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## **THE NAPOLEONIC WARS: A WATERSHED IN SPANISH HISTORY**

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**ECONOMIC HISTORY**



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# THE NAPOLEONIC WARS: A WATERSHED IN SPANISH HISTORY

## Abstract

The Napoleonic Wars had dramatic consequences for Spain's economy. The Peninsular War had higher demographic impact than any other military conflict, including civil wars, in the modern era. Farmers suffered confiscation of their crops and destruction of their main capital asset, livestock. The shrinking demand, the disruption of international and domestic trade, and the shortage of inputs hampered industry and services. The loss of the American colonies, a by-product of the French invasion, seriously harmed absolutism. In the long run, however, the Napoleonic Wars triggered the dismantling of Ancien Régime institutions and interest groups. Freed from their constraints, the country started a long and painful transition towards the liberal society. The Napoleonic Wars may be deemed, then, as a watershed in Spanish history.

JEL Classification: E02, F54, N13, N43

Keywords: Napoleonic Wars, Peninsular War, Spain, Institutional Change, growth

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## ***Introduction***

The Napoleonic Wars are usually depicted as a major juncture in European history. Historians' assessments of the Peninsular War (1808-1814) tend to emphasise its negative impact. In this essay, we survey the short-term effects of war but also look beyond and consider its long run consequences. The French invasion had severe consequences for the economy of Spain in the short run. The actions of French and Allied armies had a higher demographic impact, larger than any other military conflict, including civil wars, in Spanish modern history. Confiscations of crops and destruction of livestock hindered agriculture, while shrinking demand, disrupted trade, and shortage of inputs hampered industry and services. Moreover, the loss of the American mainland colonies, a by-product of the French invasion, severely harmed absolutism, challenging its viability. In the long run, however, the Napoleonic Wars contributed to the removal of Ancien Régime institutions and interest groups. Freed from their constraints, the economy experienced a far from smooth transition towards a liberal society was initiated. The Napoleonic Wars may be deemed, then, a watershed in Spanish history.

### ***I. The short-run impact***

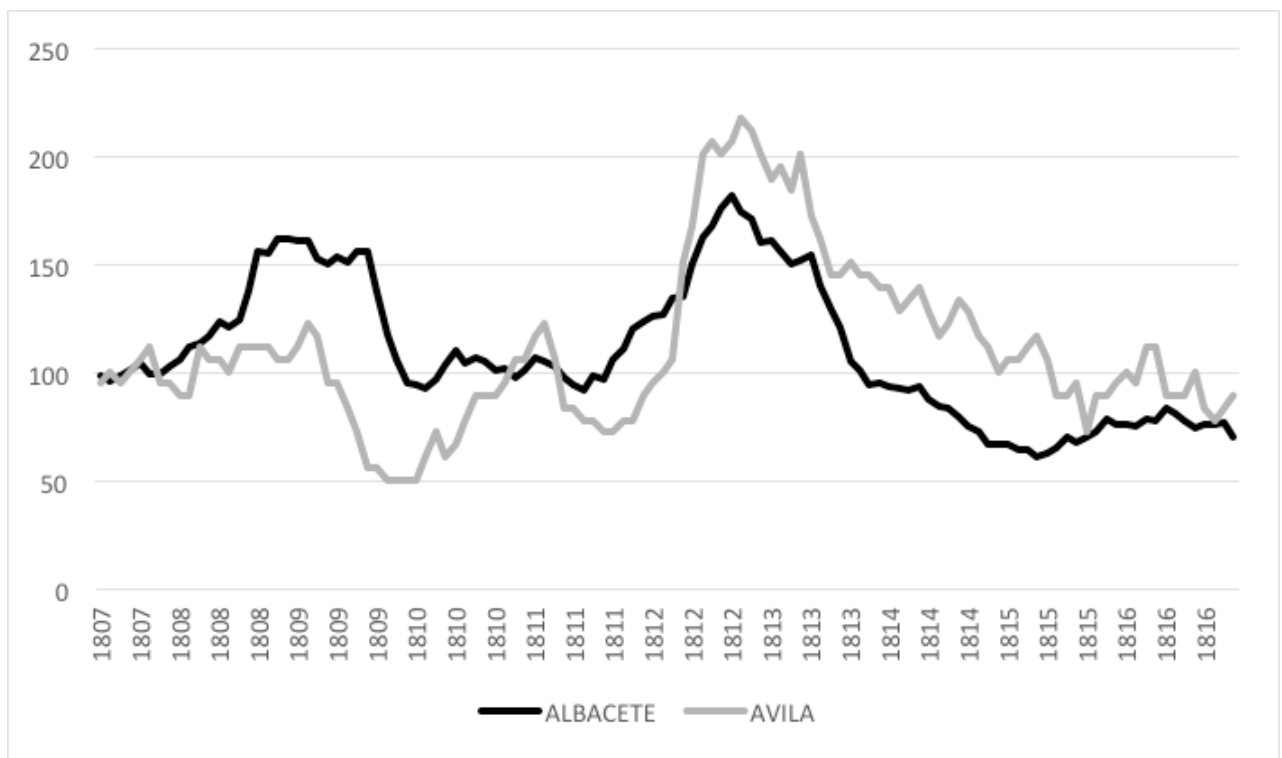
The invasion of Spain by the Napoleonic armies was initially a peaceful process that took place with the complete agreement of the Spanish authorities.<sup>1</sup> However, as soon as Napoleon forced Charles IV's abdication, insurrection broke out, starting in Asturias and quickly spreading throughout the country. By then, Napoleon had already stationed large contingents of soldiers at key points in Spain and was ready to face Spanish and allied forces in the upcoming war. How large was the damage inflicted on the economy? The direct effects of the war are hard to reckon. In the following paragraphs we will survey different social and economic dimensions of its impact.

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<sup>1</sup> On March 16th 1808, Charles IV issued a proclamation, "Breathe calmly: know that the army of my good ally the emperor of the French passes through my kingdom with ideas of peace and friendship. Its purpose is moving to the points threatened by an enemy landing..."(Queipo de Llano, 2008: 1202).

## Population

Losses due to military operations in Spain, a major battleground of the Napoleonic Wars, have been estimated around 300,000 (Urlanis, 1971), probably a figure on the high side. Most of the casualties took place, however, among the civilian population. The confiscation of food, the violence of Napoleonic and Allied armies, and the spread of diseases, as large contingents of soldiers moved all over the country, were its main causes. In the shire of Valdeorras, only one ninth of the Spanish casualties were military (Canales, 2017). French troops followed a very clear strategy in dealing with local resistance, namely bloodbath and terror to avoid further insurrections. After the siege, Zaragoza was completely destroyed and 54,000 people lost their lives (Gates, 1987: 129). Equally brutal were the sieges of Badajoz, Ciudad Rodrigo and the complete destruction of San Sebastian at the hands of the Allied forces.

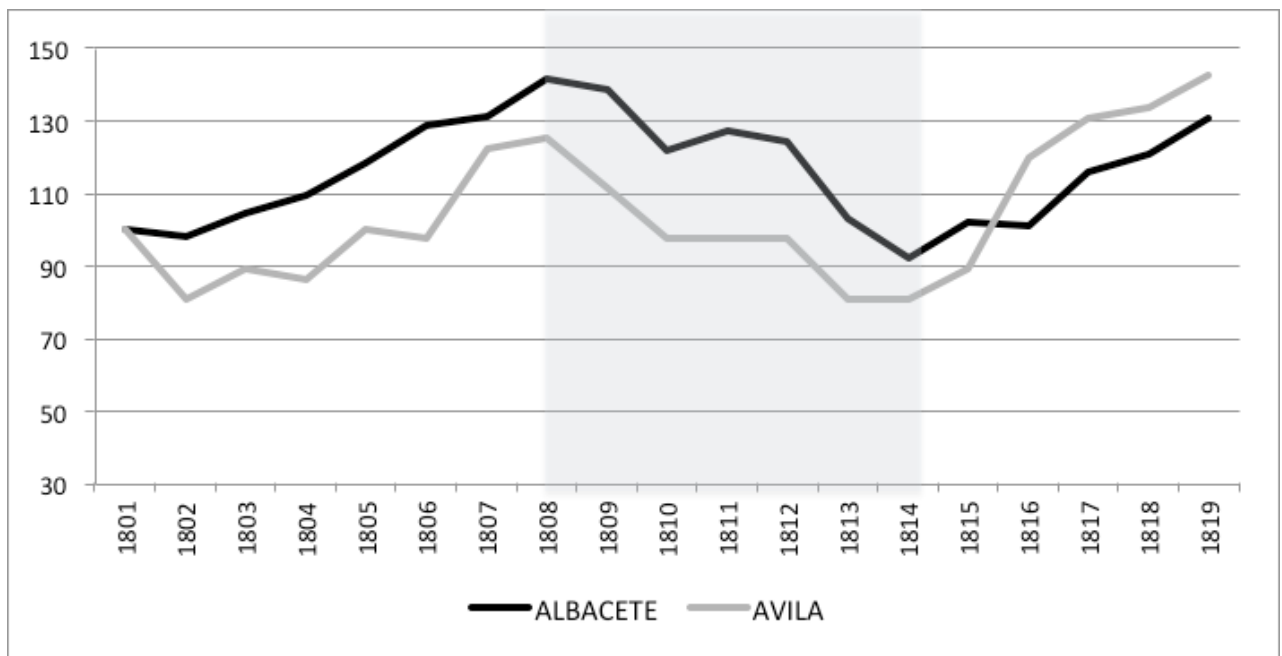


**Figure 1:** Monthly Mortality in the Cities of Albacete and Avila, 1807-1816 (Jan-Dec 1807=100)  
*Source:* Santiago-Caballero (2017).

The increase in mortality rates can be exemplified by comparing the cases of Avila, where resistance to the French troops was moderate, and Albacete, sacked several times during the war for resistance to occupation (Figure 1). In Ávila mortality

remained at the same level before and after the war, except during the second occupation by the French army in 1812-13. In Albacete, mortality increased by more than 50 per cent in 1808-09 and 1811-13.<sup>2</sup>

The negative effects of the war were also clear in the marriage strategies of the populations of Albacete and Avila. Figure 2 shows the evolution of marriages in both cities between 1801 and 1819. The rapid increase during the first years of the century suffered a sudden stop followed by a reversal at the beginning of the war. The number of marriages decreased by 35 per cent between 1808 and 1814. Figure 2 also shows the importance of the war for indirect effects such as the reduction in fertility -a consequence of young male casualties.



