European
Historical
Economics
Society

EHES Working Paper | No. 289 | December 2025

Top Income Concentration in Early Modern Spain, 1574-1799

Carlos Álvarez-Nogal
Universidad Carlos III de Madrid

Leandro Prados de la Escosura[1]
Universidad Carlos III de Madrid

https://www.ehes.org/

EHES Working Paper | No. 289 | December 2025

Top Income Concentration in Early Modern Spain, 1574-1799

Carlos Álvarez-Nogal
Universidad Carlos III de Madrid

Leandro Prados de la Escosura[1]
Universidad Carlos III de Madrid

Abstract

Contemporary perspectives highlight significant inequality in early modern Spain. Quantitative measures of inequality are often either broad and rough or based on local or scattered estimates, which do not offer a precise overall picture over time. The sale of the Bull of the Crusade provides an opportunity to examine inequality trends consistently in early modern Spain. The Bull of the Crusade was a form of almsgiving granted by the Pope and collected by the Hispanic Monarchy, widely purchased by a population convinced of its spiritual benefits. There were two types of bulls: the standard 2 Reales bull for ordinary people and the 8 Reales bull for the wealthy and individuals of high social standing. We argue that the ratio of the 8 Reales to the 2 Reales bulls sold reflects concentration at the upper end of the distribution. Three main phases emerge: fluctuations around a flat trend from 1570-1630, a sustained decline in the following century, and a notable upward trend thereafter, reaching its peak in the late eighteenth century. A closer study reveals distinct patterns within the Crown of Castile and the Crown of Aragon that converged in the late eighteenth century.

JEL Codes: N33, O15, Z12
Keywords: Top Income Concentration, Inequality, Early Modern Spain, Bulls

[1] Corresponding Author: Leandro Prados-de-la-Escosura (prados@clio.uc3m.es)
We express our gratitude to the participants of the conference 'Inequality and History', Milan, Bocconi University (October 2025), and especially to Guido Alfani and Branko Milanovic.

Notice
The material presented in the EHES Working Paper Series is property of the author(s) and should be quoted as such. The views expressed in this Paper are those of the author(s) and do not necessarily represent the views of the EHES or its members.

1. Introduction

Contemporary perceptions reveal a significant level of inequality in early modern Spain, both during its prolonged economic decline from the late sixteenth century to the mid-seventeenth century and its partial recovery throughout the eighteenth century.

Political writers considered inequality and polarisation to be very high. In an influential book, González de Cellorigo (1600: 54) asserted,

'Our republic has come to be an extreme contrast of rich and poor, and there are no means of adjusting them one to another. Our condition is one in which there are rich who loll at ease or poor who beg. We lack people of the middle sort, whom neither wealth nor poverty prevents from pursuing the rightful kind of business enjoined by Natural Law' (cited in Elliott, 1961: 66, his translation).

Quantitative assessments of inequality in early modern Spain are either aggregate, such as the Williamson index or the land rent-wage ratio (Álvarez Nogal and Prados de la Escosura, 2013; Prados de la Escosura et al., 2024), which could be considered imprecise, regional or local estimates (Santiago-Caballero, 2011; Carvajal et al., 2025; García Montero, 2020; Lanza, 2024), or scattered point estimates that cannot provide a comprehensive view of what happened across space and time (Furió et al., 2020; Nicolini and Ramos Palencia, 2016, 2020). Therefore, a measure is needed that is sufficiently inclusive to cover all of Spain, including the Crowns of Aragon and Castile, as well as the Kingdom of Navarre, and that incorporates a time dimension. The sale of the Bull of the Crusade offers a unique source to examine economic inequality consistently within a preindustrial society, as it was uniform across the kingdoms and territories of the Hispanic Monarchy, unlike most taxes and measures, and remained stable for over two centuries.

The Bull of the Crusade consisted of modest alms collected by the Hispanic Monarchy and widely purchased by a devoted populace convinced of its spiritual benefits (Fernández Llamazares, 1859). Two types of bulls were available: the regular 2 Reales bull for ordinary people and the 8 Reales bull for the wealthy and those of high social standing. We argue that the ratio of 8 Reales bulls to 2 Reales bulls sold reflects income concentration at the upper end of the distribution, revealing the extent of inequality in early modern Spanish society. However, it only provides a lower bound because we lack data on the income of those purchasing the 'bull of the illustrious,' which was certainly much higher than the average income. Moreover, it has a subjective element since, aside from social and religious

pressures on the wealthy to buy the 8 Reales bull, there was no effective oversight of those following the Church's advice to acquire a specific type of bull.

Our measure of income concentration at the upper end of the distribution involves three main phases over time: fluctuations around a flat trend from the 1570s to 1630, a declining trend over the following century, and a more pronounced upward trend thereafter, peaking in the last quarter of the eighteenth century. The top income concentration aligns with other indicators of income inequality: the Williamson Index—the ratio of GDP per person to the average wage—and the land rent–wage ratio. These measures show a modest positive correlation over time, which became more significant in the eighteenth century. Furthermore, they support the idea of a long-term decline in income inequality throughout most of the seventeenth century, alongside an increase during the late eighteenth century. A closer look at top income concentration shows clear trends within the Crowns of Castile and Aragon. Starting from a much lower level, Castile caught up with Aragon by the late 18th century.

The paper is organised as follows. In Section 2, our source, the Bull of the Crusade, is examined, and its main features are highlighted. Section 3 introduces our proposed measure of top income concentration and tracks its development over time. It then compares this with other measures of income inequality. Section 4 analyses top income concentration in the Aragon and Castile Crowns. Section 5 concludes.

2. The Crusade Bull

2.1 What is it?

Unlike sin, which is forgiven through confession, guilt in the Catholic faith must be atoned for. The indulgence removes the need for atonement, either shortening the time in Purgatory or waiving the requirement for penance in life. The Church could grant these indulgences in the form of Papal Bulls, and in Spain it did so for more than three centuries through the so-called 'Crusade Bull'. The Crusade Bull was a creation of the Church, but managed by the Crown. Its economic yield became part of the Royal Treasury's revenues, establishing itself as one of the most dependable sources of revenue over three centuries of history.

The Bull of the Crusade was an alms (not a tax) that, by regular papal concession and subject to renewal every six years since 1571, the Hispanic Monarchy collected annually

within its domains. The papal bull emerged in the Middle Ages as an instrument designed to support military campaigns against infidels, whether in the Holy Land or on the Iberian Peninsula. Although it was nearly abolished following criticism during the Reformation, Philip II succeeded in maintaining its application in both Spain and Hispanic America. From 1571 onwards, it took on its final form and institutional organisation, thus strengthening its role as one of the Monarchy's most consistent and dependable sources of revenue (Ulloa, 1977; Alvarez-Nogal and Prados de la Escosura, 2025b). The Royal Treasury managed the sale of bulls to ensure they reached the entire population and to maximise revenue. Additionally, social pressure from local authorities and residents was exerted to ensure no one was left without purchasing their annual bull (Fernández Chaves, 2009; Ojeda Nieto, 2000).

The Bull, personal and non-transferable (as it bore the buyer's name), was available to all, regardless of social or economic standing, unlike many other favours granted by the Crown. By buying the bull, a person received a plenary indulgence that forgave all penance after the sin, whether in life or later in Purgatory. As a result, it eased death anxiety (Cohen, 2002; Cohen et al., 2005). Since an individual could sin again afterwards, the need for indulgences remained, encouraging the purchase each year.

There were various types of papal bulls, but the most important and widely circulated one, which forms the basis of our research, was the bull for *vivos* (the living), intended for the entire population except children, the very poor (*pobres de solemnidad*), and the Moorish (*Moriscos*).[1]

The bull for *vivos* was a cost-effective, fixed-price alms, equivalent to a day's work for an unskilled labourer in New Castile in 1574 (Hamilton, 1934: 398), which its recipients—the population over the age of 12, constituting about two-thirds of the population—purchased en masse. The fact that the price was not high, nor was there resistance to acquiring it, explains the success of the bulls from a collection perspective. Aside from specific conflicts, the fact remains that the Crusade Bull always enjoyed widespread and steady demand among the population, as reflected in the extensive sales among local residents (Mejía Asensio, 2002).

[1] For a description of various types of bulls, see Álvarez-Nogal and Prados de la Escosura (2025b).

A distinctive feature of the bull is its extensive temporal and geographical scope. The bull was sold for over two centuries, almost continuously, following the same rules—an exceptional practice in Early Modern Spain. This was certainly not the case with taxes. The second advantage is its geographical reach. Unlike other revenues of the Hispanic Monarchy, those of ecclesiastical origin were collected throughout its entire territory, irrespective of the borders of its various kingdoms or their specific institutions and privileges (Elliott, 1992).

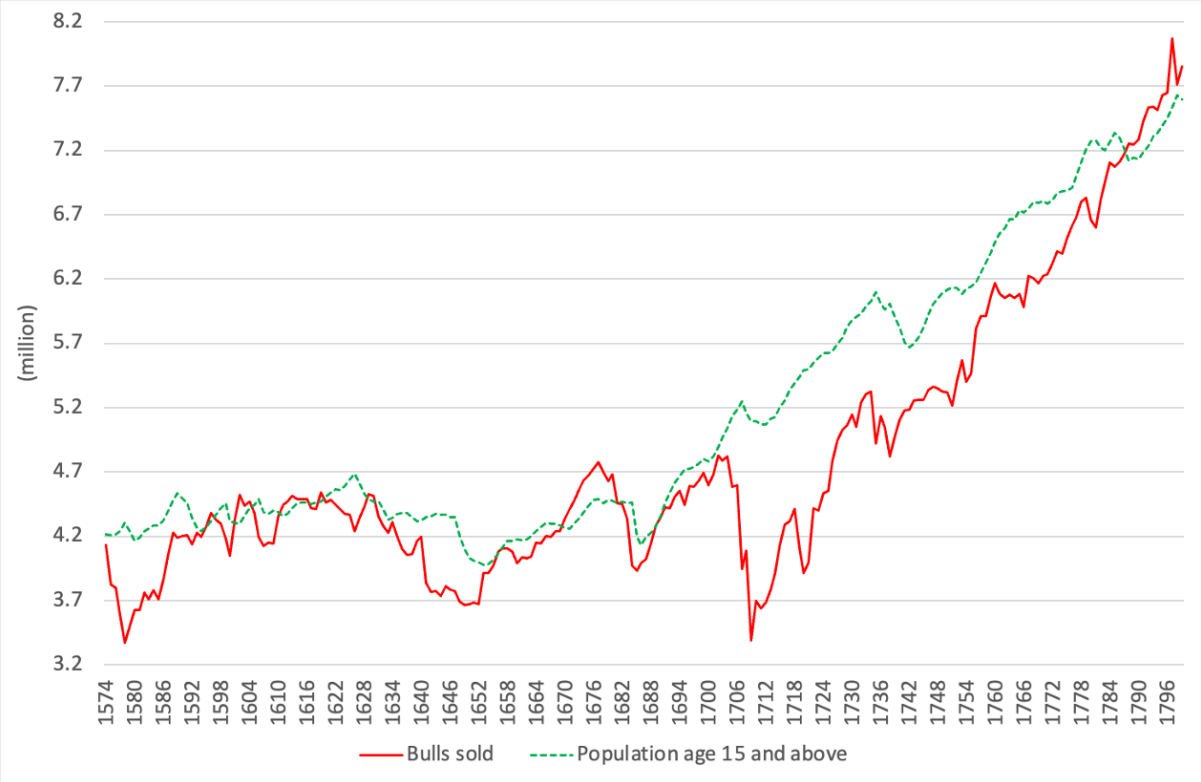


Figure 1. Total Bulls Sold and Population Age 15 and above, 1574-1799
Source: See the text

