanied by a moderation of inequality, even in rural areas where it started with lower values than in the large cities. We have been able to confirm this for the second half of the 14th and the 15th century. There are

unfortunately no data available from before the Black Death for the observatories studied in this paper, but we can infer the process from our ongoing project. In the same way, the growth in the 16th century represented a new phase of increased inequality. However, the egalitarian trend of the demographic decline was qualified and even cancelled out by other simultaneous processes, now of an economic and political nature, conducive to the accumulation of incomes and properties in the upper strata of local society despite the decrease in the number of inhabitants.

Our study has shown that the Iberian case fits perfectly in the general European trends: inequality was increasing throughout the late medieval period, and it only seems to have halted or descended during the decades after the mid-14th century, something usually associated with the catastrophic impact of the Black Death and other calamities of the time. Therefore, far from being anomalous, the Iberian case is representative of the European trend. In addition to this general trend, of decline and the recrudescence of inequality, our paper has been able to confirm several phenomena that have been overlooked until now: inequality was greater among women than among men (when only women are taken into account); in cities than in the countryside; and among the richer occupational sectors than among the poorer ones. The great centuries-old trends based on hundreds of Gini coefficients and deciles are useful and necessary, if what we want is to study the dynamics of inequality. But what about its social impact? How did inequality manifest itself across the whole of preindustrial society, in our case in the Middle Ages? This is what our work has been able to show. We have looked at inequality in detail, 'with a magnifying glass', and this allows us to understand that global trends may not be representative of the whole of society. It is necessary to go beyond global, aggregated figures, to disaggregate them in sectoral analyses, and above all, to contextualise inequality and its evolution within its historical background, in order to understand the nature of the phenomenon in all its complexity.

TABLES

Tab. 1. **General Gini indexes**

city	year	taxpay.	G.I.	average	median	minimum	maximum	max./min.
Valencia	1354		0.606					
Barcelona	1363	2.772	0.622	3 s. 8 d.	2 s. 6 d.	0 d./6 d.	166 s. 8 d.	333
Valls	1378	517	0.665	1.710 s.	795 s.	20 s.	29.075 s.	1.453
Seville	1384	2.578	0.805	471 mr.	100 mr.	50 mr.	50.000 mr.	1.000
Seville*	1384		0.589	185 mr.	100 mr.	50 mr.	10.000 mr.	200
Castelló	1398	886	0.548	7 L.	7.25 L.	0.12 L.	117.25 L.	977
Castelló	1468	729	0.492	10.40 L.	7.62 L.	0.12 L.	72.5 L.	604
Mallorca	1478	2.606	0.723	19.15 s.	6 s.	1 s.	800 s.	800
Castelló	1497	653	0.509	11.25 L.	8.00 L.	0.25 L.	104.5 L.	418
Castelló	1599	1.239	0.616	10.58 L.	4.87 L.	0.12 L.	144.5 L.	1.204

* Without knights.   s. sous   mr. maravedis   L. pounds

Tab. 2. **General Gini female indexes**

		Gini I	average	median	minimum	maximum	max./min.
Valencia	1354						
Barcelona	1363						
Valls	1378	0.734	1.219.1 s.	300 s.	20 s.	10.932 s.	546
Seville	1384	0.810	463 mr.	100 mr.	50 mr.	50.000 mr.	1.000
Castelló	1398	0.580	7 L.	4 L.	0.37 L.	72.2 L.	195
Castelló	1468	0.520	8.7 L.	5.87 L.	0.25 L.	56.25 L.	225
Mallorca	1478	0.787	14.37 s.	4 s.	1 s.	800 s.	800
Castelló	1497	0.503	7.24 L.	4.37 L.	0.25 L.	33 L.	132

s. sous   mr. maravedis   L. pounds

Tab. 3. **Gini indexes by parish in Barcelona (1363)**
(in sous/diners)

	Gini I	*average*	*median*	*minimum*	*maximum*
quarter del Mar	0.631	3/1	2/6	0-0/6	166/8
quarter del Pi	0.593	3/9	2/6	0-0/6	50
general	0.622	3/8	2/6	0-0/6	166/8

Tab. 4. **Gini indexes by parish in Mallorca (1478)**
(in sous)

	Gini I.	*average*	*median*	*minimum*	*maximum*
S. Eulàlia	0.685	16.59	6	1	400
S. Jaume	0.675	24.11	8	2	400
S. Nicolau	0.720	18.85	6	1	680
S. Creu	0.793	26.82	6	1	800
S. Miquel	0.564	9.42	6	1	360
General	0.723	19.15	6	1	800

