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Artículo

# In search of the ideal husband. Could inequality in the pre-industrial era be measured through dowries? North-eastern Catalonia, 1750-1825

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#### ABSTRACT

This paper explores the possibilities that dowries may offer to study inequality in the pre-industrial era. We argue that, mostly, in rural societies with impartible inheritance, families competed to join the heir of an estate that would allow them to maintain or even improve their socio-economic status by means of paying the best possible dowry. Hence, dowries may be an indicator of family wealth and, therefore, disparities in dowry amounts could be informing about economic inequality. Then, we show the results of a case study based on a rural region in north-eastern Catalonia from 1750 to 1825, which suggest that over the last decades of the 18th century and the first quarter of the 19th century, inequality increased significantly. As it was a period of bellicosity and inflation, our results suggest that political instability tended to increase inequality in pre-industrial societies, as it has been previously stated by some authors.

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# En busca del marido ideal. ¿Es posible medir la desigualdad en la era preindustrial a través de las dotes? Nordeste de Cataluña, 1750-1825

#### RESUMEN

En este artículo exploramos las posibilidades que ofrecen las dotes para el estudio de la desigualdad durante la era preindustrial. Argumentamos que, especialmente, en las sociedades rural de herencia indivisa las familias competían, a través del pago de la mejor dote posible, para unirse al heredero de un patrimonio que les permitiese mantener o incluso mejorar su estatus socioeconómico. En consecuencia, las dotes serían un indicativo de la riqueza familiar, de modo que las disparidades en su distribución podrían informar sobre la desigualdad económica. Mostramos los resultados de un estudio de caso basado en una región rural del nordeste catalán entre 1750 y 1825, los cuales sugieren que durante la última década del siglo xvIII y el primer cuarto del xIX la desigualdad aumentó considerablemente. Dado que fue un periodo de belicosidad e inflación, nuestros resultados parecen coherentes con las tesis que consideran que la inestabilidad política era un elemento generador de desigualdad en las sociedades preindustriales.

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# 1. Introduction: why inequality?

Over the last few years, particularly since the onset of the fiscal and financial crisis of 2007-2008, inequality came under the spotlight while the consequences of the Great Recession became increasingly evident and shattering. A recently unprecedented economic decline in the western world was by no means accompanied by a reduction in inequality. Hence, Kuznets curve showed its shortcomings as a justification for inequality at a time when the wealth of the rich (redundancy aside) was turning obscene in the face of the growing mass of poor and unemployed workers, especially in those countries accustomed to see poverty as a marginal and almost anecdotal issue. Certainly, the work of the French economist Thomas Piketty (2014, 2019) has been crucial in causing a prolific debate around inequality, with his books becoming bestsellers that have reached a readership far beyond the academic environment (Jackson, 2022, p. 3).

Progressively, studies on inequality have been adopting a long-term perspective. Branko Milanovic, Peter Lindert and Jeffrey Williamson (2007, 2011) laid the foundations for the study of pre-industrial inequality, providing a theoretical and interpretative framework for the study and comparison of different societies through equally disparate sources<sup>1</sup>. From then and until today the academic literature has witnessed a plethora of remarkable publications on the measurement of inequality in a long-term historical perspective. From archaeologists measuring disparities in Upper Palaeolithic burial sites to taxation experts on the eve of the French Revolution, we enjoy a wide range of studies and academics on the unequal distribution of resources throughout human history<sup>2</sup>.

Almost all the current literature on this topic coincides, more or less explicitly, in the difficulty of finding a universal source which allows the comparison between regions and periods. Therefore, sources and methods of a very diverse typology are being used, inevitably assuming the estimative nature of the obtained results. Either way, the most commonly used sources for the measurement of inequality in the pre-statistical era are those derived from direct taxation, because, in spite of all their limitations and inaccuracies, they were usually aimed at first ascertaining and then recording the wealth of families. Nevertheless, when fiscal records are not available, other documentary sources are utilised, such as social tables (Allen, 2019) or rental values of households (Van Zanden, 1995; Ryckbosch, 2016).

Nowadays, despite using different sources and/or methodologies, there is a certain consensus regarding that there were common forces pushing towards higher inequality in early modern Europe. Indeed, many field historians agree that, from late middle ages until the end of pre-industrial times, inequality

increased continuously almost everywhere, with only one exception: during the century after the advent of the Black Death, i.e., from 1347 to c.1450, when inequality declined. This fact may have occurred due to a shift in the equilibrium of the production factors, driven by an abrupt reduction in the availability of labour force (Jackson, 2022, pp. 10-11). Consequently, it would appear that economic growth was not a necessary cause of inequality (Alfani, 2021, p. 34) and also, only major catastrophes could counteract the forces that were constantly pushing towards larger capital concentration leading to greater inequality. Moreover, according to the extensive work of Walter Scheidel (2017), during pre-industrial times, "minor" catastrophes as non-massive warfare or local plagues and famines, would have even increased inequality caused by defence strategies of large capital owners. Similarly, in times of turmoil, rulers tended to cover their rising costs through regressive fiscal measures, further exacerbating inequality (Alfani, 2021, p. 30).

In this paper, we explore the possibilities provided by a non-fiscal source for the study and measurement of inequality in the pre-industrial (and pre-statistical) era: the dowries paid and received by families, which were recorded in notarial deeds known as marriage contracts and kept in notarial archives. This approach is based on a broad tradition since, as will be discussed in the following sections, for more than three decades dowries have been used by historians as a source for the study of social and economic history. By extension, dowries have proven their usefulness, especially in the absence of reliable modern statistic and/or fiscal source which could directly inform about family's wealth<sup>3</sup>.

Accordingly, this article aims to contribute to the study of pre-industrial inequality from two different perspectives. Firstly, by studying the characteristics of marriage contracts which constitute an historical source abundant and well preserved, especially in societies with impartible inheritance, where they were an indispensable instrument for family wealth management. Secondly, by analysing a study case from north-eastern Catalonia during 1750-1825, covering two antagonistic historical contexts. On the one hand, the prosperous and fairly quiet central decades of the 18th century and, on the other hand, the extremely agitated and tumultuous last years of the 18th century and the first decades of the following, in the so-called Age of Revolution (Hobsbawm, 1962). Hence, this geographical and chronological framework enables the assessment, albeit on a small scale, of the effects caused by the growing bellicosity and galloping inflation upon inequality in the frontier territories between the France born of the Revolution and the absolutist Spanish monarchy.