In the absence of estimates for the population aged 12 and above, Figure 1 compares the number of bulls sold with estimates of the population aged 15 and above (roughly two-thirds of the total population), from 1574 to 1799. It shows that they are similar, as the bulls were widely purchased, confirming compliance with the Church's recommendation to buy bulls. Nonetheless, it can be observed that they follow similar trends but also exhibit notable discrepancies in the short and medium term, with periods where fluctuations in bull numbers are more pronounced. Major financial crises and wars on Spanish soil, along with monetary disturbances and bouts of mortality, reduced the Monarchy's bureaucratic capacity to distribute the bull and, to a lesser extent, affected the bulls' demand. These

factors account for the contractions in the volume of bulls consumed (Álvarez-Nogal and Prados de la Escosura, 2025a).

2.2 The 8 Reales Bull: same indulgence, higher price

By definition, alms were a voluntary offering and, therefore, difficult to quantify. To ensure predictable revenues, the Monarchy pressed for the establishment of a uniform price for the bull. The intention was not to limit individual generosity, but rather to guarantee universal access by setting an affordable price that could be paid flexibly. A contract signed in 1518 for the administration of the bull set its price at two silver Reales, a rate that remained essentially unchanged thereafter.[2] Critics who later called for the abolition of the bulls argued that it was inconceivable for such abundant spiritual benefits to be granted in exchange for such a modest sum (Goñi, 1958: 585).

However, the price was not the same for everyone. From the beginning, social status and personal wealth played crucial roles. In the early decades of the sixteenth century, sermons already showed this distinction. For example, in 1538, bulls for the living were sold at different rates—two Reales, four Reales, and one Florin—although these differences lacked a clear or consistent rationale.[3] Sales volumes remained limited, and earnings were accordingly small.[4] In the Americas, both bulls for the living and for the deceased were initially priced at two silver Reales, as in Spain. However, wealthier Spaniards were charged one Peso (eight Reales) for bulls for the living and four Reales for those for the deceased—amounts that were four and two times higher, respectively, than the standard rates.[5]

Beyond these precedents, the 'Bull of Illustrious' originated in Rome's growing unease over the sale of spiritual graces. During the final sessions of the Council of Trent, after intense debates on the issue, a decree condemning the sale of indulgences was adopted in 1563. Although it did not explicitly mention the Spanish Bull, its target was widely understood. The protests of numerous Spanish clergymen against abuses committed further increased pressure for reform. These voices called for the abolition of fixed prices—

[2] AGS, CMC 1E, 535. Asiento, 27/12/1518.

[3] AGS, CRU, 448. Relación de Valladolid. Bulls of one Florin (equivalent to 276 Maravedís, or 8 Reales) were also accessible in 1543 and 1559 (Fernández Llamazares (1859: 219-220; Ulloa (1977: 572); AGS, CRU, 447. Cuentas 1530-33.

[4] AGS, CMC 1E, 1387: Asiento and cuentas completas , AGS, CRU, 483. In the years 1552-1554, the 1 Florin bull is documented for 1552.

[5] Perez de Lara (1733: 81); Fernandez Llamazares (1859: 218-224). According to Pérez de Lara (1733), the first Papal bull mentioning the special rate for the wealthy was issued by Clement VII on 24 August 1529, in which he stipulates a gold Peso as alms in the Indies.

deemed a form of simony—and urged that each individual decide the amount of their alms. Furthermore, many found it intolerable that the administration of the bulls had fallen into the hands of merchants and bankers, treating spiritual goods as mere commodities. These controversies occurred within a broader context of mounting tensions between the papacy and Philip II, and they nearly resulted in the suppression of the Crusade Bull in Spain by the late 1560s (Ulloa, 1977: 585).

Shortly before his death in 1565, Pius IV annulled all provisions of the Crusade Bull that conflicted with the Council's decrees, effectively making its preaching and sale impossible. The Spanish Monarchy responded swiftly, but it was the new Pope who had to manage the matter from January 1566 onwards.

Pius V, exercising caution, did not suspend the bull immediately. Instead, he permitted the remaining five months of the current three-year cycle to pass. The real confrontation arose when Madrid sought its renewal. Aware of the potential fiscal repercussions of suspending the bulls, the Pope aimed to ease tensions by granting, in July 1567, the *Excusado* — a concession derived from Church tax revenues, where the funds come from the tithes collected from the wealthiest households in each parish — for the first time (Ulloa, 1977: 585).

To persuade the Pope, Philip II assembled a committee of distinguished ecclesiastics to review the matter (Goñi, 1858: 567). The fourteen clergymen consulted offered fourteen distinct opinions, reflecting the diversity of theological and political viewpoints within the Church. Only those reports most favourable to the interests of the Spanish Monarchy were ultimately sent to Rome. Among the conditions that Pius V considered non-negotiable for reauthorising the Crusade bull was the clear distinction between the wealthy and the poor. The wealthiest were expected to contribute more generously, while members of the clergy were to be excluded from the material privileges traditionally linked to the bull, as they were called to lead by example.

After several years without a Crusade Bull, Pius V eventually relented, though only partially. In January 1569, he approved a new bull, but its restrictive conditions were so strict that Philip II refused to promulgate it, insisting on reverting to the original terms. Pius V's deep scruples of conscience regarding the sale of indulgences, combined with increasing criticism both within and beyond Spain, led to an impasse. By 1570, the Crusade Bull had almost vanished.

However, geopolitical pressures quickly changed the course of events. The increasing threat from the Turks in the Mediterranean, combined with Philip II's diplomatic determination, proved crucial. In late 1569, a rebellion against Queen Elizabeth I of England threatened English Catholics, prompting the Pope to seek Spain's support. Within weeks, negotiations began to form a Holy League to counter the Ottoman threat. Both the Papacy and Spain needed significant financial and military resources—men, money, and ships. Philip II offered these resources, but securing funding was necessary. The creation of the Holy League and the subsequent Battle of Lepanto provided an opportunity not only to revive the Crusade bull but also to establish it as a key part of the Church's financial support to the Spanish Crown—collectively called the Three Graces (the Bull of the Crusade, the *Subsidio*, and the *Excusado*).[6]

On 21 May 1571, a new bull was issued that, for the first time, explicitly introduced a price differential (Goñi (1958: 609-611). The standard contribution of two Reales remained in place for most of the faithful, while the wealthiest were required to pay eight Reales. This distinction was a clear and explicit condition imposed by Pius V for the renewal of the bull.

This was not the only innovation. From this point onwards, the Crusade bull was preached exclusively, with other indulgences that had previously competed for almsgivers' attention being permanently abolished (Fernández Llamazares, 1859: 74).[7] Moreover, the granting of Crusade concessions was extended from a three-year cycle to a six-year cycle. In 1573, Gregory XIII further reformed the system by reducing the validity of indulgences to a single year, thus enabling annual preaching of the bull.[8]

The 8 Reales bull, depicted as the Bull of the illustrious, was meant for those with greater wealth and social rank. Although anyone who wished could purchase it, 'to avoid any confusion or doubt that might arise among those who receive it, if this were left to the discretion of each individual, and so that everyone understands the amount of alms that

[6] Carpintero (1989: 549-558); Catalán Martínez (1997: 187-188). The *Subsidio* originated from an occasional Papal contribution aimed at supporting a number of galleys in the Mediterranean. Pope Pius IV made it a regular, stable transfer in 1562, which was usually renewed every five years. (Catalán Martínez, 1997; Navarro Miralles, 1981; Ulloa, 1977). As explained earlier, the *Excusado* comes from the tithes collected from the wealthiest households in each parish.

[7] AGS, CRU, 453. Asiento, 1571. Clausula 4.

[8] AGS, CRU, 521. Listado concesiones, 1673. AGS, CRU, 424. Instrucción impresa, 30/10/1571; Fernández Llamazares (1859: 83).

must be given in accordance with the said Bull'[9], their main recipients were specifically outlined:

'Primate cardinals, patriarchs, archbishops, bishops and abbots who have episcopal jurisdiction, and dukes, marquises, counts, grand commanders, priors of the Order of Saint John, Viceroys, captains general, ambassadors and presidents and those of the councils and mayors of the House and Court of His Majesty and judges of the Chancelleries and royal courts and mayors and prosecutors thereof, and chief accountants and lieutenants and judges, and prosecutors in the offices of the Contaduría Mayor de Hacienda[10], and secretaries of His Majesty, and inquisitors and commanders, commanders of all military orders and lords of vassals, and the wives of laymen of all the aforementioned states, even if they are widows'.[11]

The highest ranks of the Church and the upper nobility, along with members of the royal administration involved at various levels of government and finance, formed a privileged elite. To these were added rentiers, such as the *encomenderos* of the military orders, and the wealthiest sectors, represented by the lords of vassals. This latter group also included bankers and merchants who, having amassed considerable fortunes, obtained jurisdictions or lordships from the Crown in their pursuit of upward social mobility and the privileges linked to noble status (Marcos Martín, 2022).