Tab. 5. **Gini indexes by parish in Castelló (1468)**
(in pounds)

	Gini I	*average*	*median*	*minimum*	*maximum*
S. Maria	0.487	11.67	8.87	0.5	56.75
S. Joan	0.468	8.92	6.75	0.12	52
S. Nicolau	0.403	9.89	8.87	0.25	57.75
S. Pere	0.510	10.48	7.37	0.25	59.25
S. Agustí	0.560	10.89	6	0.25	70
S. Tomàs	0.501	12.15	9.12	0.5	72.5
General	0.492	10.40	7.62	0.12	72.5

Tab. 6. **Gini indexes by socio-professional levels in Mallorca (1478)
(in sous)**

	Gini I.	average	median	minimum	maximum
notaries	0.296	18.76	15	4	55
carders	0.421	3.37	6	2	60
merchants	0.640	38.22	20	3	400
weavers	0.203	5.58	6	3	16
General	0.723	19.15	6	1	800

Tab. 7. **Gini indexes by socio-professional levels in Seville (1384)
(in maravedíes)**

	Gini I.	average	median	minimum	maximum
knight	0.793	1.665.56	300	50	50.000
scribes	0.491	352.72	200	50	2.000
butchers	0.386	197.61	200	50	500
fishermen	0.363	115.44	100	50	500
weavers	0.437	123.80	100	50	400
General	0.805	471	100	50	50.000

Tab. 8. **Gini indexes by socio-professional levels in Castelló (1468)
(in pounds)**

	Gini I.	average	median	minimum	maximum
peasants	0.455	9.98	8	0.12	70
artisans	0.465	8.21	6.25	0.25	45.12
mer./prof.*	0.407	25.38	26.31	5	72.5
Muslims	0.378	7.18	6.12	1.75	28
Global	0.492	10.40	7.62	0.12	72.5

* Merchants and liberal professionals.

Tab. 9. **Gini indexes by socio-professional levels in Castelló (1497) (in pounds)**

	Gini I.	*average*	*median*	*minimum*	*maximum*
peasants	0.490	10.61	8.12	0.25	104.5
artisans	0.542	8.84	5.87	0.25	86
mer./prof.*	0.311	23.5	18	2	58.37
Muslims	0.457	9.25	6.37	0.87	32.87
General	0.509	11.25	8	0.25	104.5

* Merchants and liberal professionals.

Tab. 10. **Socio-professional condition of top taxpayers in Castelló***

	1398	*1468*	*1497*
% taxpayers	2.8	3.29	3
% wealth	16.3	15.2	14.4
peasants	2	7	8
artisans	5	2	1
mer./prof.	8	14	9
ecclesiastics	1		
knights		1	2
unknown	9		
Total taxpayers	25	24	20

* The fourfold of the average wealth: more than 45 L. in 1398. more than 35 L. in 1468 and more than 40 L. in 1497.

Tab. 11. **Socio-professional condition of top taxpayers in Barcelona***

	1363
% taxpayers	2.2
% wealth	
Royal officers	9
merchants	7
moneychanger	1
draper	1
grocer	1
innkeeper	1
tailor	1
cuirassier	2
unknown	37
Total taxpayers	60

* 50 L. or more.

Tab. 12. **Socio-professional condition of top taxpayers in Mallorca***

	1478
% taxpayers	2.11
% wealth	27.51
knights	5
merchants	2
apothecary	1
unknown	47
Total taxpayers	55

* 140 sous or more.

Tab. 13. **Socio-professional condition of top taxpayers in Seville***

	1384
%	2.11
draper	5
councillor	7
shepherd	1
admiral	1
governess of the duke	1
knights	55
Total	70