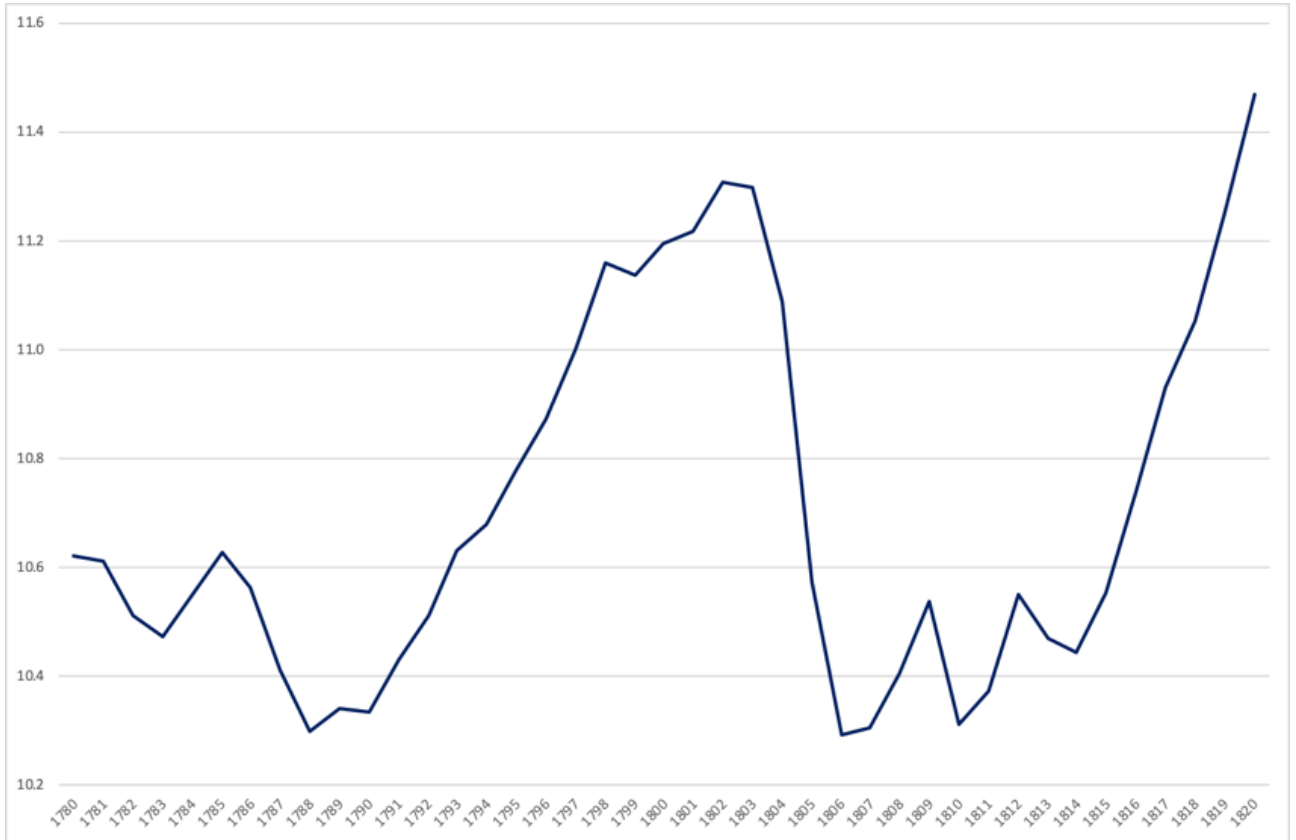
**Figure 2:** Marriages in the Cities of Albacete and Avila, 1801-19 (5-year moving ave. 1801=100)  
*Source:* Santiago-Caballero (2017).

More significant are the losses resulting from deviations from the demographic trend. Fraser (2006) suggested that Spain’s potential population decreased by around 0.8 million inhabitants during the first fifteen years of the nineteenth century.

Although the casualties of the war did not exceed 375,000. Canales (2017) reckons that excess mortality reached 0.6 million during 1809-13. These figures are not far apart

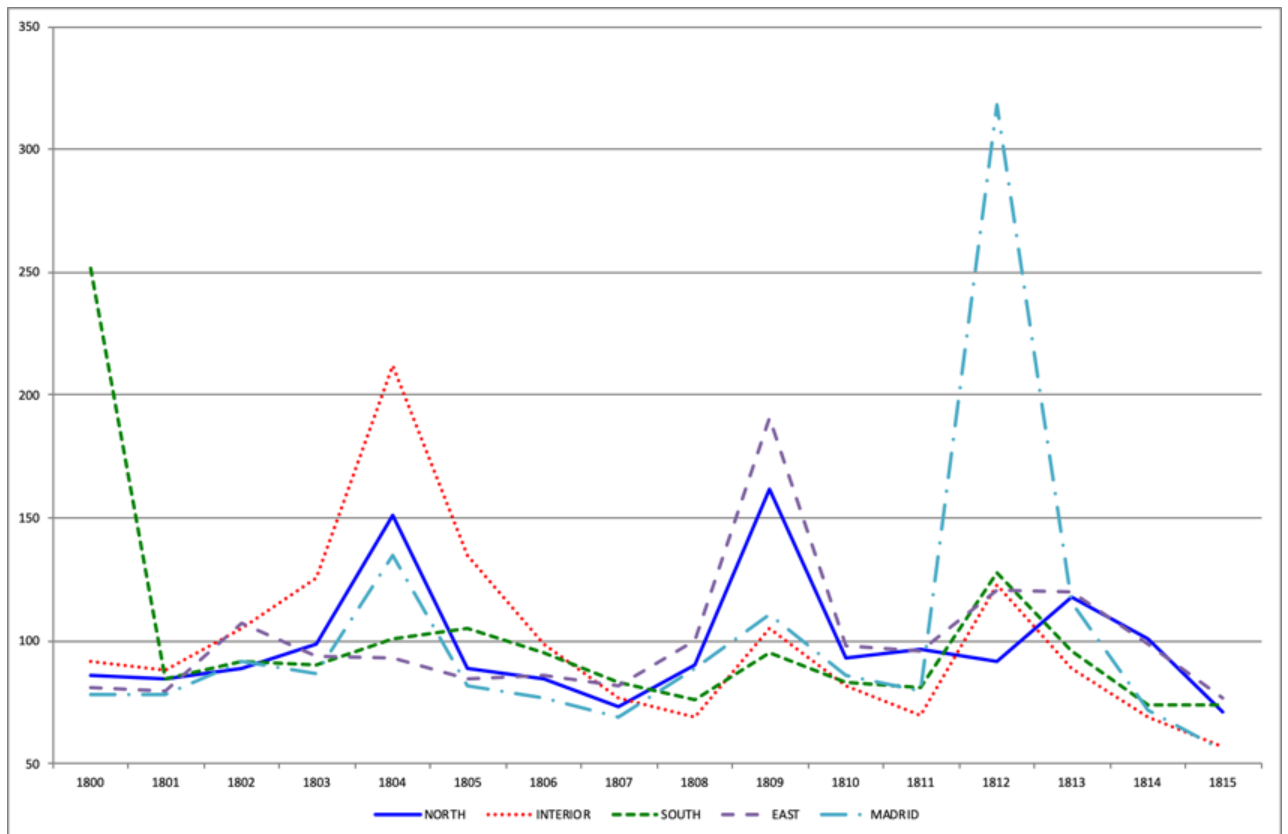
<sup>2</sup> As Sánchez Albornoz (1911) wrote, “during this period when most of the Spanish cities adorn their history with heroic deeds, not a single one is carried out in the Avila of the Loyalists and the Knights, a single act that would made the Avulenses of that time worthy descendants of the hidalgos from medieval Avila”.

from contemporary estimates suggesting an overall war toll of about one million (Muñoz Maldonado, 1833). Pérez Moreda (1985, 2010) considers this figure plausible, provided it includes the effects of the subsistence crisis of 1803/05 on the number of births. Thus, adding up direct casualties and losses resulting from excess mortality a total loss of nearly one million people can be suggested (Figure 3).



**Figure 3:** Population Conjectures: Spain, 1780-1820 (million).  
 Source: Prados de la Escosura et al. (2020)

Regional consequences were unevenly distributed. In the south and the interior, most of the increase in mortality took place before the war, as a result of the subsistence crisis of 1803/05. It was in the periphery that the effects of the conflict were considerably larger, particularly in Catalonia and the northern regions (Figure 4). Madrid was especially hard hit in 1812, as consequence of the poor harvest of 1811 and supply difficulties arising from warfare (Fraser, 2006: 203). Thus, those regions that had already experienced a significant population contraction during the previous subsistence crisis suffered a milder demographic impact during the Peninsular War.



**Figure 4:** Mortality in Spanish Regions, 1800-1815 (1800-1815=100).

Source: Canales (2017)

## Agriculture

The Peninsular War had deep and widespread effects on the agricultural sector. Plundering and confiscation by French and Allied armies imposed a considerable toll on producers. The war also affected Ancien Régime institutions that had conditioned the secular behaviour of farmers and peasants.

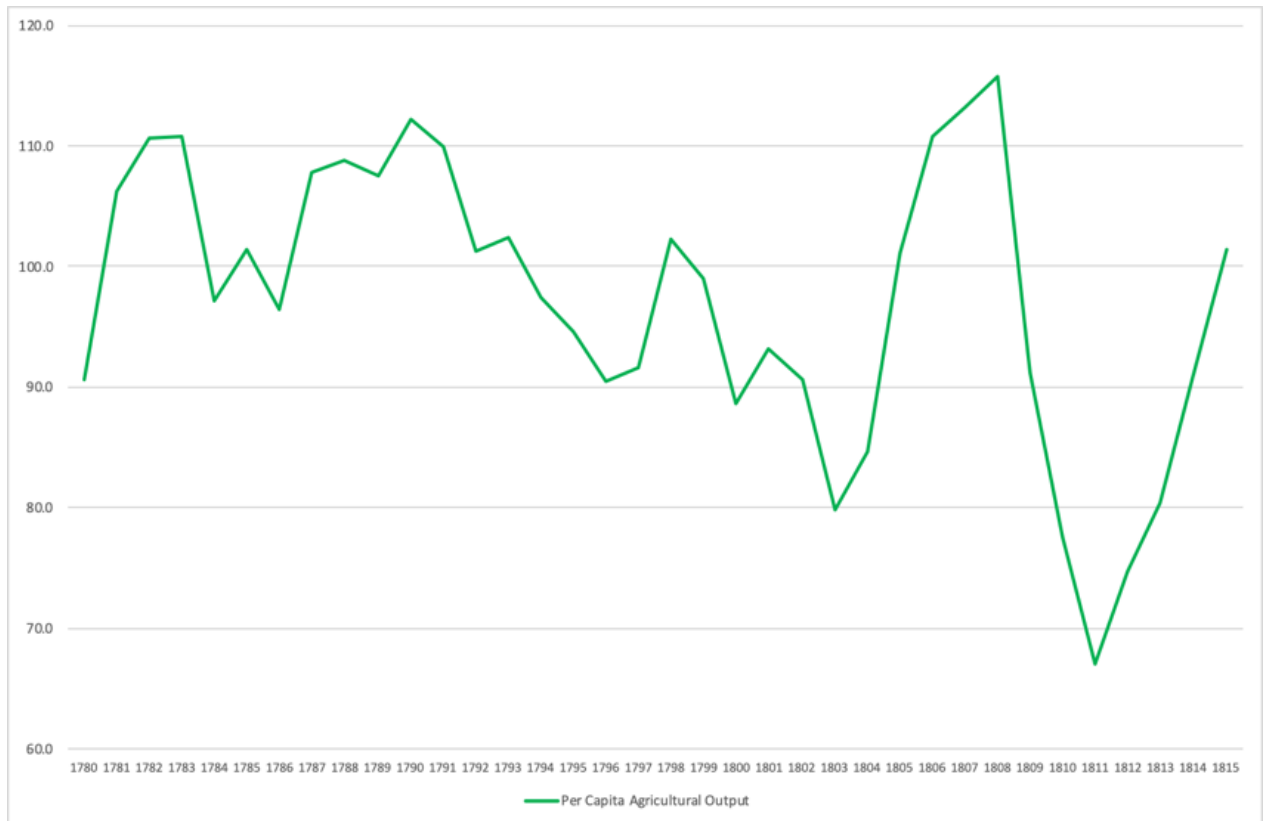
Napoleonic troops relied on supplies from France to carry out their military operations, but guerrilla attacks on their supply lines led to requisitions from local producers (Gates, 1987:41). The British expeditionary force also relied on requisitions but promised to pay for the expropriated produce.<sup>3</sup>

Confiscations of livestock were particularly significant and had two significant effects. First a decline in the amount of meat and dairy products consumed by the

<sup>3</sup> However, payments rarely occurred because farmers had to travel to Lisbon and wait for weeks to receive the money. Many of them sold the bills at considerable rates of discount (Fraser, 2006: 761).