# 2. Why dowries?

First of all, it is remarkable to note that the payment of a sum of money (or goods) at the time of marriage is almost as old as the institution of marriage itself. Some anthropologists have pointed out that in ancient and unstratified societies the groom's family used to pay a *brideprice* to the family of the future wife. Afterwards, since human groups became more complex, differ-

<sup>&</sup>lt;sup>1</sup> However, the first notable attempts on measuring pre-industrial inequality were conducted in the Netherlands at the end of last century. Their findings provided a theoretical interpretation which gave further amplitude to Simon Kuznets' thesis, identifying a kind of Super Kuznets Curve of inequality throughout the early modern era which would begin its declining phase already in the twentieth century (Van Zanden, 1995).

<sup>&</sup>lt;sup>2</sup> An exhaustive bibliographical synthesis of these works can be found in Alfani (2021) and Scheidel (2017). For the Spanish case see, among others, the works of Carlos Santiago-Caballero (2011), Esteban Nicolini and Fernando Ramos-Palencia (2016), Gabriel Brea-Martínez and Joana Pujadas-Mora (2019), Héctor García-Montero (2020) and Jordi Morelló Baget *et al.* (2020).

<sup>&</sup>lt;sup>3</sup> Particularly noteworthy is the work carried out by the Rural History Research Group of the University of Girona, which began in the 1980s and 1990s and culminated with the celebration in April 2009 of a workshop focused on the study of marriage contracts, which led to the publication of a compilation book the following year (Ros, 2010).

entiated and unequal, societies evolved towards the dowry system, where it is usually the family of the bride who pays a dowry to the groom (Anderson, 2007; Hughes, 1978). Despite this apparent link between socio-economic stratification and dowries, the latter have usually been discarded for the study and quantification of inequalities in historical perspective may due to the following reasons: 1) only a small portion of the families, frequently the elites, paid dowries and 2) the amounts given were not completely correlated with their real wealth.

These statements may be relevant both in cultures where the dowry system is still nowadays practised, as well as in many historical societies. Nevertheless, some exceptions might be found, as could be the case of rural Catalonia until mid-19th century, which was home to a society based on the impartible inheritance system (Barrera, 1990; Ferrer, 2007). That is to say, a community where the transmission of wealth was concentrated in a single heir, which was usually the eldest male child4. Consequently, as the availability of land was a key factor for survival and social reproduction, this system resulted in a high degree of intrafamilial and extrafamilial inequality. Furthermore, it is also noteworthy that some anthropological studies have also highlighted the existence of a link between impartible inheritance systems and social stratification and inequality. Thus, researchers on primitive societies have argued how the inheritance system determines the degree of heritability of wealth, which is lower in single-heir societies and consequently prone to greater inequality (Borgheroff et al., 2009; Bowles, Smith and Borgheroff, 2010).

In any case, it was in this context of a pre-industrial society with impartible inheritance where families participated in a competitive search for the ideal husband, i.e., the heir of a patrimony which would allow them to maintain or even improve their socio-economic status. Which was the mechanism for attracting this perfect son-in-law? The payment of a dowry as large as possible, thus constituting a marriage market where often every detail was negotiated. Once both families came to an agreement, they would settle it before a notary by drawing up a marriage contract, in which the dowry to be paid was stated<sup>5</sup>.

Recent studies have highlighted the widespread of marriage contracts in Catalonia and especially in its rural areas during the pre-industrial era (Ferrer, 2011; Congost and Ros, 2013), while underlining the relevance of the dowry market in the comprehension of economic and social changes at the end of the Ancien Régime (Congost, Ros and Saguer, 2016). In addition, contemporary jurists and scholars of the Catalan inheritance system had already highlighted how the payment of dowries was hegemonic in all strata of wealth, as well as the close relationship between the amount given and the socio-economic

status of the families (Faus, 1907; Saguer, 1907; Maspons, 1935). Besides, through different diaries and memoirs written during the 18th and 19th centuries, we benefit from direct testimonies of the central role played by dowries and their importance in determining family status. Some examples may be the memoirs of Sebastià Casanovas (1978), Isabel Piferrer (Compte, 1993) and Miquel Heras de Puig (2001).

Likewise, the relevance of marriage contracts and dowries in the economy of pre-industrial rural societies has also been observed in other regions where the impartible inheritance system prevailed, such as the Tyrol, the Languedoc or the Central Pyrenees (Lanzinger, 2011; Pélaquier, 2011; Bonnain-Dulon, 2011), highlighting the arduousness of the negotiations to settle the ideal dowry for each marriage (Béaur, 2011)<sup>6</sup>.

In summary and as Congost (2010) pointed out, there are three characteristics of dowries which confer an advantage on them in comparison with other sources for the study of inequalities:

- 1) Considering the fact that dowries have historically been used to situate each family in its socio-economic status, it enables the observation of inequalities in a given society.
- 2) Dowries provide data concerning the status of families at a very particular point in the family life cycle as is marriage.
- 3) As most of dowry payments are in cash, they can be easily quantified and the results obtained may be reliable as the amount of money bargained shows the household's saving power.

Nevertheless, even if the reader has been convinced, up to this point, of the virtues provided by dowries, he or she may still wonder why not to use fiscal sources for the measurement of inequality. Indeed, for the Catalan case, a series of direct taxes on wealth existed since medieval times, being particularly outstanding those known as "Talles i Estimes". Recently, some first attempts to measure inequality from this documentary source have been performed (Morelló *et al.*, 2020; Reixach, 2022). Certainly, using them enables the comparability with other Mediterranean regions where homonymous sources exist, such as the Italian "Estimi", which have also recently given rise to inequality measurements (Alfani, 2015, 2017; Alfani and Di Tullio, 2019).