* 3,000-50,000 maravedís

Tab. 14. **Wealth distribution**

city	*year*	*taxp.*	*D1*	*D2*	*D3*	*D4*	*D5*	*D6*	*D7*	*D8*	*D9*	*D10*
Valencia	1354		0.65	1.35	2.00	3.50	3.50	4.68	6.98	10.20	17.00	49.90
Barcelona	1363	2,772	0.94	1.68	266	4.48	6.02	6.48	7.68	9.50	12.52	48.00
Valls	1378	517	0.53	1.10	1.71	2.51	3.55	5.66	7.96	11.33	18.28	47.31
Seville	1384	2,578	1.04	1.06	2.07	2.12	2.12	3.09	4.24	5.93	10.07	68.26
Seville*	1384		2.63	2.69	3.84	5.39	5.39	5.39	6.65	10.59	13.84	43.56
Castelló	1398	886	0.75	1.45	2.70	4.22	5.72	7.55	9.87	13.08	17.90	36.70
Castelló	1468	729	0.83	1.95	3.55	5.10	6.49	8.40	10.37	12.98	17.99	32.28
Mallorca	1478	2,606	1.38	1.92	2.42	3.13	3.13	3.96	4.99	9.13	14.89	56.01
Castelló	1497	653	0.66	1.60	3.18	4.63	6.25	8.23	10.47	13.67	18.16	32.25
Castelló	1599	1,239	1.66	1.89	1.89	2.09	3.56	5.98	9.13	13.31	20.12	40.33

* Without knights.

Tab. 15. **Quarter del Mar de Barcelona (1363)**
(in sous/diners)

deciles	wealth*	% wealth
1	57/6	0.73
2	108	1.37
3	204/9	2.59
4	342/7	4.35
5	474/9	6.03
6	510	6.48
7	610/5	7.64
8	744	9.45
9	959	1.,18
10	3.867/7	4.,15
Total	7,868/10	99.97

Tab. 16. **Top taxpayers**

city	year	Top 5%	Top 1%
Valencia	1354	32.20	14.43
Barcelona	1363		
Valls	1378	31.99	10.82
Seville	1384	57.45	33.53
Seville*	1384	32.99	17.87
Castelló	1398	23.59	7.80
Castelló	1468	20.25	5.74
Mallorca	1478	41.98	17.91
Castelló	1497	20.81	6.34
Castelló	1599	25.90	8.27

* Without knights.

Tab. 17. **Female taxpayers**

		% taxpayers	*% wealth*
Valencia	1354		
Barcelona	1363		
Valls	1378	14.89	10.80
Seville	1384	22.35	21.95
Castelló	1398	19.07	11.74
Castelló	1468	12.75	10.75
Mallorca	1478	15.80	11.87
Castelló	1497	11.63	7.49

Tab. 18. **Female wealth distribution**

City	*Year*	*D1*	*D2*	*D3*	*D4*	*D5*	*D6*	*D7*	*D8*	*D9*	*D10*
Valencia	1354										
Barcelona	1363										
Valls	1378	0.44	0.95	1.54	1.81	2.44	3.62	5.92	9.74	19.96	53.53
Seville	1384	1.02	1.07	1.56	2.15	2.15	2.64	4.22	5.74	11.47	67.90
Castelló	1398	0.97	1.43	1.80	3.06	4.49	7.11	9.69	13.43	19.56	37.97
Castelló	1468	0.87	1.70	3.06	4.59	5.95	7.84	10.47	12.95	18.42	34.10
Mallorca	1478	1.48	2.21	2.07	2.07	2.68	3.37	4.15	5.67	10.43	65.91
Castelló	1497	0.72	1.45	2.13	3.90	5.78	8.69	11.41	15.61	19.15	31.11

Tab. 19. **Wealth by parish in Barcelona (1363)**

parish	*D1*	*D2*	*D3*	*D4*	*D5*	*D6*	*D7*	*D8*	*D9*	*D10*
quarter del Mar	0.73	1.37	2.59	4.35	6.03	6.48	7.64	9.45	12.18	49.15
Quarter del Pi	1.59	2.63	2.87	4.87	5.96	6.52	7.80	9.65	13.57	44.52

Tab. 20. **Wealth by parish in Mallorca (1478)**

parish	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10
S. Eulàlia	1.57	2.27	2.67	3.60	3.62	4.54	5.83	8.83	15.20	51.81
S. Jaume	1.15	1.56	2.24	2.51	3.25	4.33	7.21	11.27	18.60	47.84
S. Creu	0.99	1.42	1.89	2.22	2.22	2.62	3.95	6.57	14.70	63.92
S. Nicolau	1.37	1.94	2.79	3.15	3.18	4.20	4.98	8.25	13.57	56.53
S. Miquel	2.93	3.39	4.41	6.03	6.46	6.46	6.78	8.61	10.55	44.31