2.3 *The bull of illustrious: exclusively payment in silver*

Over time, the bull for the living diverged not only in price but also in the currency used for its purchase. In the early seventeenth century, the Spanish Monarchy introduced a *vellón* coin, a copper currency containing no silver, into circulation in the Crown of Castile. This measure allowed the Monarchy to increase revenues quickly without resorting to unpopular tax hikes.

[9] Our translation. In the original Spanish text, 'Para cuitar la prolixidad y duda que podrían tener los que la tomaren, si esto se remitiera al arbitrio de cada uno, y para que todos entiendan la cantidad de limosna que se ha de dar por la dicha Bula'.

[10] Similar to the existing National Audit Office in the UK today.

[11] AGS, CRU, 454. Instrucción 1572, n. 10. Our translation. In the original Spanish text, 'Cardenales primados, patriarcas, arzobispos, obispos y abades que tienen jurisdicción episcopal y duques, marqueses, condes, comendadores mayores, priores de la orden de San Juan, Visoreyes, capitanes generales, y embajadores y presidentes y los de los consejos y alcaldes de la casa y Corte de su Majestad y oidores de las Chancillerías y audiencias Reales y alcaldes y fiscales dellas, y contadores mayores y tenientes y oidores, y fiscales de las contadurías mayores de Hacienda y cuentas, y secretarios de su Majestad, e inquisidores y comendadores, encomendados de todas las ordenes militares y señores de vasallos, y las mujeres de los seglares de todos los estados ya dichos aunque estén viudas'.

Initially, the population accepted the *vellón* coin because it facilitated daily transactions in a context of chronic cash scarcity. Public confidence was such that silver coins could be exchanged for *vellón* without any premium; in the eyes of ordinary people, the two were equivalent. Encouraged by this initial success, the Monarchy expanded the minting of *vellón* far beyond sustainable levels, flooding the market and triggering inflation in basic goods. As the currency depreciated, public trust collapsed. A premium quickly emerged for those willing to pay in *vellón*, as individuals sought to rid themselves of the 'bad' money first, accelerating its circulation and devaluation. Meanwhile, silver coins were increasingly hoarded as a store of value, their worth rising in proportion to the continuing overproduction of copper coinage. Gradually, silver became a luxury currency, largely inaccessible to many people in society.

Although the nominal value of the Papal Bull remained constant, the relative value between *vellón* and silver fluctuated according to their respective levels of abundance. To avoid confusion, once it was accepted that bulls could also be purchased using *vellón*, the Crown implemented a formal procedure. Each year, the Commissioner General and the Council of the Crusade were to determine the official price of the bull in both v*ellón* and silver.[12] A royal decree then communicated this price to all personnel involved in preaching and distribution, ensuring uniformity and administrative control over the system.[13]

The first time vellón was accepted as legal tender for paying the Crusade Bull was in 1624, and the decision was far from simple (Lanza, 2020: 387-407). For months, the General Treasury of the Crusade had been receiving complaints from its officials in various districts. Reports indicated that many faithful wished to purchase the bull but were unable to do so because of the scarcity of silver currency. If the situation continued, a significant decline in sales was expected. The city delegates in the Cortes of Castile expressed similar concerns to the king, warning that many people might be left without a bull that year due to the prevailing monetary situation.[14]

These petitions eventually reached the Council of the Crusade, which debated the issue and instructed the banker Vicencio Squarzafigo, then the Genoese administrator of the

[12] They were the official authorities responsible for overseeing the Bull of the Crusade within the Monarchy.. AGS, CMC 3E, 13. Asiento, 31/07/1637, n. 42.
[13] The decree of 4 December 1632 set the price of the bull for the preaching of 1632-33. AGS, CRU, 466, 24/11/1651.
[14] AGS, CRU, 521. Cédula, 25/08/1626.

Crusade, to explore the possibility of accepting copper coins in regions where silver was particularly scarce. Specific mention was made of León, Zamora, and Galicia, where the use of copper currency for purchasing bulls was ultimately authorised. However, a premium was imposed to cover the costs associated with the subsequent conversion of copper into silver.[15]

The Council of Crusade eventually concluded that accepting payment in copper was unavoidable. The ministers proposed authorising *vellón* transactions while adding 18 per cent premium, corresponding to the exchange differential at the time the measure was debated. Yet within a matter of weeks, the actual market premium for silver had risen to 26 per cent, highlighting the volatility of the situation. The Council of Finance, however, opposed this decision. Its members correctly foresaw the risks of collecting such revenues in *vellón*. They feared that the use of copper currency would discourage financiers not only from participating in the management of the Crusade but also from accepting consignments issued against its revenues. Although the scarcity of precious metals in regions such as Galicia and other mountainous areas was acknowledged, the Treasury Council argued that it was imprudent to enact a general policy based on a problem affecting only certain localities:

'For a sum as modest as two Reales per year for each Papal Bull, considering the obligation to pay in silver, everyone would make the effort to acquire it. Even the Treasurer General of the Crusade himself would obtain and distribute silver to ensure the proper issuance of the bulls.'[16]

In the view of some officials, it was preferable to grant the Treasurer General discretionary authority to set local prices, provided that, when fulfilling his obligations to the Crown, all bulls were ultimately paid for in silver. The Council of Finance supported this position, arguing that it was better to forgo the sale of some bulls than to risk receiving payments predominantly in copper. Philip IV fully endorsed this proposal.

Despite these reservations, the scarcity of silver ultimately forced the Monarchy to authorise payment in *vellón*. At the end of 1624, a royal decision confirmed that the price of the bull would remain at 2 Reales (68 Maravedís) for those who paid in silver, while those lacking precious metal would be charged 80 Maravedís, that is, 17.6 per cent premium

[15] AGS, CRU, 521. Consulta, 18/07/1626.
[16] AGS, CJH, 614. Consulta, 21/09/1625, our translation.

(Fernández Llamazares, 1859: 220). The Bull for illustrious, however, continued to be sold exclusively in silver. The 12 Maravedís surcharge was intended to enable the Treasurer General to convert *vellón* into silver before remitting revenues to the Crown. This mechanism quickly became unsustainable: the market premium for silver rose to 40.8 per cent in 1625 and reached 54.8 per cent in 1626, rendering the official surcharge obsolete and financially harmful to the Treasurer General, who bore the responsibility of settling all proceeds in silver (Serrano Mangas, 1996: 60-63).

Table 1. Regular *Vivos* Bull's Price in Silver and *Vellón* (Maravedís)

	Silver (2 Reales)	Vellón	Premium (%)
1624-1625	68	80	17.6
1626-1627	68	102	50.0
1628	68	102/ 88	50 .0/ 29.4
1629-1634	68	80	17.6
1635-1640	68	88	29.4
1641-1643	68	102	50.0
1644-1686	68	84	23.5
1709	68	102	50.0
1710-1793	68	84	23.5

Sources: AGS, CRU, 464, 465, 466, 478 CMC 3E 116, AHN, Consejos, 6396

In 1626, there was no alternative but to apply a 50 per cent surcharge to bulls purchased with *vellón*, raising the price to 102 Maravedís per bull. The monetary reform introduced that year allowed for variable pricing throughout the year, reflecting the volatility of the exchange market. This was a particularly critical period. Prices then stabilised for several years at 80 Maravedís, before rising to 88 Maravedís in 1635. Another significant monetary disruption occurred between 1641 and 1643, when the reform attempt failed; subsequently, the price returned to 84 Maravedís, a level maintained at least until 1686.[17] This price likely remained unchanged until 1708. In 1709, the king decreed that bulls paid in vellón would cost 3 Reales (102 Maravedís), while the silver price remained unchanged. Estimates suggest that this price increase led to an 8.3 per cent decline in sales.[18] By 1730–1731, the royal decree once again recorded the price at 84 Maravedís.[19]

[17] AGS, CRU, 472. Sumario general, 1686.
[18] AGS, CRU, 550. Informe cuentas, 23/09/1709.
[19] AGS, CRU, 479.

The requirement to pay in silver for the eight-real bull, in an economy where silver had mainly been withdrawn from circulation, represented a significant additional burden for would-be purchasers. This condition further distinguished a privileged minority—those with access to precious metals—from the rest of the population, reinforcing social and economic hierarchies through monetary means.

3. Top Income Concentration: A Measure Based on the Crusade Bull

The difference between bulls priced at 2 Reales for ordinary people and 8 Reales for the wealthy and upper social classes reveals how many individuals preferred one type over the other. We suggest that the ratio between the number of 8 Reales and 2 Reales bulls sold indicates economic inequality, or more specifically, the level of concentration at the top of the income distribution. It should be emphasised, however, that, aside from social and religious pressure on the affluent to buy the 8 Reales bull, there was no effective control over who followed the Church's advice, which introduces a subjective element in the choice of bull type.

Unfortunately, the lack of detailed information on income distribution by bracket in early modern Spain prevents us from estimating the shares of income held by the top 1, 0.1, or 0.01 per cent, as seen in the top income share literature (Atkinson, Piketty and Saez, 2011). However, the ratio of 8 Reales to 2 Reales bulls sold offers a lower-bound estimate of income concentration at the top of the distribution, since the income of those buying the Bull of the Illustrious was significantly higher than average. For instance, in the mid-eighteenth century, in some small towns in Old Castile, 8 per cent of the total income went to the top 1 per cent, and in Madrid, the top 0.02 per cent received 9.2 per cent of the total income.[20]

[20] Calculated from data in Yun-Casalilla (1987) and Ringrose (1983) for Villalpando and Frechilla (Old Castile) and Madrid, respectively. Nicolini and Ramos Palencia (2020: 266) present the top 10 per cent's share of total income for a sample of 36 locations across the Crown of Castile in 1750 that, on average, accounts for 39.8 per cent (standard deviation, 12.2).