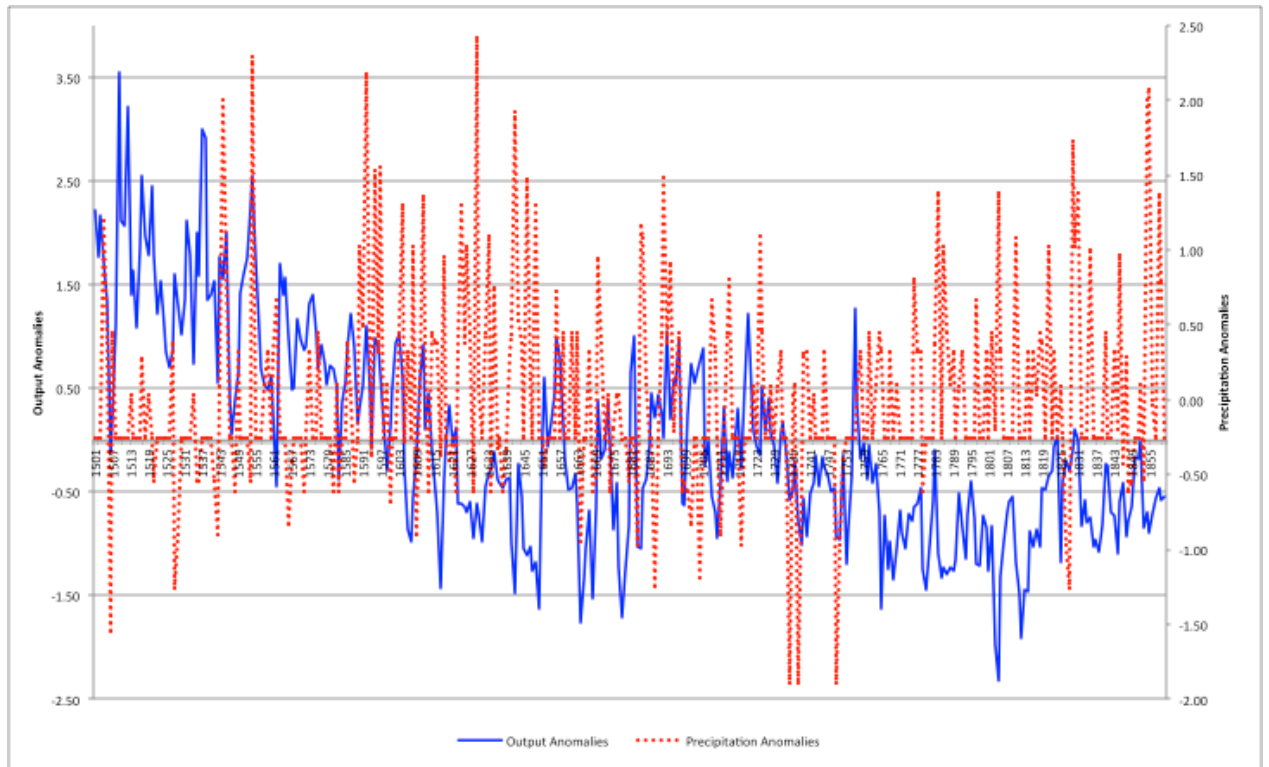
population. Secondly immediate and long term reduction in capital stock used for ploughing and transportation. Confiscatory taxation had similar effects. In Catalonia, for example, the French administration collected more than 100 million Reales from landlords and farmers.



**Figure 5:** Real Agricultural Output per Head, 1780-1815 [1790/99=100]  
 Source: Prados de la Escosura et al. (2020).

French invaders reformed Ancien Régime institutions. For example, they repealed the tithe, a religious tax that, in principle, represented 10 per cent of total production. Municipal laws restricting land cultivation at the extensive margin ceased to be enforced and thereby extended the frontier of land available for cultivation (Santiago-Caballero, 2013). *Desamortización* (namely, the confiscation and public sale of landed property owned by religious and communal institutions, took place during Joseph Bonaparte’s rule in order to finance the French army (Rueda Hernanz, 1997). Although the area affected was limited and confiscation was partially reversed after the war, the transformation of commons and church lands into private property became irreversible. This was not the first episode of disentailment. *Desamortización* had taken place in 1798, as a way of funding previous wars against the French Republic

and the United Kingdom (Herr, 1971) presents a challenge. Our estimates based on data related to tithes suggest a severe contraction occurred during the war followed by a rapid recovery (Figure 5).

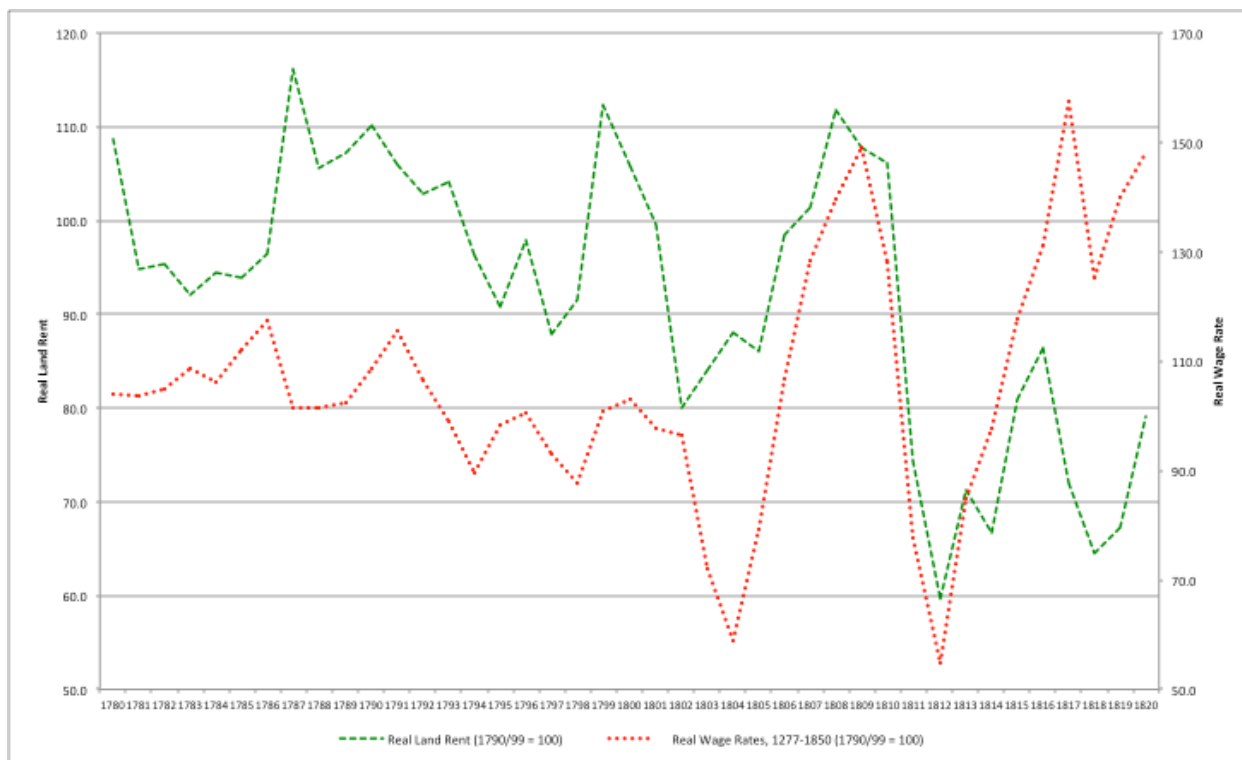


**Figure 6:** Agricultural Output and Precipitation Anomalies 1500-1855.

*Sources:* Agricultural output, Álvarez-Nogal et al. (2016); Precipitation, Rodrigo et al. (1999).

Output in preindustrial agriculture was highly dependent on climate conditions and the Napoleonic Wars coincided with a period of climatic instability. The Maldá Anomaly or oscillation, that simultaneously increased droughts and floods, coincided with the first Dalton Minimum -a phase of low solar radiation between 1790 and 1830-, and the eruption of the Tambora volcano in 1815, that increased atmospheric (CO<sub>2</sub>) concentration, bringing with it high climatic irregularity and hydrologic extremes. These climatic anomalies were matched by severe output fluctuations (Barriendos and Llasat, 2003; Barrera-Escoda and Llasat, 2015).

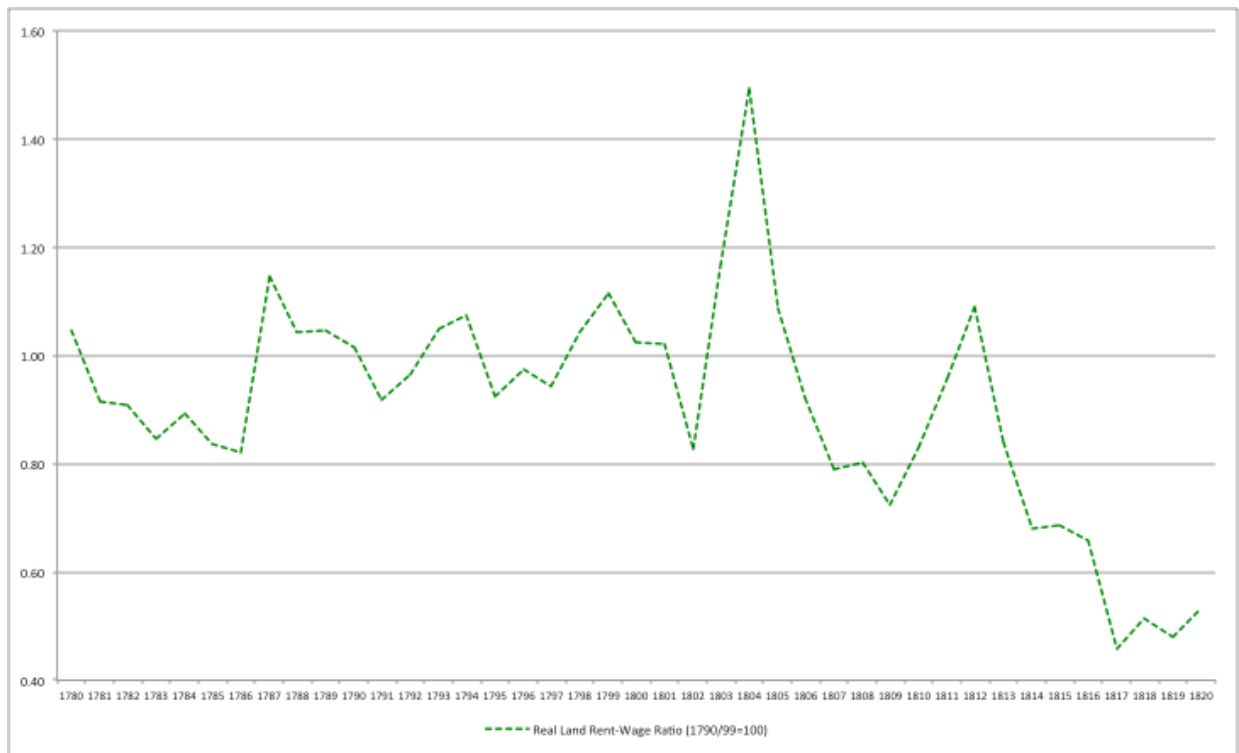
Figure 6 shows agricultural output and seasonal rainfall anomalies –namely, yearly deviations from the historical average relative to the standard deviation-. An inverse association between output and rainfall variations can be predicated, with wet periods associated to negative output fluctuations.