However, after the Spanish War of Succession (1701-1715) a new direct taxation system was imposed: the "Catastro" (Ferrer, 2002)<sup>7</sup>. Not only do all pre-modern tax sources deal with the query of an uncertain degree of hidden and fraud, but there are also two additional issues to consider regarding the "Catastro" in rural Catalonia. Firstly, in many municipalities, the collection was leased to the highest bidder after a public auction, who was in charge of assessing tax burden distribution among the tax-payers and later collecting it. Unfortunately, as it was let to a private individual, the bulk of the documentation has been lost.<sup>8</sup>

<sup>&</sup>lt;sup>4</sup> The indivisibility of the Catalan hereditary system, which lasted until after the Second Industrial Revolution, is closely related to the predominance of small and medium-sized rural properties known as "masos", whose origins date back to the 10th century (Lluch and Mallorquí, 2015). It was in this context where a system of hereditary transmission based on male primogeniture was imposed from medieval times onwards, in order to facilitate the non-disintegration of the family estate (To, 1997). It is remarkable to mention that this agrarian structure contrasts with other Spanish regions where the percentage of landowners was significantly lower due to the predominance of large estates (Nicolini and Ramos-Palencia, 2016). However, this does not imply that agrarian systems based on small properties, often insufficient for subsistence and subject to many burdens, tended per se to greater equity.

<sup>&</sup>lt;sup>5</sup> Dowry payments were mostly in cash, a relevant fact for its quantification (see table 1).

<sup>&</sup>lt;sup>6</sup> According to Boudjaaba (2011), in the Norman regime, where a system of egalitarian inheritance was prevalent, the practice of marriage contracts was also widespread in all social strata.

<sup>&</sup>lt;sup>7</sup> It has also its Italian counterpart: the "Catastro", which has led to inequality measurements as well (Alfani and Ammannatti, 2017).

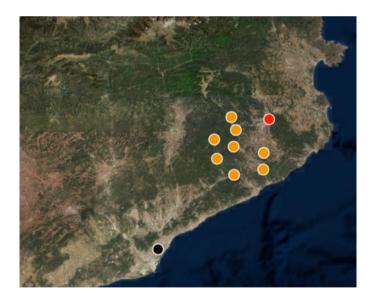
<sup>8</sup> The only year in which we have a considerable amount of cadastral data is 1795, and it is an exceptional document hastily drawn up in the context of war. See below.

Secondly, a large amount of tenancy contracts included a clause stipulating that the lessee was obliged to pay the taxes (Congost, 1990, p. 155). Thus, when analysing the scarce evidence of "Catastro" records, among the list of the largest taxpayers in each municipality a significant number of tenant farmers is found, while large landowners are recorded with a lower tax burden. In view of the above-mentioned, seeking for an alternative source to measuring pre-industrial inequality in Catalonia was necessary. It is in this context that dowries come to the fore.

### 3. The source: marriage contracts

In order to approach inequality measurement through dowries, 1,136 marriage contracts have been collected from eight notarial offices of a rural region<sup>9</sup> in north-eastern Catalonia, which roughly corresponds to the interior of the present-day *comarca* of La Selva (map 1). We consider this area to be a small but well-prepared analysis scenario, as it covers an orographically heterogeneous territory. As seen from the satellite image on map 1, the eight notarial offices that compose this region cover an area including municipalities in the coastal and pre-coastal mountain range, as well as the cereal-growing plain which links this region with the city of Girona and its surroundings.

Data collection has been organised in four chronological intervals, allowing us to cover the period from 1750 to 1825 in 25-year spans (table 1). Almost a thousand of the marriage contracts include a monetary dowry, the rest being contracts where movable and/or immovable goods constitute the dowry or where it is absent due to a mutual pooling of their respective estates.



**Map 1.** Location of the notarial offices analysed.

Note: Map created with Instamaps. Orange circles represent the 8 notarial offices analysed, which were located in the current municipalities of: Anglès, Amer, Arbúcies, Caldes de Malavella, Hostalric, Sant Hilari Sacalm, Santa Coloma de Farners and Vidreres. Black and red circles show the location of the nearest cities, Barcelona and Girona, respectively.

Source: Author's elaboration.

However, prior to the measurement of inequality through dowries, it is mandatory subjecting to empirical validation the robustness of the two previously-mentioned main assertions regarding dowries: 1) marriage contracts were drawn up by families from all strata of wealth in the context of a competitive marriage market; 2) the value of dowries was representative of the socio-economic status of families.

**Table 1.**Marriage contracts and dowries analysed

| Interval  | Marriage<br>contracts | With<br>monetary<br>dowry | % of marriage contracts with monetary dowry |
|-----------|-----------------------|---------------------------|---|
| 1750-1755 | 306                   | 273                       | 89.22%                                      |
| 1775-1780 | 265                   | 226                       | 85.28%                                      |
| 1800-1805 | 248                   | 209                       | 84.27%                                      |
| 1820-1825 | 317                   | 270                       | 85.17%                                      |
| Total     | 1136                  | 978                       | 86.09%                                      |

Note: the source for marriage contracts prior to 1800 is the Arxiu Històric de Girona (AHG). For those after this date it is the Arxiu Comarcal de la Selva (ACSE).

Source: Author's elaboration.

To answer the first question, the best possible method would undoubtedly be to cross-check the base of marriage contracts with the parish registers of marriages. Unfortunately, in this area, the latter are not sufficiently well preserved in terms of quantity and quality<sup>10</sup>. Thus, an alternative approach was performed. Indeed, since marriage contracts inform about the occupation of the grooms, it is possible to calculate the percentage of them belonging to each socio-professional group and compare it with censuses including data about the occupational structure of the male population. Therefore, similar results from both sources would reinforce the hypothesis that marriage contracts may be a true reflection of society, or at least as true as the censuses themselves. Then, the socio-professional structure of the grooms from 1775-1780 and 1800-1805 was analysed in our sample, in order to compare it with data provided for the same region by the Floridablanca Census (1787) and also the "Llista de l'Armament" (1795), a list of all the household heads made in the context of the War of Roussillon<sup>11</sup>.

<sup>&</sup>lt;sup>9</sup> The most populated municipality (Santa Coloma de Farners) had 2,200 inhabitants according to 1787 census and 3,116 in 1838. Source: Instituto Nacional de Estadística (INE) (1987) and ACSE160-1-T1-4.