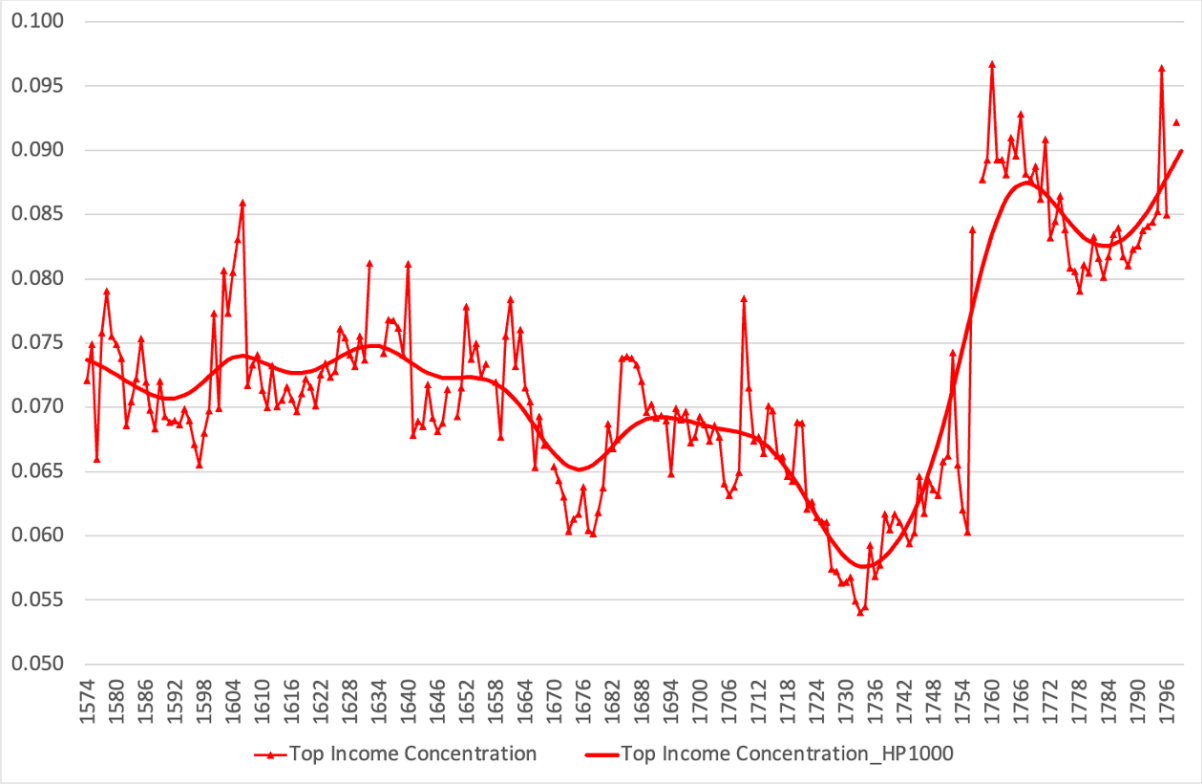


Figure 2. Top Income Concentration*, 1574-1799: Yearly Values and Hodrick-Prescott Trend
*Ratio 8 Reales Bulls to 2 Reales Bulls. Source: See the text.

Figure 2 shows how our measure of top income concentration changed over more than two centuries, revealing three distinct phases. The first phase, from the mid-1570s to the early 1630s, features fluctuations around a flat trend. Closer examination shows that top income concentration decreased during the 1580s and early 1590s, then reversed in the early seventeenth century. The second phase is characterised by a steady long-term decline until the mid-1730s. It started declining from the 1640s, leading to a significant contraction from the mid-1660s to the late 1670s. A recovery in the 1680s, followed by stability, was then interrupted by a collapse between the War of the Spanish Succession (1701-14) and the early 1730s. The third phase exhibited a clear upward trend, including a sharp rise until the mid-1760s, followed by a contraction in the 1770s and a recovery in the 1790s, with income concentration at the top in the late eighteenth century being the highest over the 225 years observed.

One might wonder, however, to what extent the decline in the volume of bulls sold—due to reductions in supply (state capacity) and demand for bulls, caused by monetary and financial crises, mortality bouts, etc.—affected the purchases of 8 and 2 Reales bulls differently and, consequently, biased our top income concentration estimates (Figure 3).

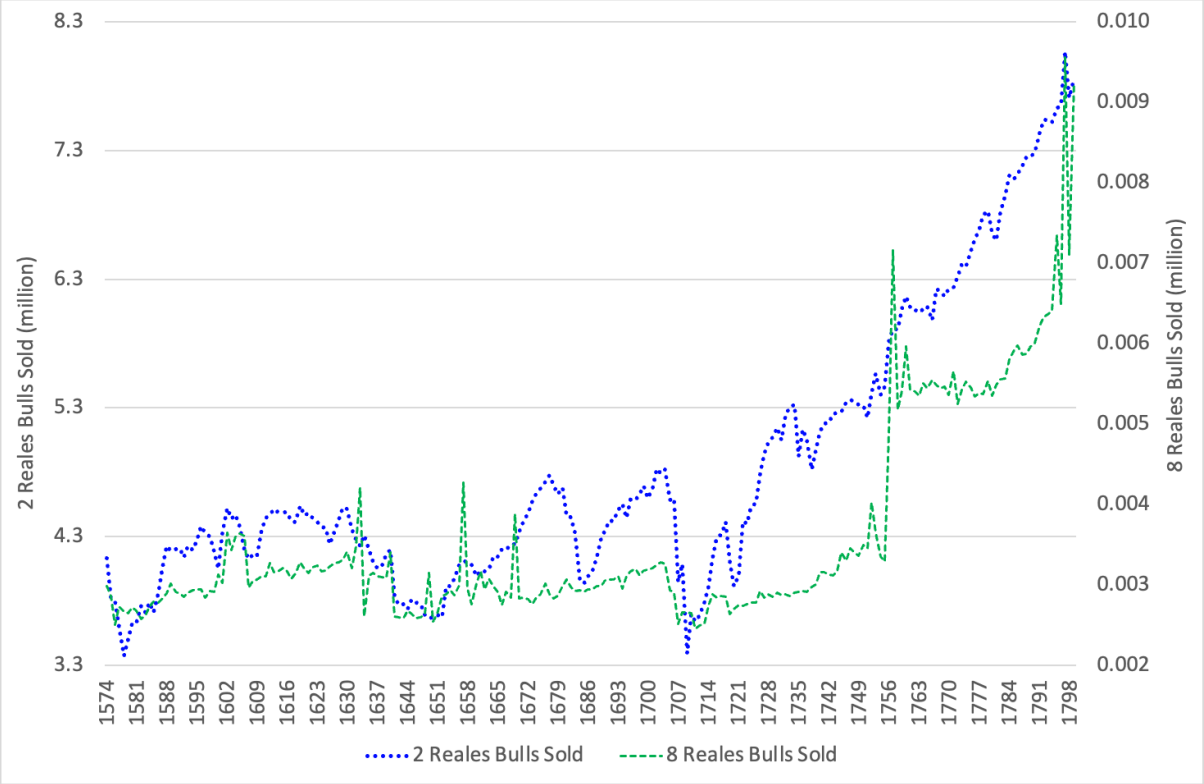


Figure 3. 2 and 8 Reales Bulls Sold, 1574-1799 (million)
Source: See the text

It could be argued that a war or revolt should impact both types of bull equally because of the inability to sell indulgences. However, it could be contended that, during phases when the sale of bulls lags behind the relevant population, due to a reduction in state capacity and/or demand, the less affluent would be unable to purchase the bull. In such cases, inequality would likely increase within the index. Nonetheless, in Figure 2, we observe that inequality actually shrank during periods when the sale of bulls lagged behind the population aged 12 and above—that is, during the financial crisis from the mid-1570s to the late 1580s, the Catalan Revolt and the war with Portugal in the 1640s, and during the War of Spanish Succession (1704-1714) and its aftermath.

Another scenario involves epidemics, where the impact on each type of bull may vary. Although an epidemic affected the purchase of both types similarly due to communication disruptions, the impact on the poor would be greater if more of them died, as they received less care. This situation would apply to episodes of famine-related high mortality.[21] The implication is that the milder effect of the pandemic on the upper part of

[21] For the main outbreaks of famine mortality in early modern Spain, cf. Pérez Moreda (2017: 54).

the distribution magnifies the rise of inequality in 1600 or 1684. However, in other episodes of increasing mortality, it affected the purchase of each type of bull, and therefore, no clear relationship exists between higher mortality and inequality, which during some mortality bouts surged (1605-1606, 1652, and 1762-1765), or declined (1706-1710).

Additionally, from the early 1620s onwards, monetary distortions caused by the introduction of *vellón* may have led to an upward bias in our inequality estimates. Before 1624, everyone paid the bull in silver, but afterwards, it was permitted to pay in *vellón* for the 2 Reales bull if individuals lacked silver Reales, as silver coins disappeared from circulation. However, the 8 Reales bull was not allowed to be paid in *vellón*. This aligns with the slight upward trend observed in the 1630s, when the sales of the 2 Reales bull fell but not that of the 8 Reales bull. The sharp decline in 1640-1641 (when a significant coin re-minting took place) and the collapse in the 1670s observed in Figure 2 could, perhaps, have been exaggerated by monetary disturbances and difficulties in obtaining silver coins. This seems to be the case for the 1670s, but not for 1640-1641, when both the 2 and 8 Reales bull sales shrank at the same time.

Overall, the main trends shown in Figure 2 would likely remain the same if we could isolate the biases caused by demographic, monetary, and financial shocks on the purchases of different types of bulls.

How does our measure of top income concentration compare with other indicators of income inequality? Two simple measures are available. One is the Williamson Index—the ratio of GDP per person to the average wage. Its rationale is that it compares the middle of the distribution—since GDP results from the sum of returns to all factors of production (land, labour, and capital) and is divided by the total population—to the bottom, because wage rates represent the return to raw labour daily or weekly. The other is the land rent–wage ratio, which compares the return to landowners with that of raw labour. An increase in the ratio indicates higher inequality. Both variables are expressed in current silver prices and relative to 1790-1799=100.

Figure 4 depicts long-term trends in concentration at the upper end of the distribution, along with the Williamson Index and the land rent-wage ratio from 1574 to 1799. They mostly align, despite differences in the severity of inequality decline until the early eighteenth century and the subsequent increase, as well as in the magnitude of their fluctuations.