**Figure 7: Real Land Rent and Wage Rates, 1780-1820 (1790/99=100)**  
 Source: Álvarez-Nogal and Prados de la Escosura (2013)

The exogenous shock brought by the war and climatic anomalies impacted on the returns to factors of production. The extension of land under cultivation depressed land rents. They fell by nearly 50 per cent between 1808 and 1812 and never re-gained pre-war levels (Figure 7). Real wages suffered a more intense reduction during the war but returned to pre-war levels by 1817.

Comparing land rents and real wages allowed us to draw trends in income distribution. Returns from land ownership are incomes more unevenly distributed than returns from wages. Thus, the rent-wage ratio provides a measure of changes in income inequality. The ratio displays a tendency to decline from 1800 onwards a tendency that was not reversed at the end of the war except for two peaks during the pre-war subsistence crisis (1804) and in the Peninsular War (1812) (Figure 8).



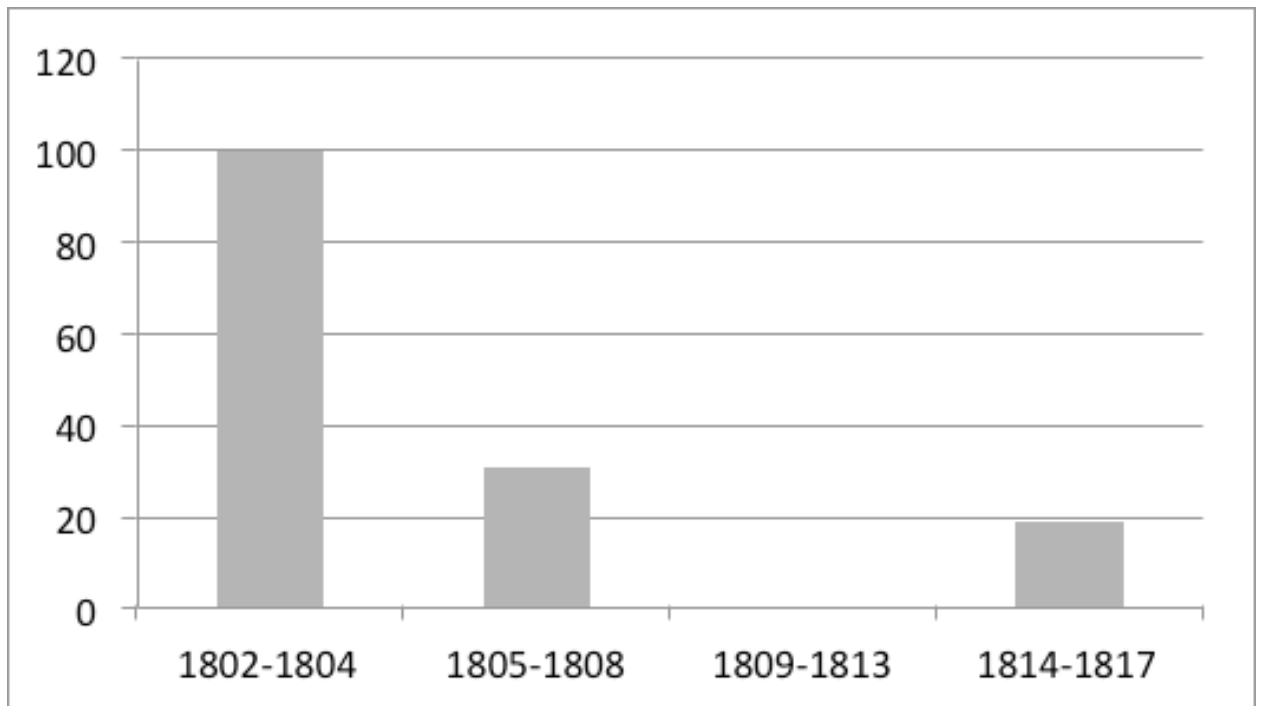
**Figure 8:** Inequality Trends: Real Land Rent/Wage Rate ratio, 1780-1820 (1790/99=100)  
*Source:* Álvarez-Nogal and Prados de la Escosura (2013)

## Industry

The effects of war on the industrial sector included the reduction of internal and external demand, scarcity of inputs, and heavy taxation. In addition, producers faced unrestricted competition from French and British goods.

For example, in the woollen factory of Astudillo, one of the main centres of textile production in Old Castile, the price of wool more than tripled between 1808 and 1814. The requisition of animals and the increase of transport costs were probably behind these changes, while the invasion of common municipal lands and their use for cultivation also reduced the available pastures to feed sheep. Producers were forced to cut down prices and profit margins (Hernández García, 2004: 171).

In the case of the cotton industry, mainly located in Catalonia, inputs scarcity severely restricted production. For example, Erasmo de Gómina's factory in Barcelona interrupted inputs purchases (cotton and dyes) during the Peninsular War (Figure 9).



**Figure 9:** Inputs Bought by Erasmo de Gómina's Cotton Textile Company (1802-04=100)  
 Source: Sánchez (2010)

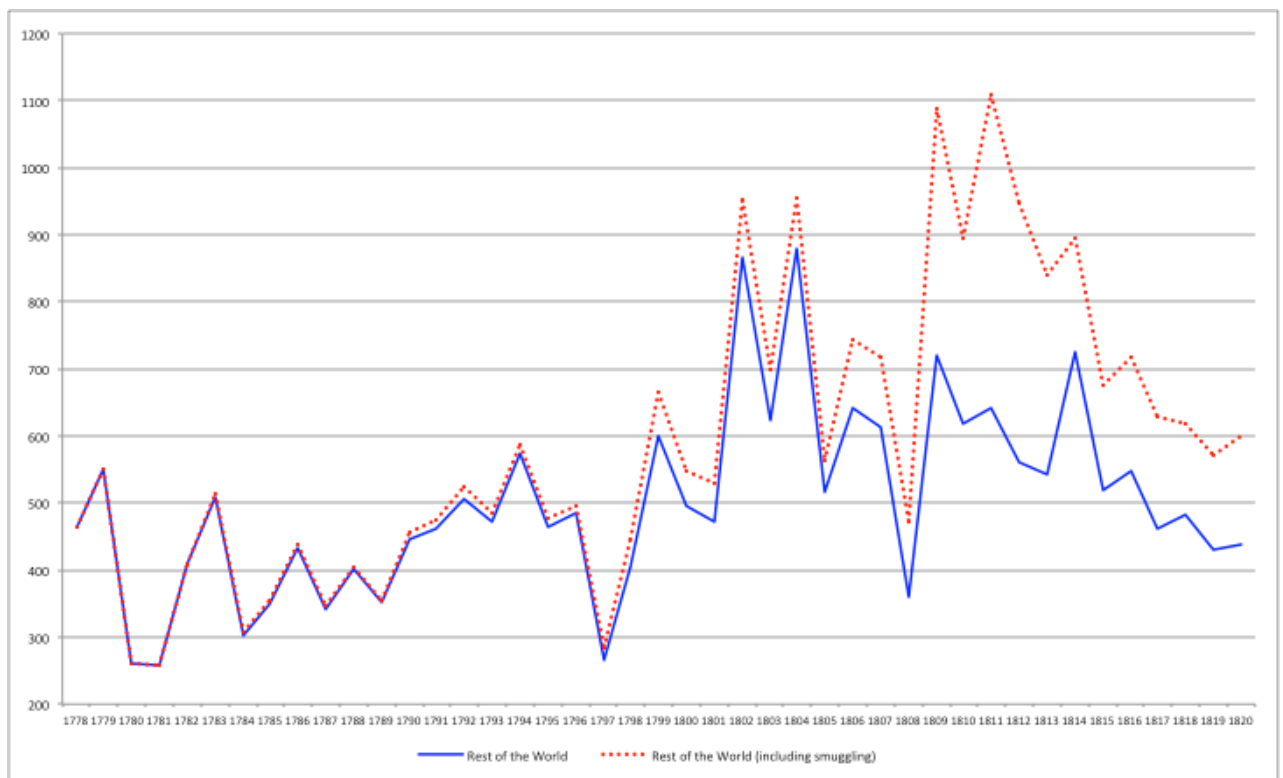
Heavier taxation to finance the war effort by both French and Allied authorities drained resources from productive activities and reduced incentives for economic activity. In Astudillo, textile producers were charged with additional taxes for the city to fund the French invaders (Hernández García, 2004: 162). In Murcia, after the French took the city on April 25<sup>th</sup> 1810, General Sebastiani obtained a ransom of 34,560 Reales for not sacking the city that was mainly paid by local businesses (Melendreras Gimeno, 2000: 64).

The so-called Royal Factories (*Reales Fábricas*) also suffered the effects of the war and never recovered. They had been established to reduce the importation of valuable goods such as porcelain, glass, and fine textiles and to upgrade the technologies used by local producers (La Force, 1965). However, their impact remained limited and they virtually ceased to exist after the end of the Peninsular War (Benaúl and Sánchez, 2004). The Royal Factory of Porcelain in Madrid was completely destroyed by English troops before leaving the capital in 1812 (Martínez Caviro, 1973).

Although the immediate effects of the war were probably similar across industries, while traditional industries collapsed, modern industries continued to adopt new technologies. The recovery, however, was not immediate and in the Catalan

cotton industry pre-war (1783-97) nominal levels of investment were only met in the 1830s (Sánchez, 2000: 502).

An additional problem for domestic industry wrought by the war was a high level of smuggling. Net imports experienced exponential growth during the war, and one-third were smuggled through Gibraltar and Portugal (cotton textiles and tobacco, in particular) (Figure 10). In addition, the Napoleonic authorities allowed French traders to flood Spain with French manufactures.

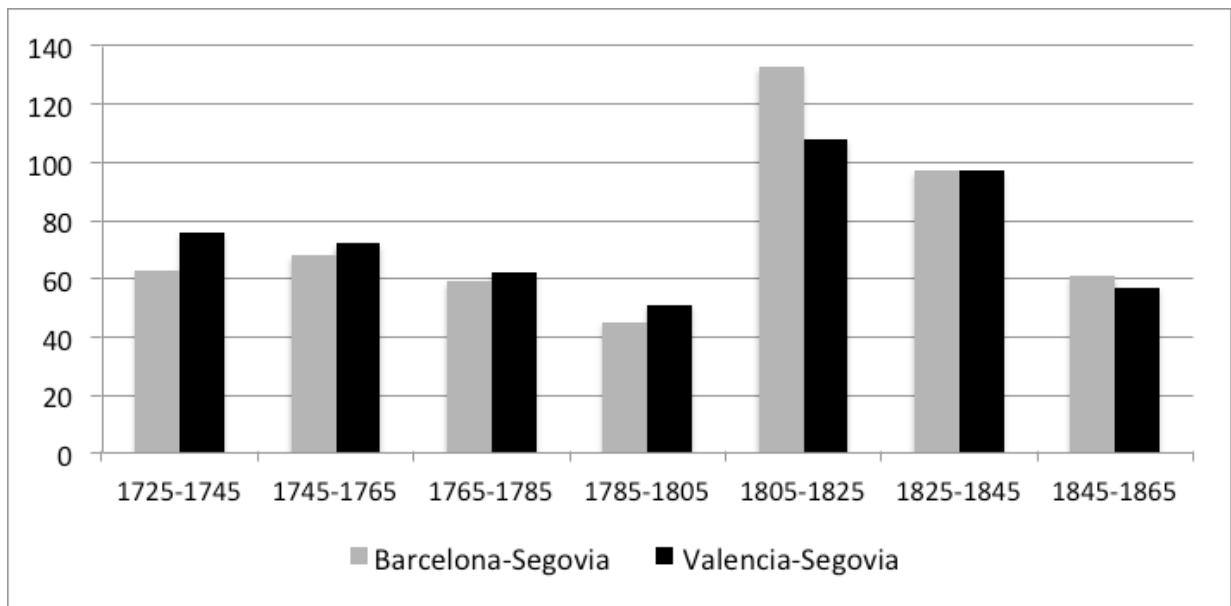


**Figure 10:** Spanish Net Imports from the Rest of the World (excl. Spanish America), 1783-1820: with and without Smuggling (000 1808 Reales)  
*Source:* Prados de la Escosura (1993)

## Trade

One of the most obvious effects of the war was the immediate disruption of both internal and international trade. Markets had gradually integrated during the eighteenth century as the fall of the price differential for wheat between coastal and interior regions suggests (Llopis Agelán, 2010) (Figure 11). The war provoked a reversal, and a return to pre-Peninsular War levels of integration had to wait until the mid-nineteenth century (Peña and Sánchez-Albornoz, 1983). Market disintegration

proved negative for economic activity by increasing transport costs and restricting the supply of goods to urban centres (Ringrose, 1970, 1983).