<sup>&</sup>lt;sup>10</sup> Moreover, at least in the province of Girona, the parish registers of towns and large villages are much better preserved than those of small parishes (Ferrer, 2016, p. 22), which complicates focussing on rural society as rural non-agricultural population would be over-represented and the agricultural ones, who lived in small and scattered parishes, would be under-represented.

<sup>&</sup>lt;sup>11</sup> Source: AHCG, VII,1.1.2. For a more detailed analysis regarding the situation of the Girona countryside based on this font, see the work of Rosa Congost (1997).

**Table 2.**Socio-professional structure of La Selva according to different sources

|                                 | A: Grooms 1775-80 & 1800-05 | B: Census of Florid-<br>ablanca (1787) | C: "Llista de l'Arma-<br>ment" (1795) | D: "Llista de l'Armament"<br>without landless |
|---------------------------------|-----------------------------|--|---------------------------------------|---|
| N                               | 510                         | 5030                                   | 3762                                  | 2993  |
| "Pagesos"                       | 30.78%                      | 17.44%                                 | 23.76%                                | 29.87%  |
| Land labourers                  | 43.53%                      | 66.5%                                  | 61.91%                                | 52.52%  |
| <b>Artisans &amp; merchants</b> | 22.94%                      | 13.44%                                 | 11.64%                                | 14.63%  |
| Others                          | 2.75%                       | 2.62%                                  | 2.37%                                 | 2.97%   |

Note: see Table 1 for the sources regarding the occupational group of grooms. For Census of Floridablanca: INE, Publicaciones de Descarga Gratuita, Censo de Floridablanca 1787. For the "Llista de l'Armament": Arxiu Històric de la Ciutat de Girona, VII,1.1.2. Llibres de l'Armament General. We have calculated the results from column D after deducting the 769 land labourers without taxable wealth.

Source: Author's elaboration.

As seen in table 2, the differences are striking: according to both the 1787 Census and the 1795 "Llista", at the end of the 18th century more than 60% of the families were labelled as land labourers, while only nearly a quarter belonged to the "pagesos" group (columns B and C)<sup>12</sup>. The rest of the society was constituted of what is often referred to as the rural non-agricultural population, comprising artisans, merchants, liberal arts professionals, public employees, among others. These results differ considerably from the social structure of grooms from marriage contracts (column A), where land labourers, in spite of being the main group, represent only four out of ten families.

The main purpose of the "Llista de l'Armament" was to collect a double tax to help the war effort: one was a capitation tax based on the social group, and the other consisted on collecting one-twelfth of the annual "Catastro" quota. Since it was a tax theoretically proportional to wealth, the percentage of landless can be calculated (i.e., those who were exempt from paying the tax). Indeed, those families without taxable wealth accounted for approximately the 20% of the whole sample. Thus, when isolating these propertyless and recalculating the socio-professional structure (column D), a much more similar picture to that observed from the marriage contracts (column A) is obtained. Certainly, in both cases land labourers represented around the half of the total, while "pagesos" constituted the 30%.

In brief, the social structure gathered from both marriage contracts and demographic lists when excluding the landless are alike. At this point, we can hypothesise that marriage contracts were common among those families who had some kind of real estate, leaving the landless out of the marriage market<sup>13</sup>. This hypothesis is consistent with the idea that the dowry was precisely a way of valuing the family patrimony, so that in the absence of patrimony there would be no dowry either. In any case, this bias would affect approximately 20% of families,

Then, we should focus on the second claim that we aim to validate, which is the assumption that the dowry correlates with the real wealth of families. A first look on any sample of dowries quickly reveals that families had a certain tendency to round off the amount to be paid. Indeed, 687 from the 978 dowries analysed in this paper ended in 0. In other words, around seven out of ten dowries represent a sum which is itself a multiple of ten. Does this mean that the dowry was a symbolic payment? In our sample, the lowest dowry consisted of 10 "lliures" (26.42 pesetas) and the highest one amounted to 8,000 "lliures" (21,140 pesetas)<sup>14</sup>. The former was paid by the daughter of a forestry labourer when marrying another labourer from the same village; the latter by the daughter of one of the largest forest owners in the inland region who accorded a marriage with a coastal larger landowner. 15 Despite both dowries are a rounded number, from our point of view, they are telling something about wealth disparities and inequality.

Furthermore, tax sources from the pre-industrial era also show a certain tendency to cluster into specific amounts or ranges. In order to quantify the magnitude of this phenomenon, Lambrecht and Ryckbosch (2020), in a study on inequality in the Netherlands during the 15th century, proposed the use of a simple exercise which consists in dividing the number of different observations (tax categories or brackets) by the total number of observations. The result would be a coefficient between 0 and 1, where 1 means that each taxpayer satisfies a different amount, while a sum close to 0 implies a significant tendency to clustering in certain amounts.

Thus, if the same exercise is applied to our sample of dowries, that is, dividing the number of dowries of different value by the total number of dowries, a coefficient around 0.3 is

presumably the poorest, which imply that marriage market would be representative of the remaining 80%. Anyway, measuring inequality from a source that excludes the landless is a handicap that also many of the studies based on wealth-proportional tax sources have to deal with (Alfani, 2017).

<sup>&</sup>lt;sup>12</sup> In the Girona region, the label "pagesos" identified those who lived and worked on a type of farm called "mas", regardless of whether they were owners or tenants. Consequently, the group of land labourers ranged from day labourers in the strict sense of the word to owners of small estates lesser than a "mas".

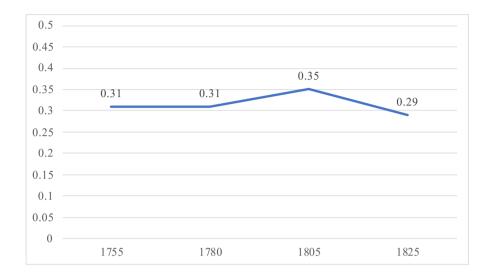
<sup>&</sup>lt;sup>13</sup> It should be noted that, as mentioned above, the tenants paid quite often the "Catastro", indicating that those exempt from this payment are probably landless individuals in the strict sense of the term.