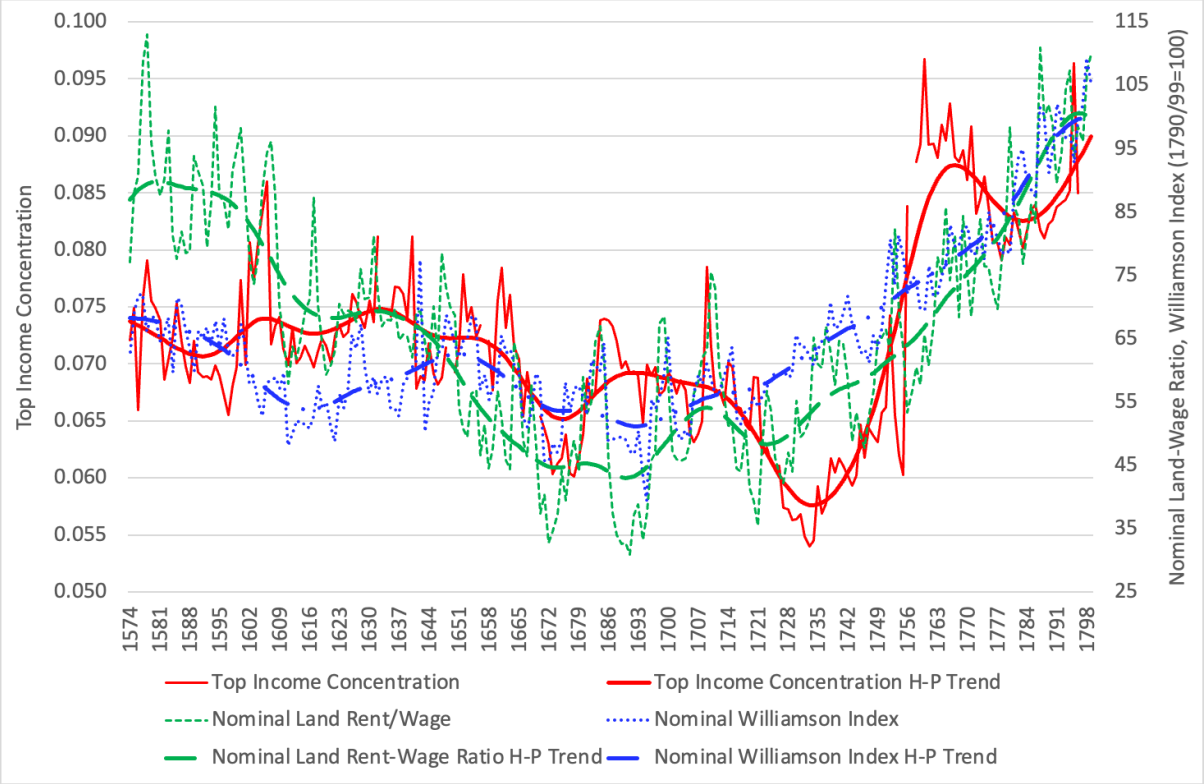


Figure 4. Top Income Concentration and Alternative Inequality Indices, 1574-1799: Yearly Values and Hodrick-Prescott Trend
Source: See the text, Álvarez Nogal and Prados de la Escosura (2013) and Prados de la Escosura et al. (2024).

The scatter plots illustrating the relationship between top income concentration and the Williamson Index and land rent-wage ratio (Figures 5a and 5b) show a weak positive correlation over time, which becomes more apparent when focusing solely on the eighteenth century. Consequently, the evidence of a long-term decline in income inequality throughout most of the seventeenth century, combined with the resurgence of inequality in the late eighteenth century, is consistently reflected across all available measures of inequality for Spain.

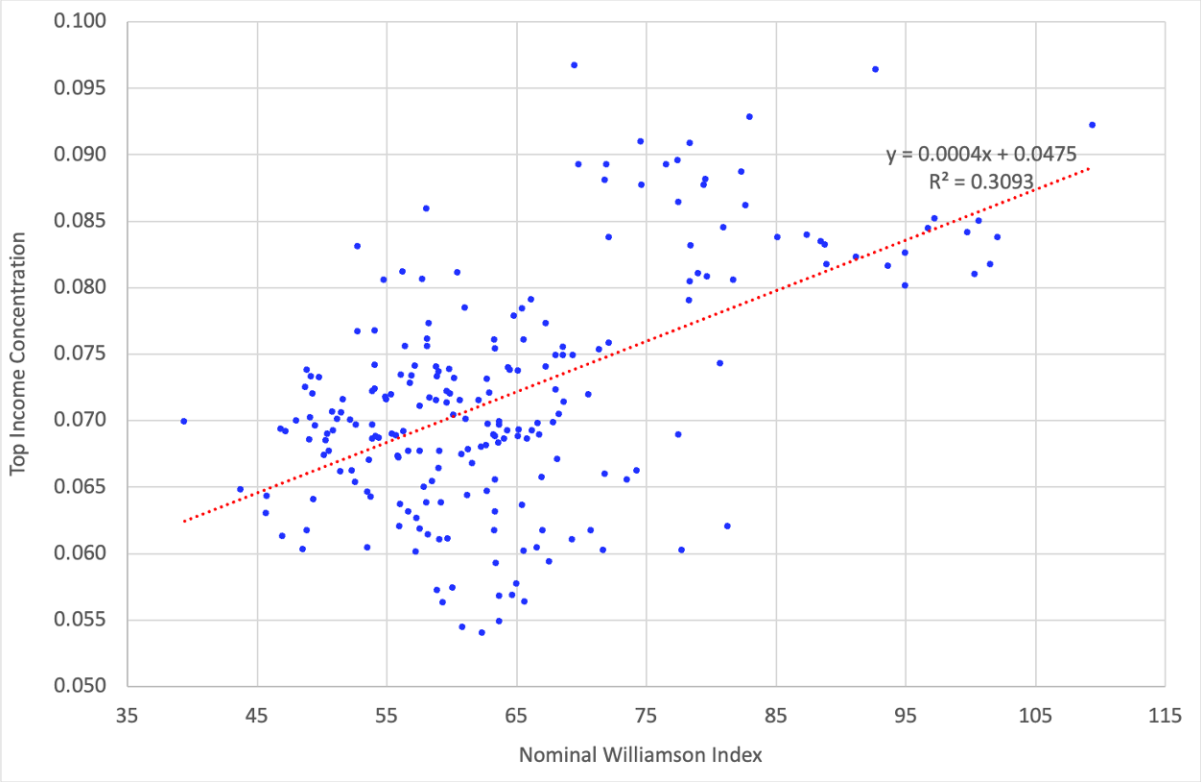


Figure 5a. Top Income Concentration versus Nominal Williamson Index, 1574-1799: Source: See the text and Prados de la Escosura et al. (2024)

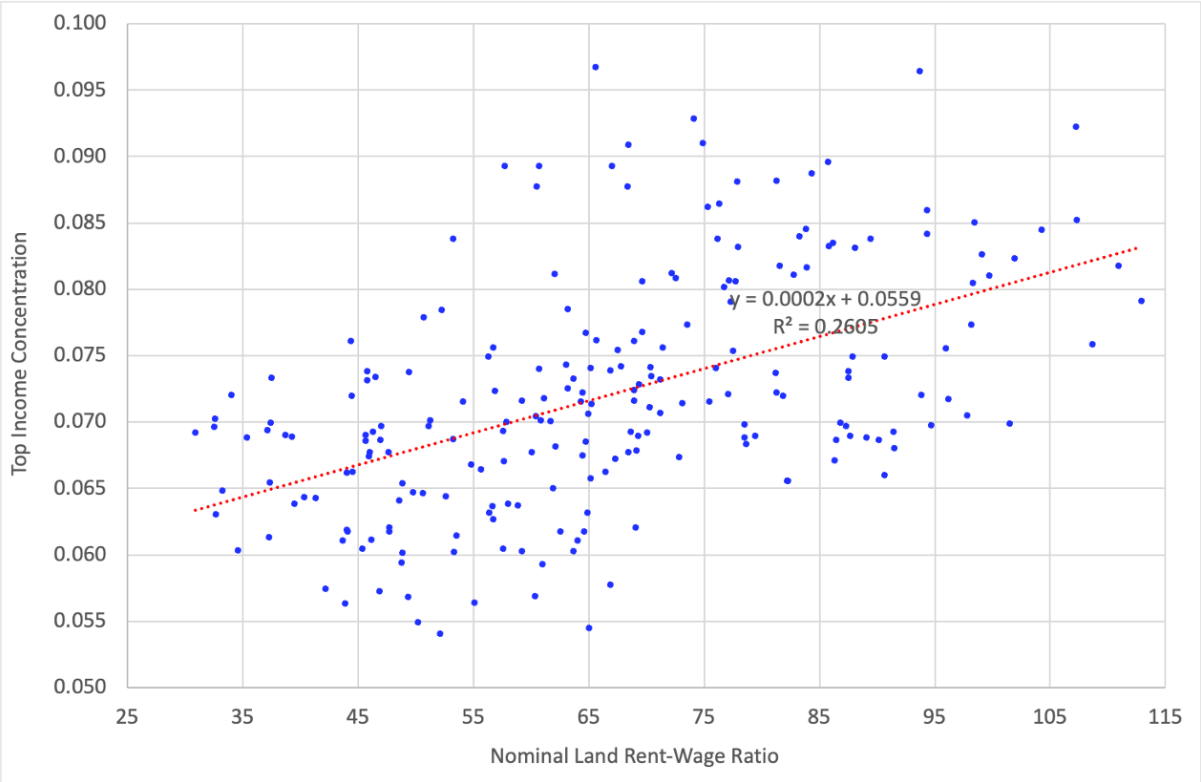


Figure 5b. Top Income Concentration versus Nominal Land Rent-Wage Ratio, 1574-1799: Source: See the text and Álvarez Nogal and Prados de la Escosura (2013).

4. Top Income Concentration in the Crowns of Aragon and Castile

A closer examination of the top income concentration within the Hispanic Monarchy reveals distinct patterns of inequality in the Crowns of Castile and Aragon (Figure 6). Starting from a lower point, the Crown of Castile experienced a steady increase until the 1650s, whereas the Crown of Aragon declined until the 1700s, with only a temporary interruption at the end of the Catalan Revolt (1640-1652). In Castile, after a dip in the 1660s, inequality recovered and levelled off, then decreased again during the War of Succession and its aftermath. By the late 18th century, Castile caught up with Aragon, resulting in a convergence of top income concentration levels.