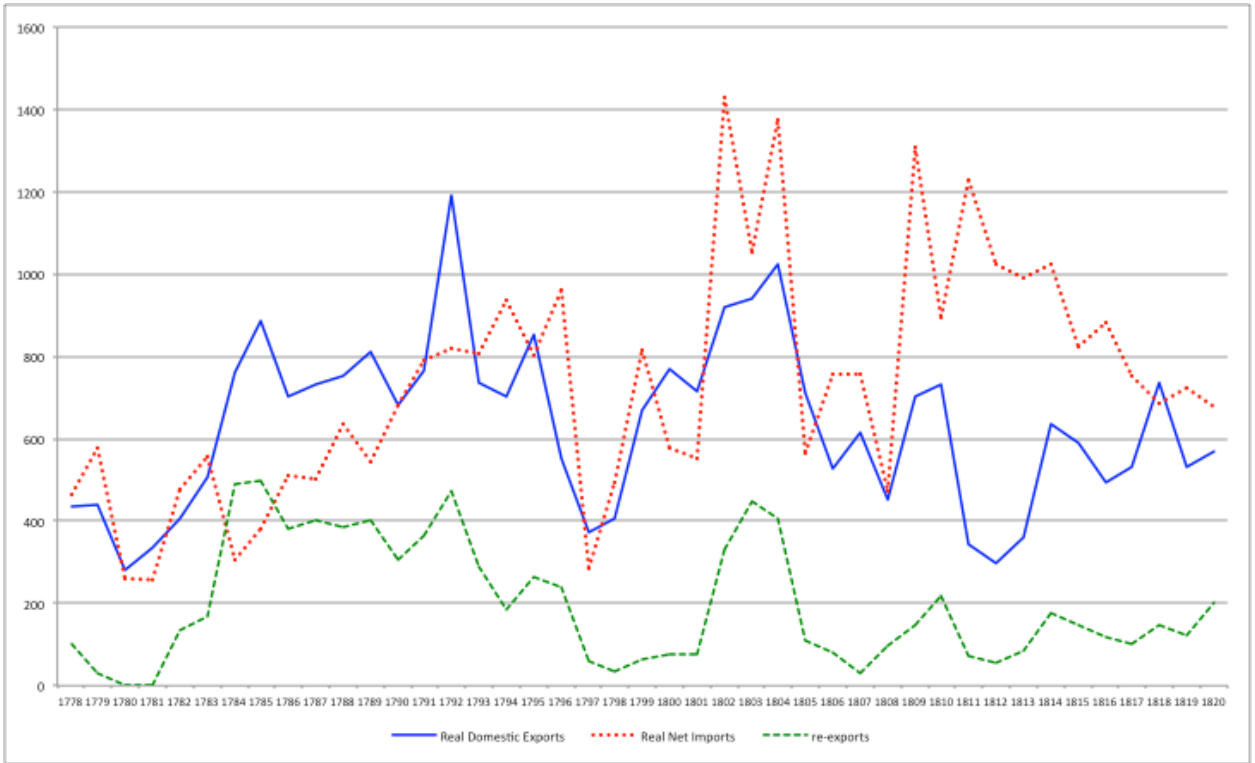


**Figure 11:** Market integration: average wheat price differentials (%)

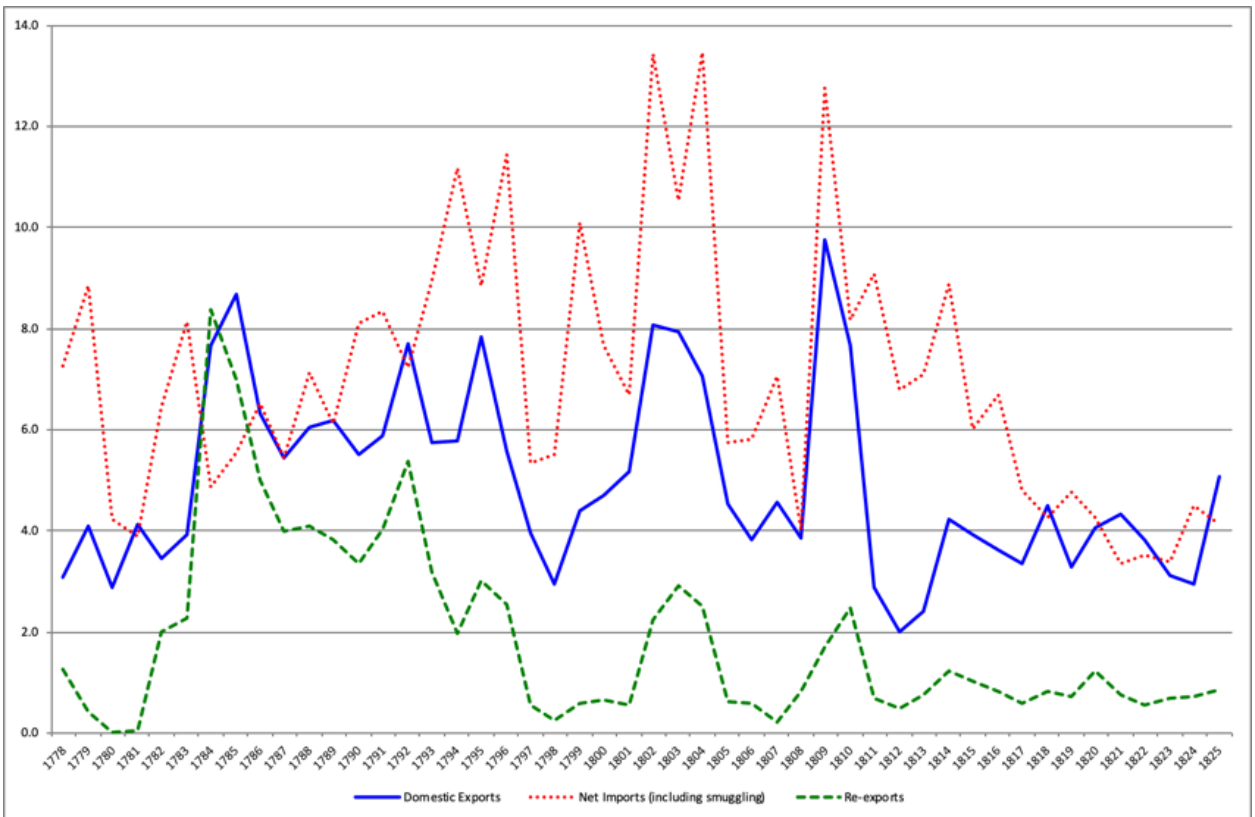
**Source:** Llopis Agelán (2010)

Transport costs increased due not only to rising insecurity but also shortages of manpower. Muleteers dominated short and mid-distance internal trade. French and Allied armies forced muleteers to service them and reduced regular transport services (Ros, 1999: 195). Furthermore, guerrillas confiscated grain supplies, including supplies for Madrid in 1813 (Fraser, 2006: 697).

International trade increased during the eighteenth century, promoting monetisation and market orientation at a time of expanding population and rising land rents. This trend suffered a reversal during the Napoleonic Wars. For almost two decades since the break out of the war with Britain in October 1796, Spain maintained almost no links with its colonies. The French invasion contracted trade further and triggered the struggle for independence in Spanish America (Grafe and Irigoín, 2012: 368).



**Figure 12a:** Real Domestic Exports, Net Imports, and Re-exports, 1778-1820 (1808 Reales)



**Figure 12b:** Trade Shares: Domestic Exports, Net Imports, and Re-exports, 1778-1820 (% GDP)  
*Sources:* Trade, Prados de la Escosura (1993); GDP, Prados de la Escosura et al. (2020)



Trade fell dramatically after the outbreak of war in 1797, briefly recovering after the Amiens peace (1802) and shrank again as war resumed (1805-1808) (Figure 12a). The Peninsular War reduced real domestic exports again. They experienced a trough in 1812, while real re-exports declined to very low levels. Imports retained for domestic consumption recovered during the war (1809-11), largely due to allied supplies, but experienced steady decline thereafter. Relative to the size of the economy, the contraction of the trade sector is even more dramatic, with domestic exports and net imports falling after 1802 and re-exports declining after 1793 (Figure 12b).

Trade with Spanish American colonies stimulated industry and services because protectionist legislation made Spanish manufactures artificially competitive. Industrial exports were concentrated in two sectors, textiles and food (36.6 and 22.3% of total domestic exports in 1792) followed by paper and iron (4.4 and 3.2%). Some of these industries represented advanced manufacturing sectors that had important effects on the development of their regions of origin. Shipbuilding and its associate activities (iron, cordage, and timber industries) were favoured by Spanish navigation laws. At most, exports of domestic manufactures to the colonies made a 5% contribution to industrial value added before the Napoleonic Wars (Prados de la Escosura, 1993).

The composition of colonial trade suggests that the possibility of increasing production by reallocating resources was small, and that most gains probably resulted from changes to consumption patterns. By 1792, over 60% of retained imports consisted of cocoa and sugar. Furthermore, Spain's dependence on the colonies for raw materials was very small (raw cotton and dyestuffs only represented 4% of retained imports in 1792) (Prados de la Escosura 1993). Since these colonial products could have been acquired on international markets, gains from colonial trade would only occur if Spain acquired the same commodities at lower prices. Furthermore, the low dependence on colonial raw materials provides a measure of the weakness of domestic manufacturing. In the Catalan cotton textile industry, European cotton yarn imports were more important than colonial raw cotton imports which suggests that the spinning industry was weak at the time.