<sup>&</sup>lt;sup>14</sup> In marriage contracts, the value of the dowries was expressed in a coin of account known as "lliures" or "lliures barceloneses". It was equivalent to 2.6425 *pesetas* (0.0157 euros) and its value in grams of silver during this period ranged from 13.166 in the mid-18th century to 12.778 in the early 19th century (Feliu, 1991).

<sup>&</sup>lt;sup>15</sup> ACSE FN Sant Hilari Sacalm, 4 and ACSE FN Sant Hilari Sacalm, 14.

obtained for each span (figure 1). In the aforementioned study, the calculated clustering index from the tax sources ranged between 0.2 and 0.4 (Lambrecht and Ryckbosch, 2020). An analogous exercise has recently been carried out with data from direct taxation for the city of Girona between 1360 and 1540; obtaining very similar coefficients (Reixach, 2022). Fur-

thermore, when calculating the clustering index of the cadastral quota reported in the aforementioned "Llista de l'Armament", the obtained result was 0.21. Therefore, the clustering index from dowries appears to be very similar to what some records derived from direct taxation in the pre-industrial era have drawn.



**Figure 1.** Dowry clustering index (1750-1825).

Note: See Table 1 for the source and the text above for the explanation on the concept of clustering index.

Source: Author's elaboration.

In the light of the above-mentioned, it must be admitted that dowries show a certain bias towards the exclusion of the poorer sectors, and also a tendency to cluster in round sums. Despite that fact, it may not seem that these shortcomings are significantly weaker than those that can be provided by sources derived from direct taxation. Hence, in the absence of modern statistical indicators, dowries may be useful (when used with due caution) to measure inequality. We will look at it in more detail in the next section.

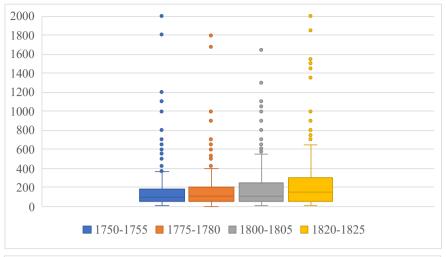
Before moving on to the results section, we would like to stress that dowries are not a perfect source for measuring inequality and therefore the results should be interpreted as estimates. Indeed, some of their features could push in opposite directions. For instance, the tendency to round dowries could lead to an overestimation of inequality, as it is reasonable to expect that the rounding is mostly performed upwards and that richer households tend to round at a greater scale. Conversely, the absence of the poorest would imply an obvious underestimation of the real inequality degree. Finally, we cannot rule out the possibility that some families made a huge effort to provide their daughters with a suitable dowry to improve their social destiny, while others paid the dowries strictly according to their possibilities, and this would then push the coefficients towards misestimation.

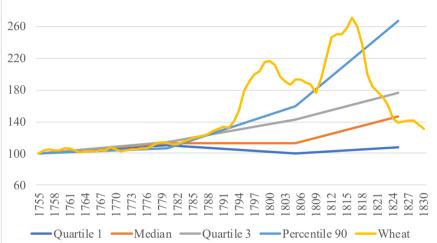
#### 4. Results

Inequality trends through dowries

A first impression regarding the trend in the distribution of dowries can be given by representing them in a boxplot (figure 2). The picture is very clear: from 1750 to 1825 the size of boxes and whiskers is progressively increasing. In other words, the sample of dowries from 1750-1755 presents the smallest distance between top and bottom dowries, whilst dowries from 1820-1825 display the largest one. This phenomenon is due to the fact that the nominal value of the first quartile (25% of the distribution) remains very stable at around 50-55 "lliures". On the other hand, the nominal value of the third quartile (75% of the distribution) increases progressively from 175 to 309 "lliures". The median grows, but less vigorously, from an initial value of 88.5 to 130. Consequently, the rise in the interquartile range observed in the boxplot is due to the continuous increase in the value of the highest dowries, while the lowest ones stagnate.

This divergent evolution of the poorest and richest dowries may be better appreciated in figure 3, where the trend of wheat price in Girona market has also been incorporated. Indeed, wheat represented the main ingredient of bread, which was historically the core component of the European diet (Allen, 2001). Therefore, the analysis of dowries in relation to the wheat price may lead to a better understanding of the topic.





**Figure 2.** Boxplot of dowries nominal value (1750-1825).

Note: See Table 1 for the source. The value of the dowries is expressed in "lliures barceloneses" (see footnote 12 for further explanation). The richest dowry amounted to 8,000 "lliures barceloneses", however, the vertical axis has been limited to 2,000 in order to avoid that a few outliers impede us from appreciating the changes in the whole distribution.

Source: Author's elaboration.

**Figure 3.** Trend in the value of dowries compared to wheat price from 1755 to 1830 (1750-1755 = 100).

Note: See Table 1 for the source of dowries and Arxiu Històric de la Ciutat de Girona (AHCG), III, 1.1 for wheat prices. In the figure, the wheat price is deflated to a 10-year moving average.

Source: Author's elaboration.

Hence, after performing this comparison, three phases can be broadly identified. The first one occurs during the second half of the 18th century, when the wheat price rises moderately and dowries behave in a relatively similar way, at all points of the distribution. Then, a second phase begins in the early 19th century, with the wheat price rocketing after a decade of poor harvests and constant warfare 16. In this context, the lowest dowries lag far behind the price of wheat since they stagnate in their nominal value. Otherwise, the highest dowries increase considerably, even though the cereal prices trend is not completely followed.

Finally, a third phase can be placed around the third decade of the 19th century when, once the convulsions of the Spanish War of Independence being over, the price of wheat stabilises at around an index 140 compared to that of the mid-18th century. At the same time, the dowry in the 90th percentile reaches an index of 267, which represents an 81% more vigorous growth compared to the wheat price. The dowry in the third

Therefore, it seems clear that the dowries paid by the richest families steadily increased during the last decades of the Ancien Régime, being above the wheat price and thus enhancing their real value. Likewise, in the short term, the richest dowries did not respond to hyperinflationary situations, which may be consistent with a once-per-generation investment usually responding to long-term savings. In any case, it seems that families belonging to the poorest strata were not able to increase the nominal value of their dowries, which necessarily had to widen the gap with the rest, limiting their possibilities of upward social mobility through marriage.