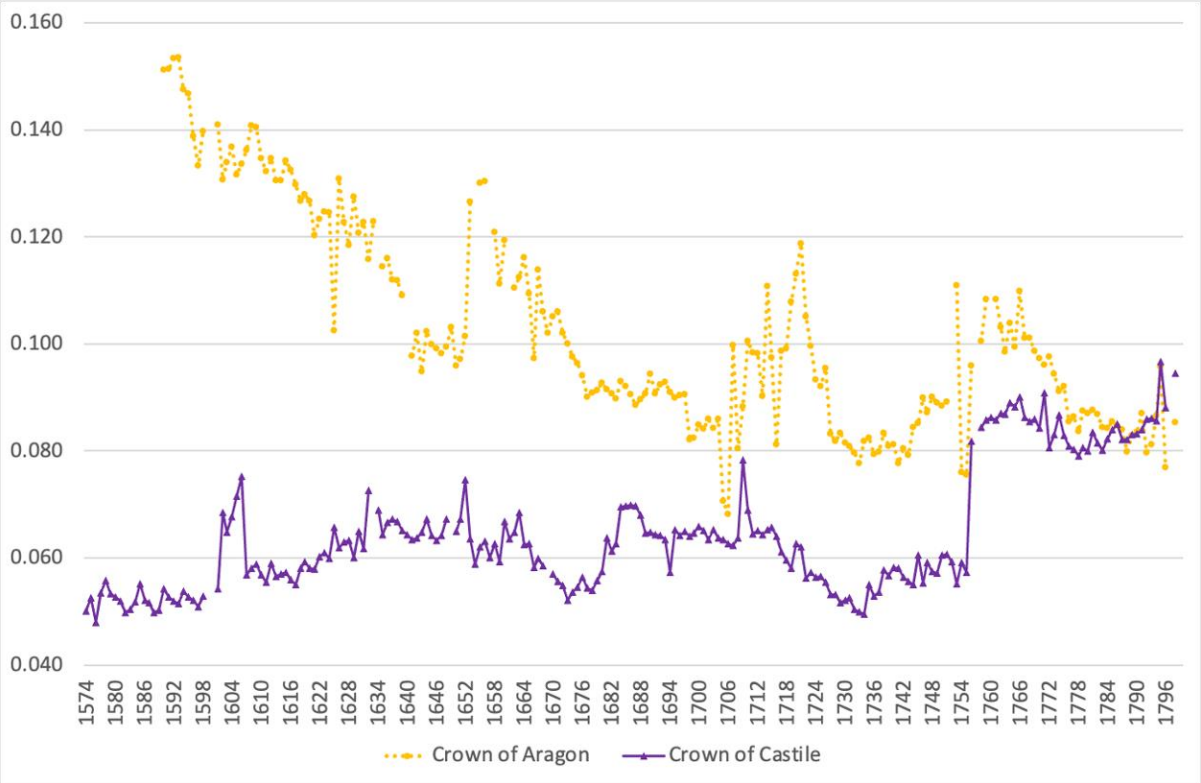


Figure 6. Top Income Concentration in the Crowns of Castile and Aragon*, 1574-1799:
*Ratio 8 Reales Bulls to 2 Reales Bulls.
Source: See the text.

Concentration at the upper end of the distribution within the Crown of Aragon (Figure 7) shows a similar pattern across its regions, driven by a long-term decline in Valencia and Catalonia, although Catalonia's level remains consistently higher. In Aragon, with a gentler long-term declining trend, the level of inequality is much lower over time and comparable to that of the Crown of Castile.

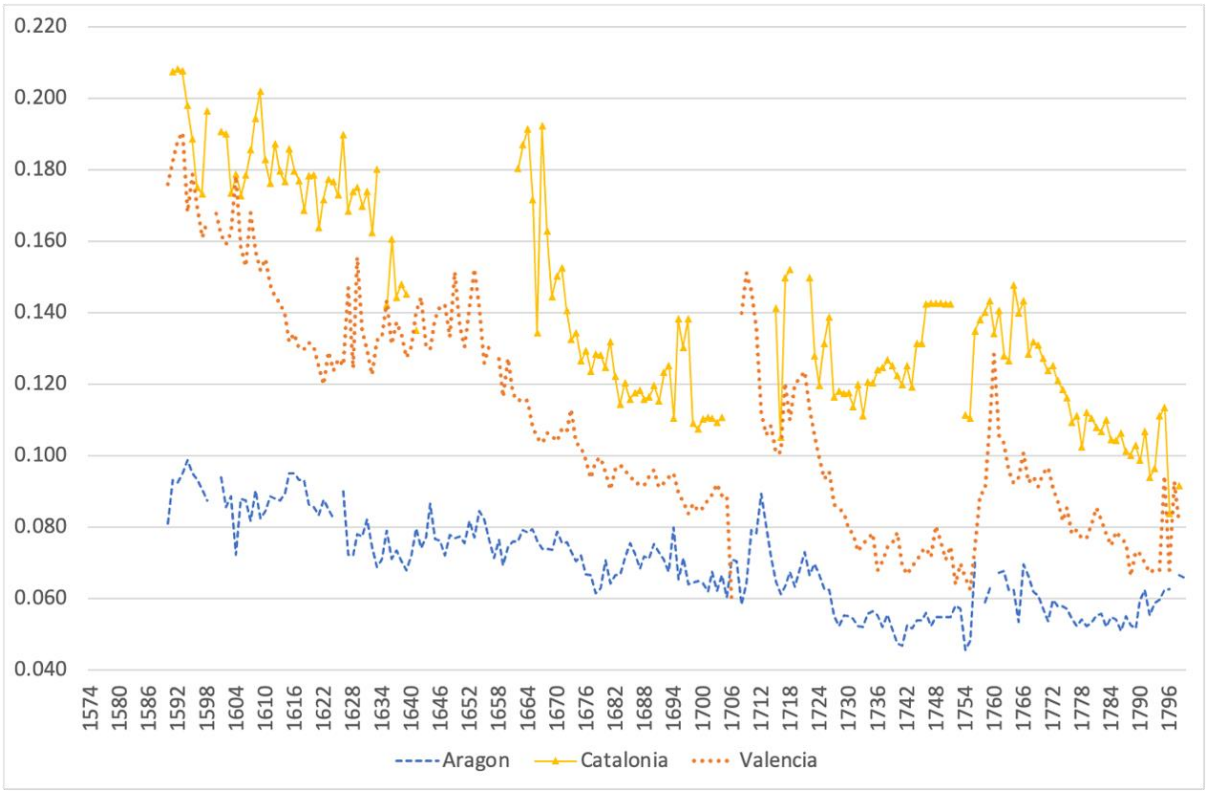


Figure 7. Top Income Concentration within the Crown of Aragon, 1574-1799:
Source: See the text.