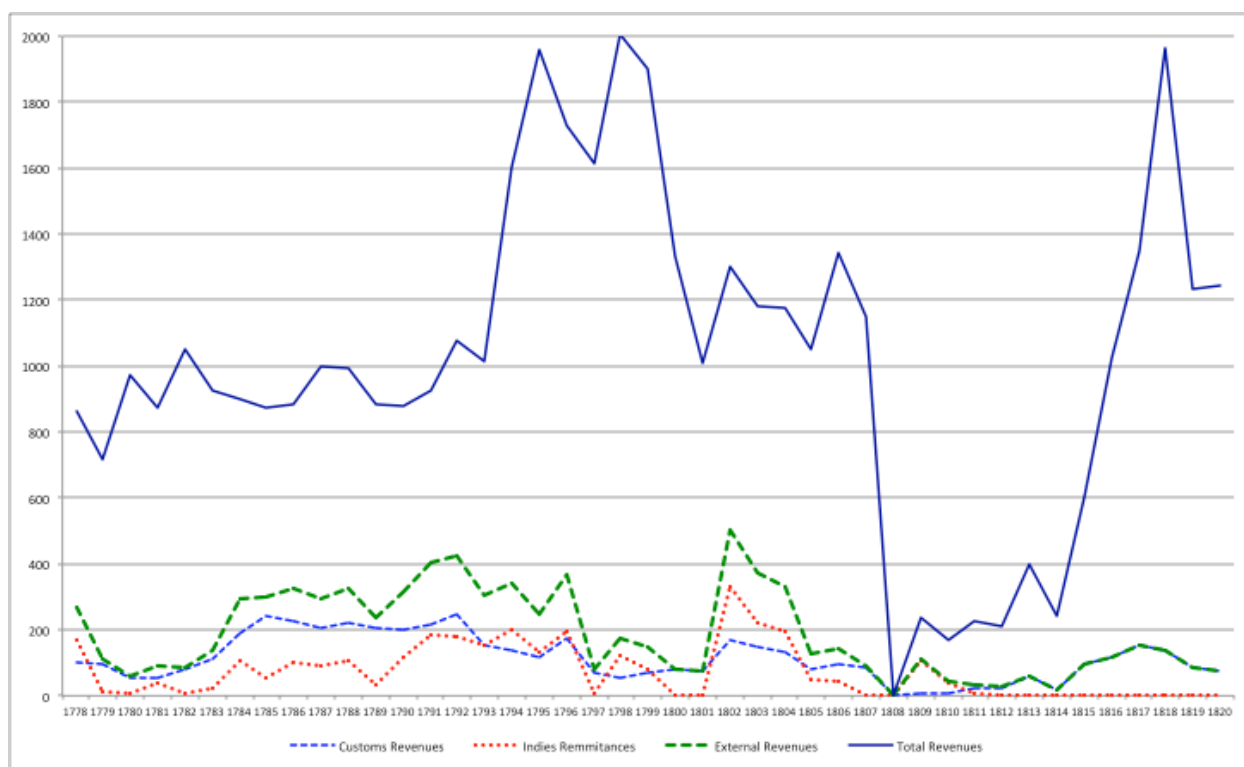
The subsequent decline in domestic exports (some 25% between 1784/96 and 1815/20) can be attributed almost exclusively to the fall in colonial commerce (which shrank by 60%). This marks the end of a long-standing equilibrium distribution of domestic exports between colonial and European markets (roughly one-third and two-thirds, respectively), and the establishment of a new pattern that continued throughout the nineteenth century (with foreign markets absorbing four-fifths). Retained imports of colonial goods for domestic consumption (which had represented one-fifth of total retained imports) fell to 15%, but again this was offset by imports from Europe. The collapse of trade with the empire was particularly significant for the service sector (finance, insurance, and transportation). Total real re-exports collapsed to 40% of the pre-war levels and re-exports to Latin America by three-fourths between 1784/96 and 1815/20. Spain's balance of trade also felt the effects of colonial independence. Before the loss of empire, Spain had a deficit on current account with foreign countries that was balanced by a corresponding surplus in colonial trade. With colonial emancipation that balance disappeared, with deflationary consequences for the domestic economy. Fortunately, a favourable shift in the terms of trade vis-à-vis Europe compensated for the deterioration of the terms of trade with the colonies and increased the purchasing power per unit of exports by nearly 40% between 1784/96 and 1815/20. This allowed Spain to avoid a further deterioration in the current account balance.

A conjectural estimate of the real cost to Spain from the loss of her colonies questions the generally accepted view that the cost was significant (Prados de la Escosura, 1993). It is based upon assumptions that the resources embodied in exported commodities and services had alternative uses in the domestic economy. In contrast to other trades exports to the colonies were transported in Spanish ships. Thus, the decline of Spanish American trade led to a contraction in Spanish maritime services. Furthermore, the loss in state revenues from the cessation of precious metal shipments, and the reduction of customs duties resulting from colonial independence have been taken into account by assuming that public revenues from the colonies were productively used in the domestic economy. Thus, the upper bound estimate of Spanish losses implied by these assumptions comes to around 6% of national income.

And while it could be argued that the profits from colonial trade represented a high proportion of the funds used to finance investment in Spain, an upper bound estimate of their contribution made to total capital formation was already below 15% by 1784/96. These estimated, derived from a static framework, are consistent with Palma's (2016). He used a dynamic model to suggest that intercontinental trade raised real wages by 6.2% and urbanization by 3.9 percentage points which are relatively low figures in European perspective.

## Finance

In addition to the contraction of external public revenues (customs revenues plus Indies' remittances, namely, surpluses from colonial administration), as a result of the sharp decline of international and colonial trade, the Peninsular War led to the collapse of all government revenues to one-fifth of pre-bellum (1784-96) levels, an amount which was and to about one-tenth of its normal size (Figure 13). To offset this collapse, between 1808 and 1815, the British Government made advances of £7.8 million in money, weapons, and supplies. (Sherwig, 1969), that Spain never repaid.

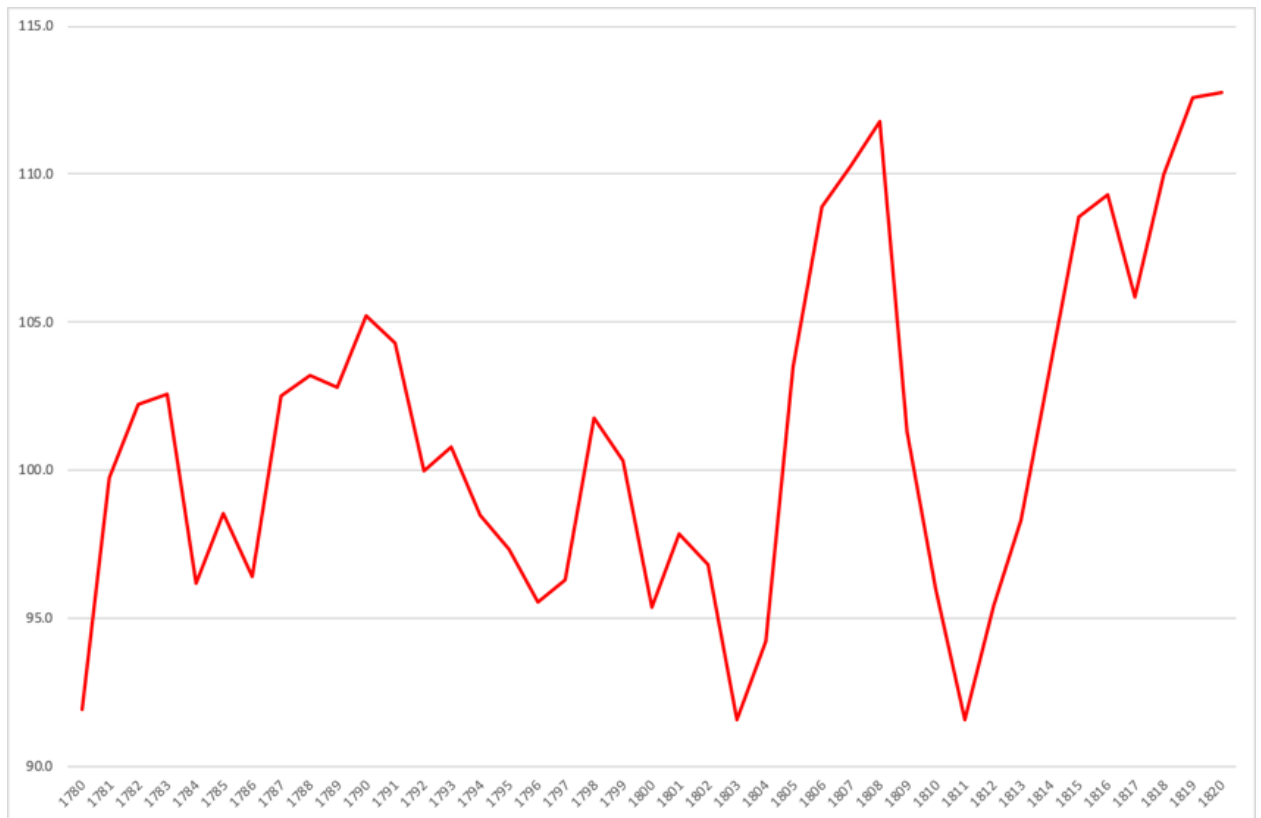


**Figure 13.** The Evolution of Public Revenues, 1778-1820 [Million Reales, 1808 prices]  
*Source:* Prados de la Escosura (1993)

Finally, the war also introduced distortions into the monetary system. For example, it provided the French authorities with an opportunity to extract precious metals from Spain via monetary manipulations. French currency was allowed to circulate and to be accepted for payments in Spain. An *ad hoc* Commission established exchange rates that assigned the same purchasing power to French coins, with lower intrinsic metallic content, than Spanish coins. On average, the differential was about 10 per cent for the most commonly used coins (Vadillo, 1846). As a consequence, in occupied territories Spanish coins disappeared and only French currency circulated (Queipo de Llano, 2010: 1136). The situation was not easily reversed and French coins remained in circulation after the war (Sardá, 1948). These monetary costs not only implied a loss of silver, but also contributed to macroeconomic instability.

### **Summing up**

The Peninsular War had deep and negative economic consequences for Spain. The demographic impact, direct and indirect, can be represented a disaster for Spain. Population fell by one million short of its potential level. The half a million casualties or so represents around 5 per cent of the population, which is more than double the ratio recorded for the 1936-39 Civil War. The Peninsular War was the bloodiest conflict in Spain's modern history. Its short-term effects on agriculture are ambiguous. On the credit side, the suspension of pre-war laws with respect to tithes allowed farmers to increase the area of cultivated land and to pay reduced rents for land. On the negative side, confiscations of livestock reduced the stock of agricultural capital. The war afflicted the industrial sector in different ways. An impoverished population reduced its consumption. Military operations increased transport costs and input prices. Heavier taxes diverted capital from productive investment. Services were also disrupted. International trade experienced a dramatic collapse. Government revenues also collapsed and the outflow of silver had a deflationary impact on the economy. As a consequence, GDP per head fell during the Peninsular War and its relative decline was only surpassed by the severe subsistence crisis of 1803/05 (Figure 14), even though its regional effects were very unevenly distributed.



**Figure 14.** Real GDP per head, 1780-1820 [1790/99=100]

*Source:* Prados de la Escosura et al. (2020)

The Peninsular War also ignited the fight for independence in Spanish America and their institutional consequences were far from negligible. The empire had strengthened Spain's absolutist monarchy. Colonial revenues promoted, consolidated, and concentrated the power of the state (Yun Casalilla, 1998). Prior to the Napoleonic Wars, the Crown revenues from the colonies (including the surpluses from colonial chests and customs duties) represented one-fourth of the total (Cuenca, 1981). This reduced the monarchy's need to raise taxes and to bargain over fiscal policies with its subjects, reducing the state need to increase taxation on the metropolis population. The colonial empire consolidated and stabilised traditional institutions and structures of power. The emancipation of the American colonies thereby contributed to the end of the Ancien Régime (Fontana, 1991), and opened the way to the liberal reforms.

## **II. The Liberal Revolution**

It included a redefinition of property rights that changed the status of Spain's population status from subjects to citizens equal before the law, the liberalization of commodity and factor markets, and the Parliamentary control over public revenues and expenditure. Nevertheless this was a long process fraught with difficulties and reversals.