In addition, the evolution of the median shown in figure 3 deserves an individual comment. At first, when wheat price moderately increases, the median behaves in the same way. Indeed, in 1775-1780, they both stand at an index of 113. Then, at the beginning of the 19th century, the median dowry does not respond in any way to the hyperinflationary context, stagnating at the index value of 113. However, in 1820-1825, when the cereal price declines, the median dowry grows until both series converge at around 140<sup>17</sup>.

quartile rises to 177, still above wheat, while the lowest dowries remain stagnant.

Therefore, it seems clear that the downess paid by the rich-

<sup>&</sup>lt;sup>16</sup> The inflationary trend of wheat in the Girona market at the end of the eighteenth century, is part of a phenomenon that affected the whole of Western Europe (Allen, 2001) and from which Spain did not escape (Llopis and García-Montero, 2009; Llopis *et al.*, 2009). For the Catalan case, the most exhaustive analysis is still the series reconstructed by Pierre Vilar (1966) and later extended by Gaspar Feliu (1991).

<sup>&</sup>lt;sup>17</sup> It is also interesting to note that, based on what we have stated in the previous section, the median dowry should not correspond to the median



Figure 4. Percentage of dowries in relation to the median dowry.

Note: See Table 1 for the source. *Source*: Author's elaboration.

Simultaneously, another noteworthy phenomenon occurred, having a direct impact on the measurement of inequality: the decrease in the percentage of observations with a value equal to or close to the median. As seen in figure 4, in dowries from 1775-1780 more than the 35% ranged between 0.66 and 1.33 times the median. In the same years, dowries with a lesser value than the half of the median represented barely the 15% of the sample. Then, from 1820 to 1825, the latter rose to 29%, surpassing the former, which fell back to 24%. Moreover, dowries with values more than five times the median doubled from 6.5% to 13%.

In the light of what we have exposed thus far, two statements can be drawn:

- 1) As seen in figures 2 and 3, the nominal values of the richest dowries increased and the more they were at the top of the distribution, the more they grew. In contrast, the poorest ones clearly stagnated.
- According to figure 4, the share of dowries with a value similar to the median decreased and those with a value closer to the extremes increased.

Indeed, the existence of a greater distance between the extremes of the distribution and the erosion of the middle layers are the two main ingredients of any inequality process. Both elements occur in our study, which should lead to a noticeable increase in the inequality index, and that is the case. Certainly, the Gini coefficients resulting from representing the four samples of dowries on a Lorenz Curve have an upward trend during the period under study (table 3). More specifically, the Gini calculated directly from dowry sample (panel A, column Gini 1) start in 1750-1755 from an inequality coefficient of 0.552 and increase to 0.676 in 1820-1825.

Nonetheless, as mentioned in the previous section, approximately 20% of the families were landless and did not participate in the marriage market. On this basis, we calculate a new estimate of the inequality coefficient assuming that, in the absence of immovable assets, the landless had nothing to bid for on the marriage market. Accordingly, the sample size has been artificially increased by adding as many 0-value dowries as necessary until they represented the 20% of the sample. As expected, the result is an increase in inequality with no change in the trend, from 0.641 to 0.740 (table 3, panel A, column Gini 2)<sup>18</sup>.

Even though the sample size is modest, the consistency of the obtained results must be highlighted as they are mainly in agreement with the existing academic literature on pre-industrial inequality. As can be appreciated in panel B from table 3. Gini coefficients of around 0.6-0.8 have been estimated in many places and regions across western Europe between the late 18th and early 19th centuries. However, among the comparators shown in panel B, only Tuscany and Piemonte are considered indicative of wealth inequality and their coefficients are at the upper edge of the range, circa 0.8<sup>19</sup>. Thus, considering dowries as an indicator of wealth, our results are lower compared with those obtained in the Italian peninsula. Nonetheless, as our study is based on a completely rural area, this finding could also fit with the idea that urbanisation positively correlate with inequality (Milanovic, 2018; Nicolini and Ramos-Palencia, 2016, p. 761).

family. Given our estimation regarding that approximately the poorest 20% of families did not participate in the marriage market, the dowry right at the median would rather correspond to those families approximately located at the 60th percentile of the whole.

<sup>&</sup>lt;sup>18</sup> It must be pointed out that this is a maximum estimate of inequality through dowries. The fact that the landless did not notarize their marriages does not mean that they could not afford the payment of some kind of dowry, however humble.

<sup>&</sup>lt;sup>19</sup> The other comparators would more closely resemble a proxy for income inequality.

**Table 3.**Gini coefficients of dowries and some comparators

**Panel A: Dowries sample** 

|           | Gini 1 | Gini 2 |
|-----------|--------|--------|
| 1750-1755 | 0.552  | 0.641  |
| 1775-1780 | 0.522  | 0.617  |
| 1800-1805 | 0.589  | 0.671  |
| 1820-1825 | 0.676  | 0.740  |

# **Panel B: Contemporary comparators**

|   | Gini          |
|---|---------------|
| Palencia c.1750                         | 0.485         |
| Holland 1750 - 1800                     | 0.63          |
| Southern Low Countries 1750 - 1800      | 0.572 - 0.586 |
| Piedmont 1750-1800                      | 0.758 - 0.782 |
| Tuscany 1750                            | 0.856         |
| England & Wales 1759                    | 0.53          |
| England & Wales 1798                    | 0.60          |
| Barcelona area (2nd half XVIII century) | <0.30         |

Note: See Table 1 for the source of Panel A. For Panel B: Nicolini and Ramos Palencia (2016: 760), Alfani and Ryckbosch (2016: 146) and Allen (2019: 110-111). Brea-Martínez y Pujadas-Mora (2019: 407-410).

Source: Author's elaboration.

# What or who provoked these trends?

In any case, the trend in inequality shown by dowries is apparently in line with the idea of socio-political instability positively correlating with inequality<sup>20</sup>. Indeed, the lowest coefficient is found in the span 1775-1780 and later increases following the War of the First Coalition (1792-1797), before finally soaring after the Napoleonic Wars (1803-1815). Additionally, this period of political turbulence was accompanied by a rising inflation<sup>21</sup>. In this context, increasing wealth inequality may have been caused whether by the poor saving less than the rich or by the existence of some particular commodities in hands of the rich which fit better with inflation. Although dowries do not permit to decompose wealth into the asset distribution, they provide data about the occupational group of male individuals, thus allowing for some causal hypotheses to be formulated.