Tab. 21. **Wealth by parish in Castelló (1468)**

parish	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10
S. Maria	0.98	1.95	3.39	5.07	6.60	8.47	10.14	13.42	18.60	31.29
S. Joan	1.22	2.33	3.48	5.39	6.69	8.26	10.45	13.26	18.63	29.85
S. Nicolau	1.25	3.41	4.65	5.70	7.68	9.56	11.53	13.27	16.41	26.52
S. Pere	0.71	1.31	2.45	4.98	6.41	8.10	10.01	13.58	20.36	32.02
S. Agustí	0.65	1.79	3.28	4.98	5.78	6.15	8.87	12.30	18.02	38.15
S.Tomàs	0.92	2.11	3.66	5.31	6.92	8.25	9.77	11.76	17.08	34.13

Tab. 22. **Wealth by socio-professional levels in Seville (1384)**

	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10
knights	0.56	1.16	1.29	1.72	2.38	3.26	4.37	7.73	13.25	64.57
scribes	1.55	2.58	3.01	5.15	6.18	8.25	11.34	12.89	15.46	33.50
butchers	3.60	3.60	4.82	4.82	7.22	9.63	10.84	14.45	16.86	24.10
fishermen	4.46	4.46	4.46	8.92	8.92	8.92	8.92	9.55	15.28	26.10
weavers	4.80	4.80	3.80	4.80	7.70	7.70	7.70	13.46	17.30	27.88

Tab. 23. **Wealth by socio-professional levels in Mallorca (1478)**

	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10
merchants	0.90	1.92	2.66	4.27	5.33	5.87	7.20	10.14	12.01	49.65
notaries	3.12	4.17	5.79	7.3	8.8	11.12	11.00	13.32	15.06	20.27
carders	3.84	5.32	6.44	6.44	6.44	8.05	8.46	10.40	14.41	30.15
weavers	5.37	6.63	7.16	7.70	10.57	10.57	10.57	10.57	13.08	17.20

Tab. 24. **Wealth by socio-professional levels in Castelló (1468)**

	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10
peasants	0.90	2.12	3.96	5.47	7.11	8.93	10.76	13.44	17.94	29.32
artisans	1.15	2.18	3.71	5.53	7.00	8.02	10.84	14.01	17.27	30.23
mer./prof.*	2.04	2.78	4.28	5.57	7.72	9.11	10.15	14.41	19.59	24.30
Muslims	3.87	4.04	4.71	5.89	7.35	9.48	11.06	12.74	16.17	24.64

* merchants and liberal professionals.

Tab. 25. **Wealth by socio-professional levels in Castelló (1497)**

	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10
peasants	0.67	1.65	3.11	4.85	6.90	8.61	10.70	13.52	18.17	31.78
artisans	0.72	1.47	2.61	3.94	5.50	7.48	10.23	14.17	18.42	35.40
mer./prof.*	2.11	4.53	5.75	7.64	8.06	9.53	12.54	12.85	16.75	20.20
Muslims	1.31	2.25	4.11	5.43	6.55	7.97	10.54	13.82	20.06	27.90

* Merchants and liberal professionals.

Tab. 26. **Inequality trends in Castelló (1398-1599)**

year	Gini Index	Taxpayers	Wealth	Average wealth
1398	0.548 (100)	886 (100)	10.075 (100)	11.3 (100)
1468	0.492 (90.7)	729 (82.2)	7.588 (75.3)	10.4 (92.0)
1497	0.509 (94.4)	653 (73.7)	7.348 (72.9)	11.2 (99.1)
1599	0.616 (112.9)	1.239 (139.8)	13.109 (130.1)	10.5 (92.9)

In brackets indexes (base 1398)

Tab. 27. **Socio-professional structure and wealth distribution in Castelló (1468)**

	% taxpayers	% wealth	average	median
peasants	65.98	63.29	9.98	8
artisans	17.96	14.18	8.211	6.25
mer./prof.*	6.85	16.72	25.38	26.31
Muslims	4.25	2.93	7.18	6.12
Jews	2.46	0.63	2.67	0.87
ecclesiastics	2.33	1.73	7.76	7
knights	0.13	0.48	36.87	36.87
Absolute value	729 taxpayers	7.588 pounds	10.40	7.62

* Merchants and liberal professionals.

Tab. 28. **Socio-professional structure and wealth distribution in Castelló (1497)**

	% taxpayers	*% wealth*	*average*	*median*
peasants	65.08	61.38	10.61	8.12
artisans	16.99	13.35	8.84	5.87
mer./prof.*	7.19	15.06	23.5	18
Muslims	6.43	5.28	9.25	6.37
ecclesiastic	3.06	2.25	8.28	6.56
knights	1.22	2.65	24.34	49.18
Absolute value	653 taxpayers	7.348 pounds	11.25	

* Merchants and liberal professionals