The first step involved intellectual property rights. After the short-lived patent act of 1820, legislation that regulated property rights for innovation was introduced in 1826 (Sáiz González, 1995: 90). The number of patents rose steadily, especially between 1843 and 1864 (Saiz González, 1996: 14).

The second and more significant step came with the modern Code of Commerce in 1829, which concentrated commercial matters into a single unified legal framework which reduced uncertainty and transaction costs. The Code of Commerce, the creation of the Bank of San Fernando, and the establishment of the stock market in Madrid in 1831, provided for the institutional transformation of the financial system (Tedde, 1994; Artola, 1983: 307).

The liberalization of commodity and factor markets implied major changes. The gradual suppression of the tithe increased disposable income. The tithe was halved in 1821, and though formally abolished in 1837, the First *Carlist War* delayed its definitive elimination until 1841. In 1834, the internal market for primary products was liberalised and taxes on the exportation of grains exports abolished (Artola, 1983: 297).

Guilds that restricted the formation of relevant skills and the participation of women in industrial work activities were suppressed. In 1813 the Cadiz Parliamentary Assembly (Cortes) decreed that establishing a factory or carrying out an industrious activity did not require the previous approval, or membership, of any guild (Real Decreto 8th June 1813). However, in 1814, the absolutist government repealed the decree, and the elimination of guild privileges became only effective in the mid-1830s (R.D. 20th January 1834 and 6th December 1836).

The liberalization of the land market included the elimination of *mayorazgo* (an institution that permitted accumulating assets, but whose property could not be alienated or divided in inheritance) and the *desamortización* (disentailment) or the confiscation and sale of ecclesiastical, communal, and public land. The change from *mayorazgo* and entailed property to absolute property rights reduced transaction costs, increased the amount of land in the market, and provided incentives for its exploitation. *Desamortización* was also motivated by government's need to increase its revenues. Although 'old' taxes disappeared, broadening the fiscal base at a time of rising demand for public services among the new citizens was difficult and the fiscal reform was delayed until 1845 (Tedde, 1994; Comín, 1988, 1990).

The reformed property rights also implied the abolition of the privileges enjoyed by the *Mesta*. These privileges had imposed severe limitations on the ability of landowners to enclose their properties (García Martín, 1988: 123). The laws passed in 1813, and reinstated in 1834, explicitly allowing enclosures and reinforced owners' property rights.

The redefinition of land property rights was, however, not a smooth process. The upper nobility took advantage of a weak state to transform their jurisdictional rights over given territories into rights of ownership by expropriating the rights of the local peasants (Moxó, 1965).

A stream of the literature has claimed that the *desamortización* did not change the ownership structure of landed property as only the affluent could afford to buy confiscated land property (Herr, 1971, 1989). A careful assessment of the literature has, however, revealed a more mixed regional outcome (Rueda Hernanz, 1985, 1997).

Recently, the view that the diffusion of liberal property rights to land led to efficiency gains (García Sanz, 1985) has been challenged by some historians. They argue that the elimination of communal property represented a heavy blow to peasants' living (Beltrán Tapia, 2015) and that village communities were undermined by the spread of markets coupled with fiscal demands for cash at a time of deflation (Fontana, 1978; Torras, 1976). The reforms provoked an anti-liberal Carlist reaction among peasants and gentry whose grievances were augmented by the virtual

disappearance of public goods such as *pósitos*<sup>4</sup> and hospitals that the church and other institutions had provided under the Ancien Régime but the new liberal regime could no longer afford.

We could, therefore, conclude that the institutional changes were initiated by and followed on the Peninsular War were part of the liberal reform movement. War acted as a catalyst for the development of liberal economic policies, even before the French invasion. In the wake of warfare new property rights emerged in Spain that reduced information and transaction costs, and led to the re-distribution of wealth and income.

### **III. *The long-run impact***

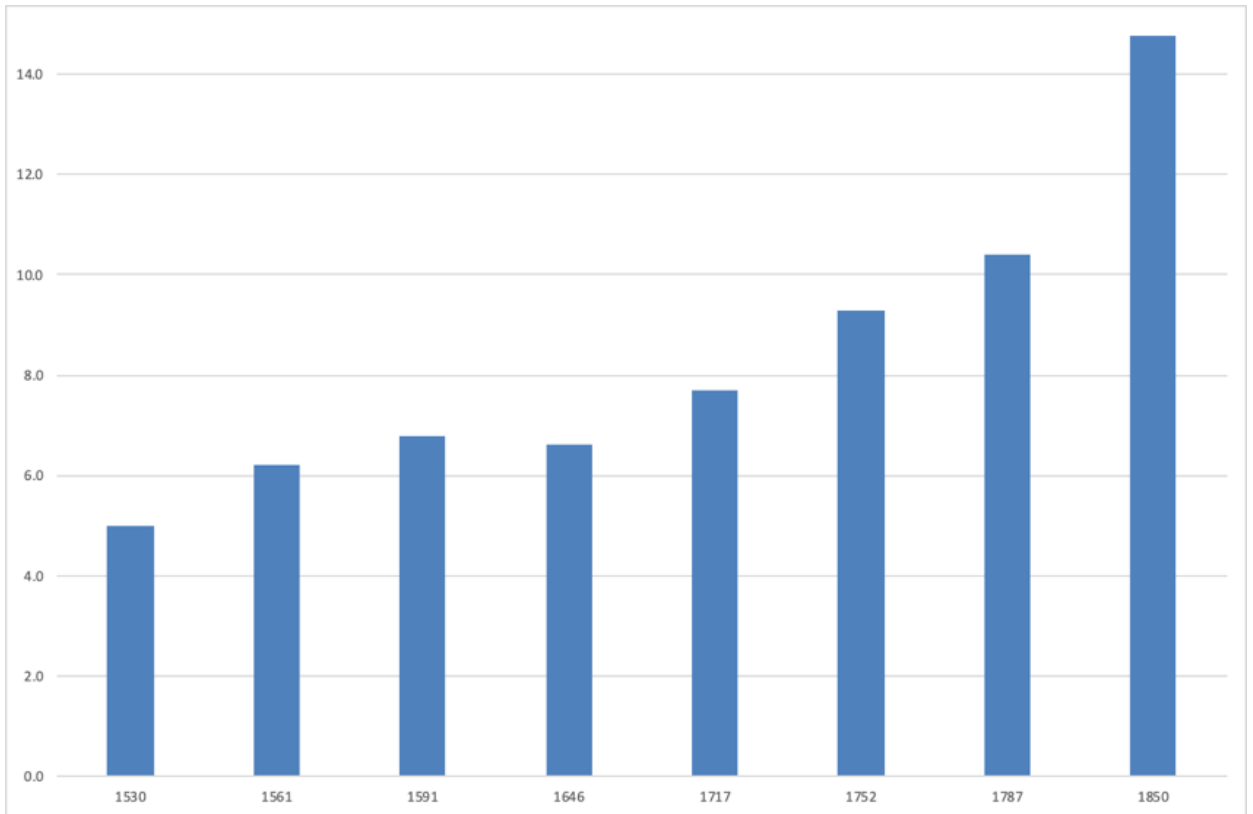
So far our focus has been on the short-term consequences of the Napoleonic Wars. However, their long run consequences, largely neglected by historians, deserve consideration. A glance at the post-Napoleonic Wars era reveals a distinctive behaviour, when compared to the pre-war era, for key dimensions of social and economic activity. Thus, over the years 1820-60 demographic expansion accelerated and nearly doubling its natural rate of increase compared to the second half of the eighteenth century (from 0.42 to 0.76% yearly) (Pérez Moreda, 1999: 8). By 1860, the size of the population was 50% per cent larger than in 1787 (Figure 15).

Furthermore, the distribution of the population also continued to change. From a geographic perspective, the tendency to concentrate on the Peninsula's periphery intensified. More significant from an economic point of view was the increase in the rate of urbanization in the early nineteenth century (0.4 %). The share of population living in towns of 5,000 and over, and that exclude those living on agriculture shows that, by 1857, almost one-fourth of the population (22.9%) ceased to depend upon agriculture for subsistence, a significant change in the level for 1787 (17.4) (Figure 16).

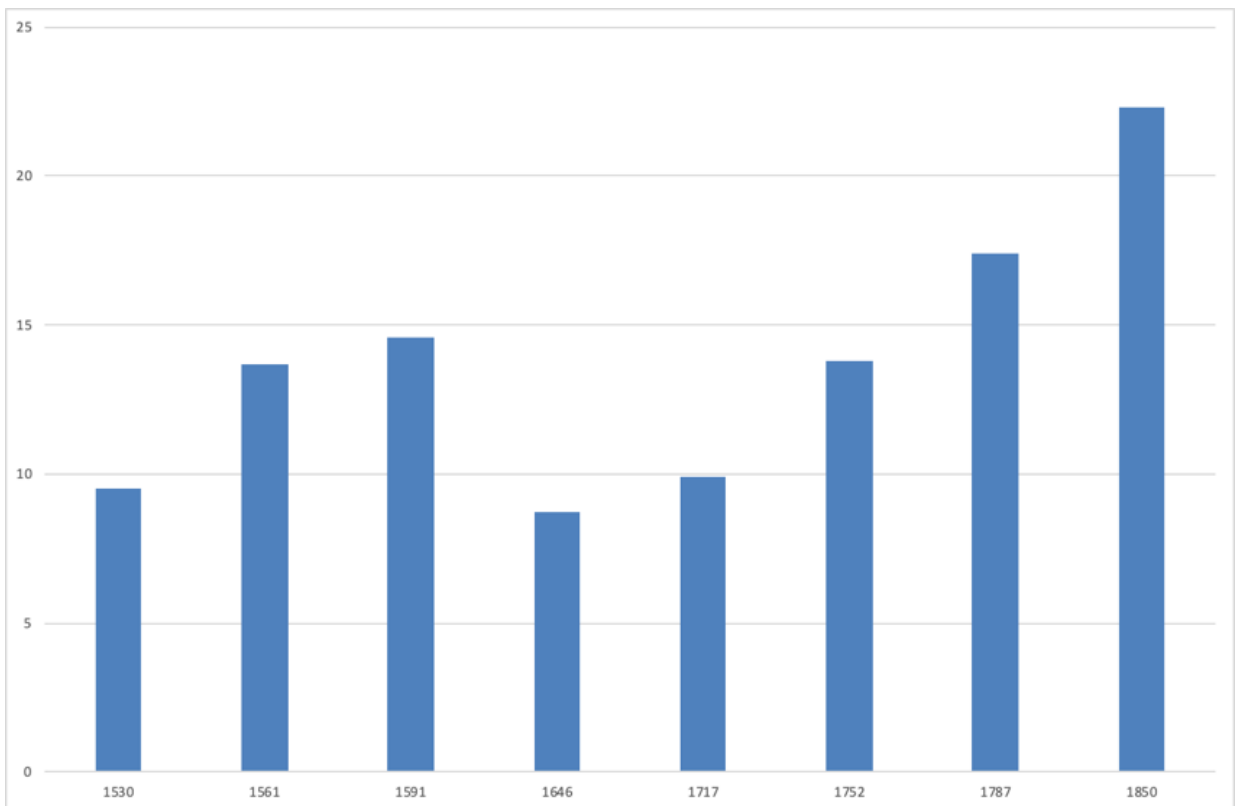
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<sup>4</sup> Municipal institutions, destined to store cereals for their loan to the peasants in times of scarcity.