On that account, the fact that poor dowries stagnated in their nominal value whereas the rich ones grew, rises the following question: who was responsible for the stagnation of humble dowries and/or for the growth of the richest ones? It is considered that a determining factor could have been the stratification within and between the two major occupational groups in the region: the so-called "land labourers" and the "pagesos". Thus,

Firstly, as figure 5 clearly reveal, there is a negative but significant correlation between the value of the dowry and the likelihood of the groom being a "land labourer". That is, as the independent variable (the dowry) increases, the likelihood of the dependent variable (groom = "land labourer") decreases. Indeed, from 1775-1780 onwards, the grooms from this social group were responsible for at least half of the dowries being below 50 "lliures". Moreover, these calculations do not consider the 20% of landless who did not participate in the marriage market and were mostly labelled as "land labourers" in fiscal and demographic sources. As mentioned in the previous section, the "land labourers" in the marriage contracts were primarily smallholders, possibly with insufficient land. On this basis, it can be hypothesised that those with an apparently lesser availability of the land factor were clearly disadvantaged during the last decades of the Ancien Régime.

Notwithstanding, the curve slightly smooths in 1800-1805 and much more clearly flattens during 1820-1825. That is to say, even among "labourers", there were grooms capable of attracting dowries in line with the evolution of prices, thus generating a greater stratification within the group itself. Considering what has been stated above, this may imply that some "labourers" were able to save more than the others and/or gained (or at least maintained) the availability of some assets which performed well with inflation.

In this sense, it may be interesting to note that in some Catalan coastal regions a very dynamic behaviour of "labourers" has been detected during this period. For instance, according to Congost, Ros and Saguer (2016), in the "Empordà" area, the specialisation and expansion of winegrowing was led by land labourers who, by means of emphyteutic contracts, gained access to the semi-ownership of land plots that had hitherto been uncultivated. Hence, this process might have resulted in a significant improvement in their living standards, especially considering that the price of wine rose over than the price of wheat (Vilar, 1966, p. 462). Similar hypotheses have been drawn by Brea-Martínez and Pujadas-Mora (2018, p. 416) in order to explain the lower inequality found in the Barcelona area (also in the dynamic Catalan littoral) during the second half of the 18th century.

The pre-coastal sector studied in this article (map 1) does not seem to have developed any agricultural specialisation during the 18th century. On the contrary, the predominance of wheat cultivation and the absence of noticeable transformations is stated by contemporary sources (Madoz, 1985, pp. 297-300; Zamora, 1973, pp. 290-304) and also by previous empirical studies (Mas-Ferrer, 2020; Congost, 1993). Nonetheless, the possibility of some "land labourers" managing to improve their living conditions might not be discarded.

In any case, along with the "labourers", the other major social group in the Catalan countryside were the "pagesos". This label identified people living and working on a medium-sized agrarian exploitation called "mas"<sup>22</sup>. In this case, a

two binary logistic regressions have been performed in order to determine the likelihood of a groom being a "land labourer" or a "pagès" according to the amount of the dowry received, whereby the occupational group acts as the binary dependent variable and the value of the dowry as the independent variable. The results are shown in figures 5 and 6.

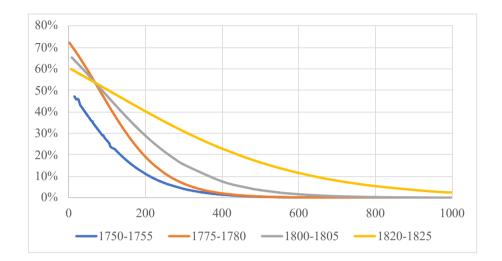
<sup>&</sup>lt;sup>20</sup> Mainly studied for modern societies, see Milanovic (2013).

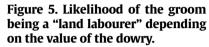
<sup>&</sup>lt;sup>21</sup> See footnote 16 and figure 3.

<sup>&</sup>lt;sup>22</sup> See footnote 12.

significantly positive correlation between the dowry and the likelihood of the groom being a "pagès" has been determined. Thus, above the 1,000 "lliures" threshold, where "labourers" are hardly ever found (figure 5), the vast majority of grooms

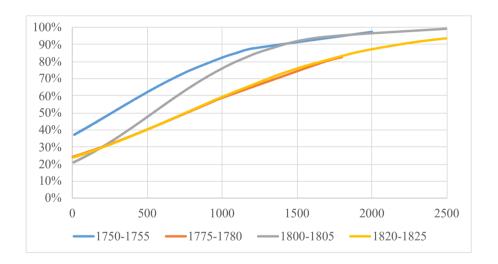
are "pagesos" (figure 6). Hence, these results reinforce the idea of land availability being a determinant and differential factor for inequality (Nicolini and Ramos-Palencia, 2016, p. 763).





Note: See Table 1 for the source and Appendix 1A for the description. The amount of the dowries (horizontal axis) is given in its nominal value in the local currency ("lliures barceloneses").

Source: Author's elaboration.



# Figure 6. Likelihood of the groom being a "pagès" depending on the value of the dowry.

Note: See Table 1 for the source and Appendix 2A for the description.

Source: Author's elaboration

#### 5. Conclusions

The aim of this paper was to explore the possibilities that dowries could offer for the study and measurement of inequality in the pre-industrial era, especially in the absence of reliable modern statistics and/or fiscal sources which could inform about family wealth. The core idea of our argument was that, particularly in rural societies based on the impartible inheritance system, the conditions were in place to generate a competitive marriage market. In this, families would bid to join the heir to the best possible estate by paying the most suitable dowry they were capable of. Then, if dowries matched with family wealth, inequality in dowry distribution may be also correlated with real wealth inequality.

Here, we validated these theoretical premises by analysing a sample of around a thousand dowries drawn up in different notarial offices in north-eastern Catalonia from 1750 to 1825. Firstly, our results suggest that families from the poorest 20% strata of wealth could have been excluded from the marriage market. Indeed, it appears that families without taxable wealth did not participate in it, which seems coherent considering that dowries constituted a mechanism to evaluate the family patrimony. Therefore, in the absence of the latter, there would be no dowry either.