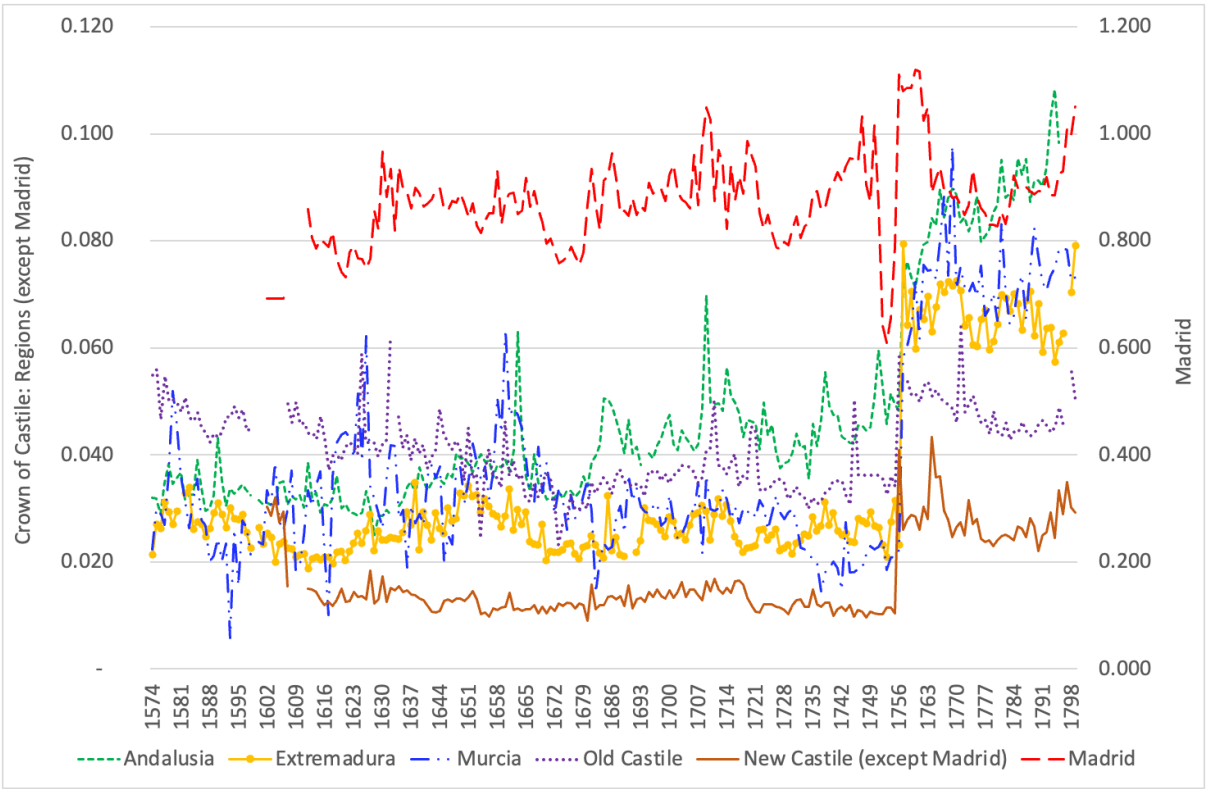


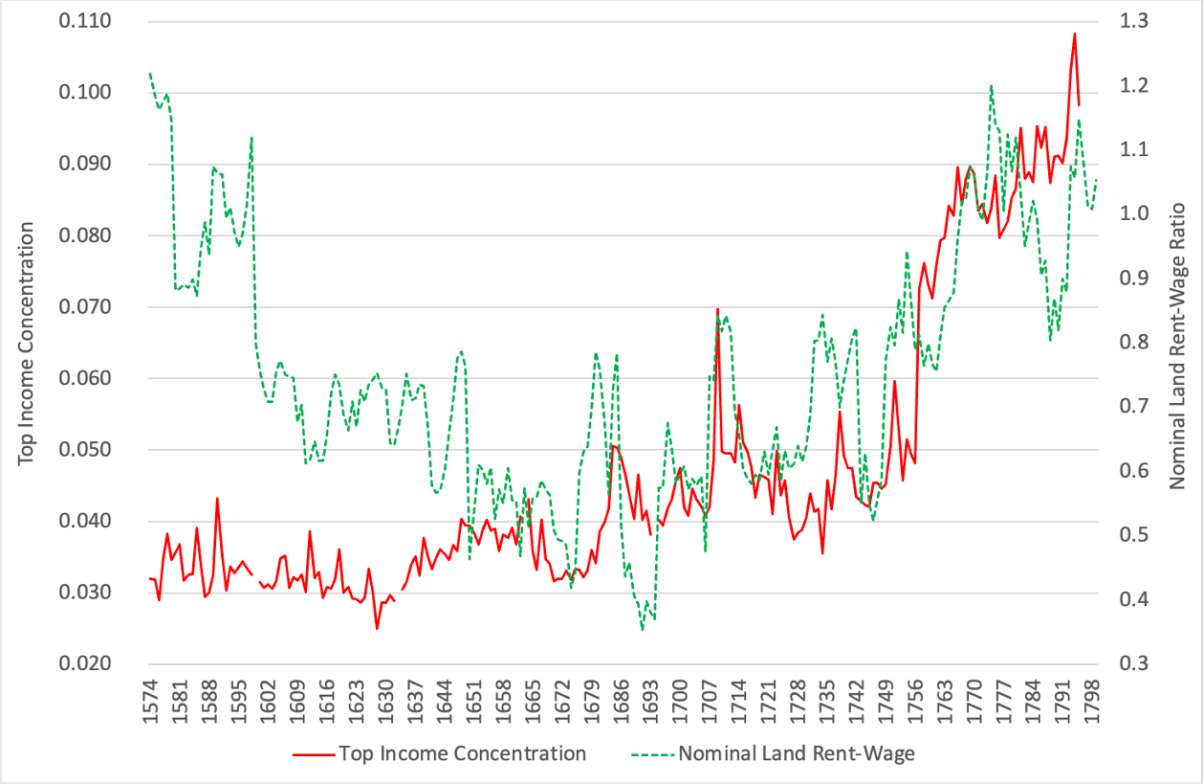
Figure 8. Top Income Concentration within the Crown of Castile*, 1574-1799
Source: See the text.

A similar exercise for the Crown of Castile (Figure 8) illustrates Madrid's, the capital city, dominance through consistently higher inequality levels. From the late sixteenth to mid-eighteenth centuries, distinct trends emerge in its regions and territories. Old Castile, and to a lesser extent, New Castile (excluding Madrid), and Murcia, show a long-term decline. Conversely, Andalusia and Madrid display an increasing trend, while Extremadura fluctuates around a relatively flat trend. A notable rise in inequality took place across all regions in the 1750s, which continued for the rest of the century, reaching the highest levels of inequality observed during the entire period.

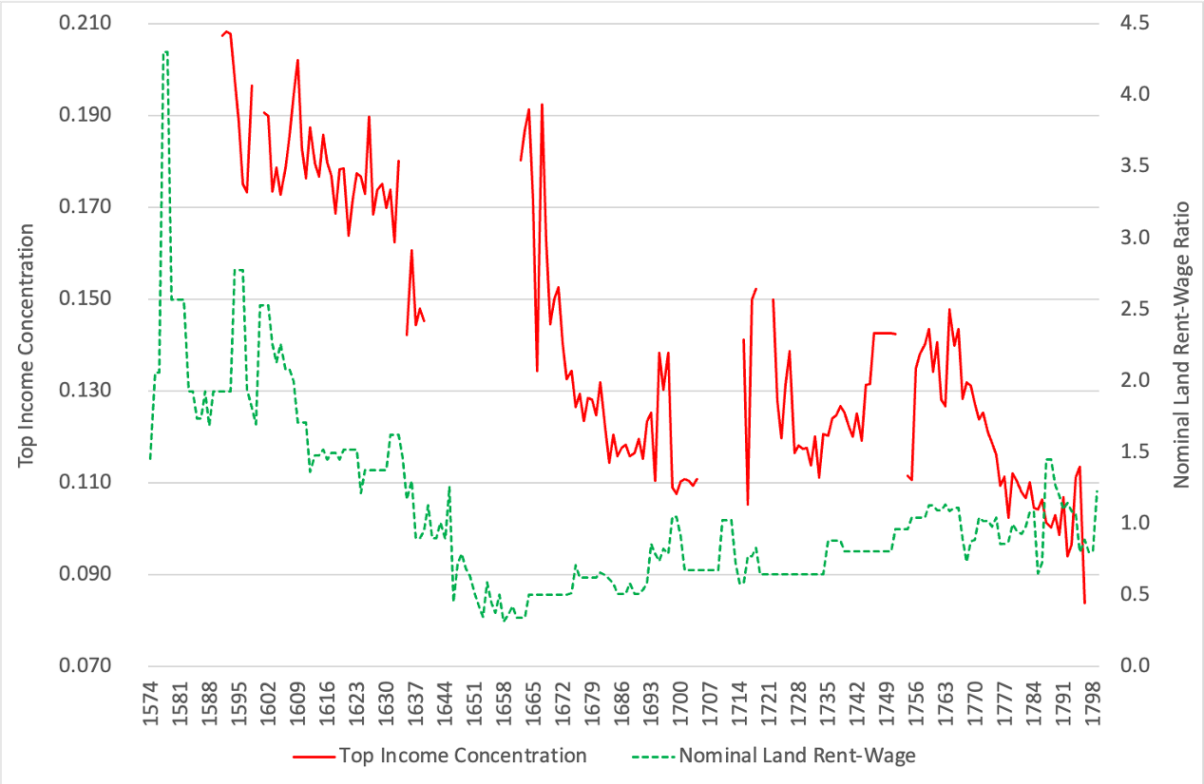
Some hypotheses arise from the differences in top income concentration between Castile and Aragon. Could these partly be due to less successful sales of 2 Reales bulls in Aragon, resulting from its lower level of urbanisation? It was certainly easier to sell bulls in towns than in rural areas, and the wealthy and high-status individuals were more likely to be concentrated in urban centres, so levels of urbanisation could have influenced this. In fact, regions with larger, more vibrant cities often exhibited higher inequality levels, exemplified by Madrid, the capital, as well as cities in Andalusia at the start of the period under review. Meanwhile, urbanisation in Catalonia, where the main disparity in inequality levels originates, increased in the late eighteenth century (Álvarez-Nogal and Prados de la Escosura, 2007: 338). Furthermore, Valencia's higher inequality could partly be explained by its larger Moorish population, at least until its expulsion in 1609, as they were exempt from buying the bull and primarily rural.[22]

How do these regional results compare with alternative measures of inequality? One approach is to contrast economic concentration at the top of the distribution with the nominal land rent-wage ratio across a sample of regions (Figure 9). In Andalusia, a similar pattern emerges from the mid-seventeenth century onwards, although they moved in opposite directions beforehand. In Catalonia, the long-term decline in inequality over a hundred years from the late sixteenth century is reflected in both indicators.

[22] However, if the Moriscos did not purchase it earlier because the religious recommendation did not apply to them, their expulsion should not change anything since they did not count before, unless the land they previously occupied has now been taken by Christians who bought the bull. In that case, the expulsion would indeed be significant because it increased the demand for 2 reales Bulls, thereby diminishing the relative importance of those worth 8 Reales.



A. Andalusia



B. Catalonia

Figure 9. Top Income Concentration and Nominal Land Rent-Wage Ratio, 1574-1799: Regional Perspective.

Source: Land Rent, Andalusia, Ponsot (1986) and Coronas Vida (1994); Catalonia, Duran i Pujol (1985). Wages, Andalusia, López Losa and Piquero (2021), Catalonia, Feliu (2004)

5. Conclusions

The sale of the Bull of the Crusade provides a unique opportunity to measure inequality, which, according to contemporary views, was significant in early modern Spain. We used the ratio of 8 Reales bulls for the wealthy to 2 Reales bulls sold to ordinary people to assess economic concentration at the upper end of the distribution, even though it involves a subjective element and only offers a lower bound of actual top income shares.

A period of stable development from the mid-1570s to 1630 was followed by a steady decline until the 1730s, then a recovery peaking in the late eighteenth century. These are the main features of top income concentration. Additionally, within Spain, top income concentration began at lower levels in the Crown of Castile but converged with that of the Crown of Aragon in the late eighteenth century. Our measure aligns with other indicators of income inequality, from which a consensus can be drawn that income inequality decreased over the long term during the seventeenth century and increased again in the late eighteenth century.

Archival Sources

Archivo Diocesano de Toledo (ADT)

Santa Cruzada XVIII

Caja 1, 20, 33, 35, 47, 48, 49, 116, 117, 130, 137, 151, 155, 156, 162, 169, 170, 179, 185, 188, 193, 201, 202, 208, 418, 424, 433, 437, 464, 468, 473, 476, 486, 565, 566, 647, 648, 703, 706, 726, 799, 813, 869, 924, 928, 929, 979, 987, 993, 994, 995, 1005, 1036, 1040, 1053, 1094, 1104, 1146, 1188, 1194

Libro 369, 994, 1102

Archivo General de Simancas (AGS)

Consejo de Cruzada (CRU)

Legajos 415, 417, 418, 420, 421, 424, 425, 427, 428, 432, 433, 434, 435, 436, 437, 438, 440, 446, ~~448,~~ 454, 456, 458, 459, 460, 461, 462, 463, 464, 465, 466, 468, 470, 472, 473, 474, 475, 476, 477, 478, 479, 480, 484, 485, 486, 487, 489, 490, 493, 494, 504, 521.

Contaduría Mayor de Cuentas 2ª época (CMC 2E)

Legajos 903, 906, 911.

Contaduría Mayor de Cuentas 3ª época (CMC 3E)

Legajos 14, 120, 899, 1045.

Tribunal Mayor de Cuentas (TMC)

Legajos 155, 157, 163, 165, 166, 167, 169, 175, 178, 183.