In addition, a certain tendency towards paying round sums has also been detected, especially in multiples of ten, meaning that dowries would not be completely proportional to the exact degree of wealth. However, both the exclusion of the landless and the tendency to cluster in rounded sums are two handicaps from which most pre-industrial fiscal sources also suffer, without disabling them for the measurement of inequality.

So, with the due precautions, the inequality trends provided by our sample of dowries have finally been analysed, highlighting the following three main characteristics:

- In the last decades of the pre-industrial era, at a time of socio-political unrest and galloping inflation, the gap between highest and lowest dowries increased significantly.
- 2) The median dowry tended, in the long run, to converge with wheat price, while the lowest ones grew clearly below and the highest ones well above it.
- 3) There was a decrease in the percentage of dowries with an amount close to the median and a considerable rise in those with extreme values.

From what has been stated in the previous points, it may be inferred that inequality coefficients must have increased since the two main requirements of any inequality process are fulfilled: i) the gap between the top and the bottom enlarged; ii) the number of cases located at the extremes also augmented at the expense of those with a value closer to the median. Indeed, Gini coefficients calculated from the dowry sample clearly displayed an upward trend which is also consistent with the tendency shown in many recent academic studies on long-term inequality measurement. Further to this, our results also fit with the hypothesis that wars and political instability tended to increase inequality in pre-industrial societies, as the rich were able to adopt defence strategies whereas the poor suffered their consequences in multiple ways. Likewise, land availability appears as an explicative driver for inequality.

Lastly, and as a general conclusion in the light of the above-mentioned, we consider that the evolution of the disparities in dowry payments could provide a precious proxy of wealth inequality, especially in the absence of other more reliable sources.

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#### **Archival material**

For this study, sources from Arxiu Comarcal de la Selva (ACSE), Arxiu Històric de Girona (AHG) and Arxiu Històric de la Ciutat de Girona (AHCG) were physically consulted. The

digital collection of the Spanish National Statistics Institute (INE) has also been used in order to obtain data regarding the Census of Floridablanca. See the text and especially tables 1 and 2, as well as figure 3 for more details.

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### **Appendix**

**Table 1A.**Summary statistics of the binary logistic regression to determine the likelihood of the groom being a "land labourer" depending on the value of the dowry

|  | 1750-1755 | 1775-1780 | 1800-1805 | 1820-1825 |
|--|-----------|-----------|-----------|-----------|
|  | 1/30-1/33 | 1773-1760 | 1000-1003 | 1020-1023 |
| No. of dowries   | 270       | 225       | 207       | 268       |
| % of "land labourer" grooms                                | 25.93%    | 39.56%    | 39.61%    | 38.81%    |
| % of "land labourer" grooms if dowry <100 "lliures"        | 39.01%    | 57.28%    | 60%       | 53.93%    |
| % of "land labourer" grooms if dowry = 100 - 499 "lliures" | 14.16%    | 28.3%     | 30.12%    | 41.41%    |
| % of "land labourer" grooms if dowry ≥ 500 "lliures"       | 0%        | 0%        | 0%        | 5.88%     |
| В  | -0.0108   | -0.0121   | -0.0080   | -0.0041   |
| S. E.  | 0.0026    | 0.0025    | 0.0018    | 0.0009    |
| Wald   | 17.2209   | 22.4629   | 19.8114   | 19.3324   |
| p-value  | <0.0001   | <0.0001   | <0.0001   | < 0.0001  |
| Exp(B)   | 0.9892    | 0.9880    | 0.9921    | 0.9959    |
| Lower  | 0.9842    | 0.9831    | 0.9886    | 0.9941    |
| Upper  | 0.9943    | 0.9929    | 0.9955    | 0.9977    |
| Nagelkerke R <sup>2</sup>                                  | 0.1896    | 0.2746    | 0.2826    | 0.1733    |
| Cox & Snell R <sup>2</sup>                                 | 0.1296    | 0.2029    | 0.2088    | 0.2352    |

Note: The No. of dowries is slightly lower than in table 1 due to the removal of cases where the occupation of the groom is not indicated. The independent variable is the value of the dowry and the dependent variable is 1 if the groom is a "land labourer" and 0 otherwise.

Source: Author's elaboration.

**Table 2A.**Summary statistics of the binary logistic regression to determine the likelihood of the groom being a "pagès" depending on the value of the dowry

|  | 1750-1755 | 1775-1780 | 1800-1805 | 1820-1825 |
|--|-----------|-----------|-----------|-----------|
| No. of dowries                                     | 270       | 225       | 207       | 268       |
| % of "pagès" grooms                                | 44.07%    | 29.33%    | 31.4%     | 32.84%    |
| % of "pagès" grooms if dowry <100 "lliures"        | 33.8%     | 23.3%     | 23.16%    | 23.6%     |
| % of "pagès" grooms if dowry = 100 - 499 "lliures" | 53.1%     | 31.13%    | 30.12%    | 27.34%    |
| % of "pagès" grooms if dowry ≥ 500 "lliures"       | 76.47%    | 56.25%    | 62.07%    | 74.51%    |
| В  | 0.0020    | 0.0015    | 0.0025    | 0.0015    |
| S. E.  | 0.0007    | 0.0007    | 0.0006    | 0.0003    |
| Wald   | 7.8184    | 5.0060    | 15.4744   | 20.7783   |
| p-value  | 0.0052    | 0.0253    | 0.0001    | <0.0001   |
| Exp(B)   | 1.0020    | 1.0015    | 1.0025    | 1.0015    |
| Lower  | 1.0013    | 1.0002    | 1.0013    | 1.0009    |
| Upper  | 1.0037    | 1.0028    | 1.0037    | 1.0022    |
| Nagelkerke R <sup>2</sup>                          | 0.0561    | 0.0352    | 0.1329    | 0.1775    |
| Cox & Snell R <sup>2</sup>                         | 0.0419    | 0.0247    | 0.0946    | 0.1290    |

Note: The same as above, except for the dependent variable, which is 1 if the groom is a "pagès" and 0 otherwise.

Source: Author's elaboration.