Archivo Histórico Nacional (AHN)

Consejos

Legajos 6365, 6376, 6378, 6380, 6382, 6383, 6384, 6385, 6386, 6387, 6388, 6389, 6390, 6391, 6391, 6392, 6393, 6394, 6395, 6396, 6397, 6398, 6399, 6400, 7470, 7476.

References

Álvarez Nogal, C., and L. Prados de la Escosura (2007), 'The Decline of Spain (1500-1850): conjectural estimates', *European Review of Economic History* 11(3): 319-366.

Álvarez Nogal, C., and L. Prados de la Escosura (2013), 'The rise and fall of Spain (1270-1850)', *Economic History Review* 66(1): 1-37.

Álvarez-Nogal, C. and L. Prados de la Escosura (2025a), State Capacity and Subjective Well-Being in Early Modern Spain, EHES Working Paper 287.

Álvarez-Nogal, C. and L. Prados de la Escosura (2025b), 'Subjective Well-Being and Inequality in Spain's Decline", *Cliometrica* 19(1): 1-27.

Atkinson, A.B., Th. Piketty, and E. Saez (2011), "Top incomes in the long run of history", *Journal of Economic Literature* 49(1): 3-71.

Carpintero Aguado, L (1989), 'Iglesia y Corte castellana en el siglo XVI. Contribución y tributos', *Hispania Sacra* 41(84): 547-567.

Carvajal de la Vega, D., H. Casado Alonso, and V. Abarca Abarca (2025), 'An approach to inequality and social mobility in Northern Castile (fifteenth and sixteenth centuries)', in A. Orlandi, ed., *La mobilità sociale nelle società preindustriali: tendenze, cause ed*

effetti (secc. XIII-XVIII) / Social mobility in pre-industrial societies: tendencies, causes and effects (13th-18th centuries) Firenze: Firenze University Press, pp. 273-305.
Catalán Martínez, E. (1997), 'El fin de un privilegio: La contribución eclesiástica a la Hacienda Real (1519-1794)'. *Studia Historica*. *Historia Moderna* 16: 177-200.
Cohen, A.B. (2002), 'The importance of spirituality in well-being for Jews and Christians', *Journal of Happiness Studies* 3: 287-310.
Cohen, A.B., J.D. Pierce Jr., J. Chambers, R. Meade, B.J. Gorvine, and H.G. Koenig (2005), 'Intrinsic and extrinsic religiosity, belief in the afterlife, death anxiety, and life satisfaction in young Catholics and Protestants', *Journal of Research in Personality* 39: 307–324.
Coronas Vida, L. J. (1994), *La economía agraria en tierras de Jaén 1500–1650*, Granada: Universidad de Granada.
Duran i Pujol, M. (1985), 'L'evolució de l'ingrés senyorial a Catalunya (1500–1799)', *Recerques* 17: 7–42.
Elliott, J. H. (1961), 'The decline of Spain', *Past and Present* 20: 52-75.
Elliott, J.H. (1992), 'A Europe of Composite Monarchies', *Past and Present* 51: 48-71.
Feliu, G. (2004), "Aproximació a un índex del cost de la vida a Barcelona, 1501-1807", in VV.AA., *Josep Fontana*. *Història i projecte social*, Barcelona: Crítica. 2 vols, I, 151-170.
Fernández Chaves, M.F. (2009), 'La Villa de Lebrija a finales del reinado de Felipe III. El padrón de Bula de Santa Cruzada de 1620', *Revista de Humanidades* 16: 59-90.
Fernández Llamazares, J. (1859), *Historia de la Bula de la Santa Cruzada*, Madrid: Imprenta de Eusebio Aguado.
Furió, A., P. Viciano, L. Almenar, D. Lledó Ruiz, and G. Chismol (2020), 'Measuring economic inequality in Southern Europe: the Iberian Peninsula in the 14th-17th centuries', in G. Nigro, ed., *Disuguaglianza economica nelle società preindustriali: cause ed effetti / Economic inequality in pre-industrial societies: causes and effect*, Firenze: Firenze University Press, pp. 168-201.
García Montero, H. (2020), 'Wealth inequality in Catalonia, 1400-1800. Sources, data and a case study', in G. Nigro, ed., *Disuguaglianza economica nelle società preindustriali: cause ed effetti / Economic inequality in pre-industrial societies: causes and effect*, Firenze: Firenze University Press, pp. 115-130.
González de Cellorigo, M. (1600) Memorial de la política necesaria y útil restauración a la república de España y estados de ella, y del desempeño universal de estos Reynos. Valladolid: Imprenta de Juan Bustillo.
Goñi Gaztambide, J. (1958), *Historia de la bula de la Santa Cruzada*, Vitoria: Montepío Diocesano.
Hamilton, E.J. (1934), *American treasure and the price revolution in Spain, 1501–1650*, Cambridge MA: Harvard University Press.
Lanza García, R. (2020), 'Plata y vellón para la Cruzada, 1589-1739', in Lanza, R. (ed.), *Fisco y moneda*: *el uso del dinero en las economías de los reinos hispanos, siglos XIII-XVIII*, Santander: Universidad de Cantabria, pp. 381-442.
Lanza García, R. (2024), 'La desigualdad económica en Castilla la Nueva en la Edad Moderna según los repartimientos fiscales: estudio de algunos ejemplos locales, 1500-1800', In Carvajal, D., H. Casado, E. Tello, and Ll. To (eds.), L*a desigualdad económica en España: nuevas aproximaciones a viejos problemas (siglos XIV-XVII)*, Madrid: Silex, pp. 109-140

López Losa, E. and S. Piquero Zarauz (2021), 'Spanish subsistence wages and the Little Divergence in Europe', *European Review of Economic History* 25: 29-84.
Marcos Martín, A. (2022). 'Dinámicas imperiales y prácticas de venalidad. Las ventas de jurisdicciones y vasallos en Castilla durante el siglo XVI'. *Magallánica* 9(1):
Mejía Asensio, A. (2002), 'La bula de la Santa Cruzada de 1618. Aproximación a la estructura socioeconómica de la ciudad de Guadalajara a principios del siglo XVII. In Iglesia y religiosidad en España', *Historia y Archivos*. Actas de las V jornadas de Castilla-La Mancha sobre investigación en archivos. Guadalajara: Anabad-Castilla la Mancha, pp. 73-109.
Navarro Miralles, L.J. (1981), 'Subsidio de galeras y Excusado: una aportación al estudio de la contribución fiscal eclesiástica (1567-1796)', *Pedralbes Revista d'historia moderna* 1: 21-50.
Nicolini, E.A., and F. Ramos Palencia (2016), 'Decomposing income inequality in a backward pre-industrial economy: Old Castile (Spain) in the middle of the eighteenth century', *Economic History Rev*iew 69(3): 747-772.
Nicolini, E.A., and F. Ramos Palencia (2020), 'Inequality in Early Modern Spain: New evidence from the Ensenada Cadastre in Castile, c. 1750', in G. Nigro, ed., *Disuguaglianza economica nelle società preindustriali: cause ed effetti / Economic inequality in pre-industrial societies: causes and effect*, Firenze: Firenze University Press, pp. 255-273.
Ojeda Nieto, J. (2000), 'La población de Castilla y León en el siglo XVII: un intento de aproximación demográfica a través de la bula de la Santa Cruzada', *Studia Historica* Historia moderna 22: 109-144.
Pérez de Lara, A. (1733), *Compendio de las Tres Gracias de la Santa Cruzada, Subsidio y Excusado*, Lyon: Ville Hermanos y Chalmettz.
Ponsot, P. (1986), *Atlas de historia económica de la Baja Andalucia (siglos XVI–XIX)*, Sevilla: Editoriales Andaluzas Unidas.
Pérez Moreda, V. (2017), 'Spain', in G. Alfani and C. Ó Gráda (eds.), *Famine in European History*, Cambridge: Cambridge University Press, pp. 48-72.
Prados de la Escosura, L., C. Álvarez Nogal, and C. Santiago Caballero (2023), 'Growth Recurring in a Preindustrial economy', in L. Prados de la Escosura, *A Millennial View of Spain's Development*. *Essays in Economic History,* Cham: Springer, pp. 27-90.
Ringrose, D.R. (1983), *Madrid and the Spanish economy, 1560-1850*, Berkeley: University of California Press.
Santiago Caballero, C. (2011), 'Income inequality in central Spain, 1690-1800', *Explorations in Economic History* 48, 1: 83-96.
Serrano Mangas, F. (1996), *Vellón y metales preciosos en la Corte del Rey de España (1618-1668*, Madrid. Banco de España, Estudios de Historia Económica 33.
Ulloa, M, (1977), *La Hacienda Real de Castilla en el reinado de Felipe II*, Madrid: Fundación Universitaria Española.
Yun Casalilla, B. (1987), *Sobre la transición al capitalismo en Cas*tilla. *Economía y sociedad en Tierra de Campos (1500-1830)*, Valladolid: Junta de Castilla y León.

European
Historical
Economics
Society

EHES Working Paper Series

Recent EHES Working Papers

EHES 288 Resisting reform in the public sector: theory and historical evidence from the UK
Oliver Brufal

EHES 287 State Capacity and Subjective Well-Being in Early Modern Spain
Carlos Álvarez-Nogal, Leandro Prados de la Escosura

EHES 286 Build Better Health: Evidence from Ireland on Housing Quality and Mortality
Alan de Bromhead, Ronan C. Lyons, Johann Ohler

EHES 285 Hereditarian Fallacies? Inheritance of Social Status in England, 1600-2022
Gregory Clark

EHES 284 How Long do Wealth Shocks Persist? Less than three generations in England, 1700-2025
Gregory Clark, Neil Cummins

EHES 283 Has oil richness been a force for income equality in Venzuela over the long term?
Pablo Astorga

EHES 282 Female labor force participation in historical census microdata
Jørgen Modalsli

EHES 281 Colonial Governance and Resource Allocation in the British West Indies (1838–1938)
Luisito Bertinelli, Fabio Gatti, Eric Strobl

EHES 280 Why railways fail: Colonial railways and economic development in Habsburg Bosnia-Herzegovina
Magnus Neubert, Stefan Nikolić

All papers may be downloaded free of charge from: https://www.ehes.org/

The European Historical Economics Society is concerned with advancing education in European economic history through study of European economies and economic history. The society is registered with the Charity Commissioners of England and Wales number: 1052680.