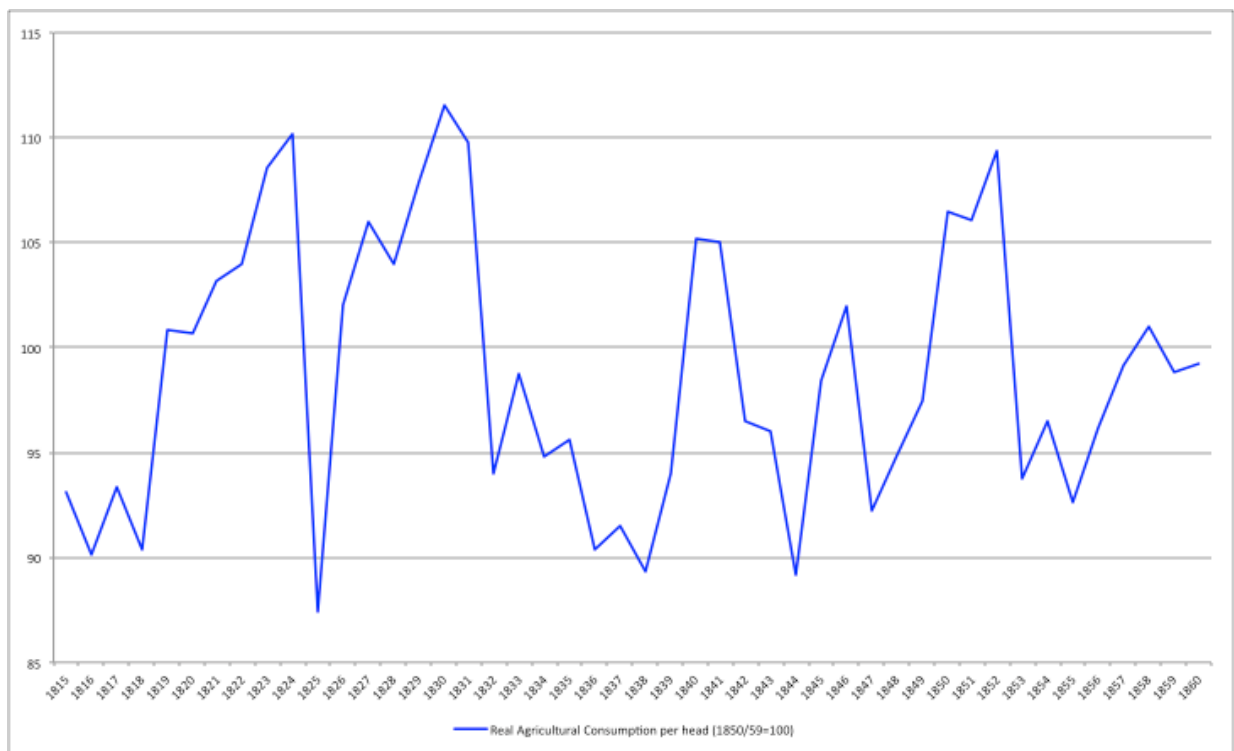


**Figure 15** Population, 1530-1857  
*Sources:* Prados de la Escosura et al. (2020)



**Figure 16** Adjusted Urbanization Rates (less population living on agriculture) 1530-1857 (%)  
*Sources:* Prados de la Escosura et al. (2020)

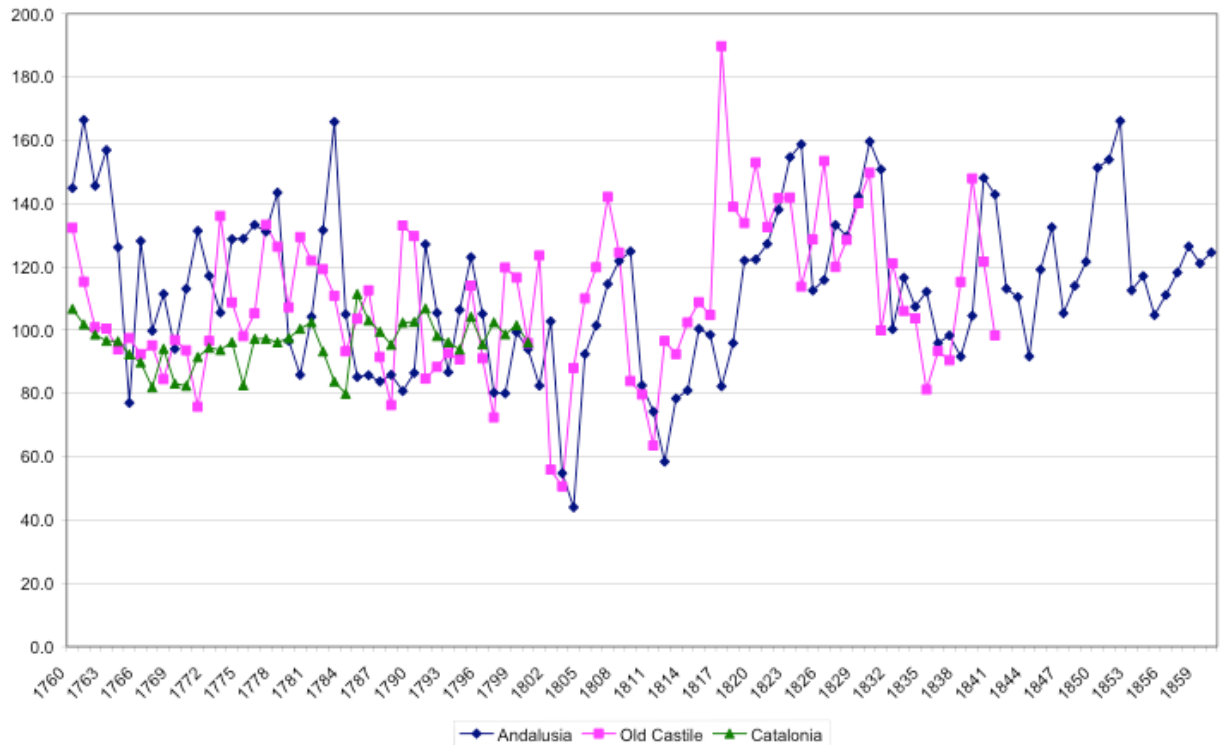
Agricultural consumption per person increased during the 1820s, fell during the Carlist War (1833-39) and, then, exhibited a growing trend until the early 1850s (Figure 17). From a long run perspective, the early nineteenth century has been represented as a break in the declining trend of consumption per head. It improved at yearly rate of 0.33 per cent between the 1810s and the 1850s (Álvarez-Nogal and Prados de la Escosura, 2013). It is worth noting also that, after the Peninsular War, there was a shift upwards in the level of efficiency (total factor productivity) in agriculture in Andalusia and Old Castile (Figure 18).



**Figure 17** Real Consumption per head in Agriculture, 1815-1850 (1850/9=100)  
Sources: Álvarez-Nogal and Prados de la Escosura (2013)

The increase in the variety of goods and services provided by the market and the reform of land property rights that broadened access to property, favoured a new scenario in which increasing real wage rates went up along with an intensification of work.<sup>5</sup> Thus, during the first half of the nineteenth century while economically active population in agriculture multiplied by 1.5, the area of cultivated land did by 2.4 (Bringas Gutiérrez, 2000: 86).

<sup>5</sup> Thus, by 1850, economically active population in agriculture worked an average of 240 days per year (García Sanz, 1979-80) compared to around 170 days in the eighteenth century (Álvarez-Nogal and Prados de la Escosura, 2013).

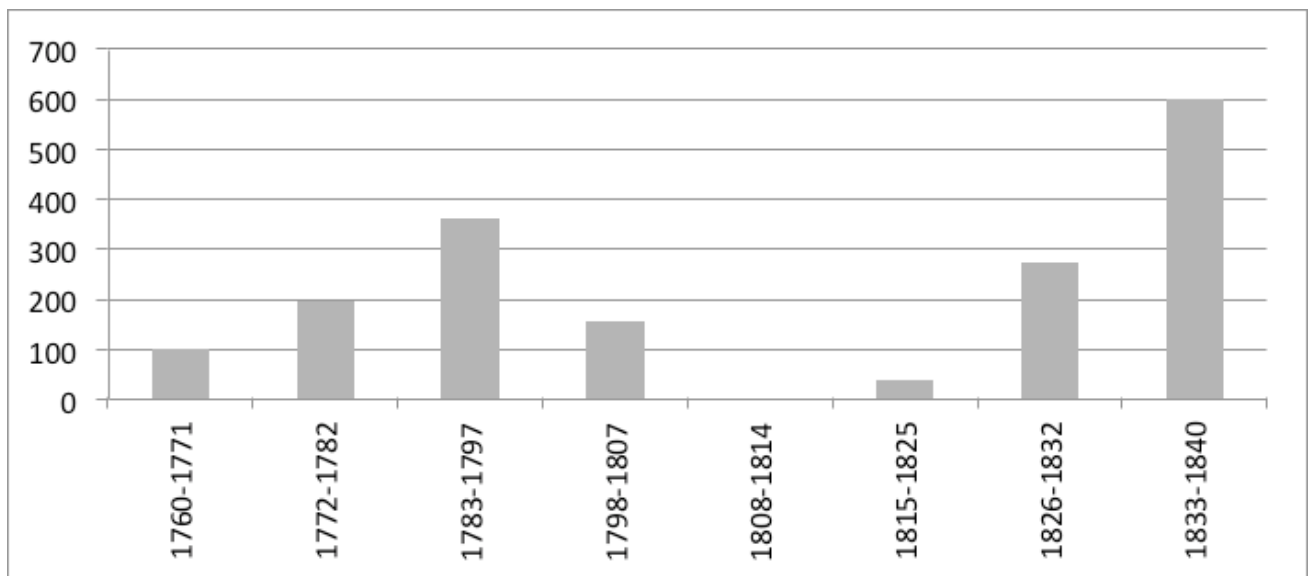


**Figure 18** Total Factor Productivity in Agriculture, 1760-1860 (1790/9=100)  
 Sources: Álvarez-Nogal and Prados de la Escosura (2007)

As regards manufacturing, although the immediate effects of the war were probably similar across industries, traditional industries collapsed, but modern industries continued to adopt new technologies. While the long-term consequences for industry of the loss of the colonies depended on the flexibility and dynamic nature of the industry concerned.

The decline in exports that flowed from the loss of the colonies illustrates a lack of competitiveness across Spanish industries. They could not offer the Latin American consumers either the prices or the quality provided by their Western European competitors. For example, the Basque iron and steel industry (which sold at least a third of its output to colonial markets at the end of the eighteenth century) became uncompetitive from the 1770s onward. A similar situation afflicted the Valencia silk industry. Between the 1790s and the 1820s net exports of raw silk rose and net imports of silk textiles increased. Catalan shipping was yet another industry which had grown under colonial protection and suffered thereafter. While cotton textiles developed further once the colonial market had been lost. After the war the

production of textiles in Catalonia recovered and mechanized, a process that was particularly intense in spinning, which absorbed three quarters of the increase in investment after 1814 (Sánchez, 2000: 502). As Figure 19 shows, the numbers of water-frames and mules increased (in thousands) from 12.9 in 1807 to 77.3 in 1829 and 622.9 in 1850. These machines represented just 13 per cent of all spinning frames in 1807 but rose to represent more than 77 per cent by 1850 (Sánchez, 2000: 508). As Rosés (1998) has shown, in the Catalan cotton industry, high levels of skills facilitated the adaptation of foreign technologies, while efficiency gains in spinning and weaving contributed one-fourth and one-third, respectively, to increases in output between 1830 and 1860.

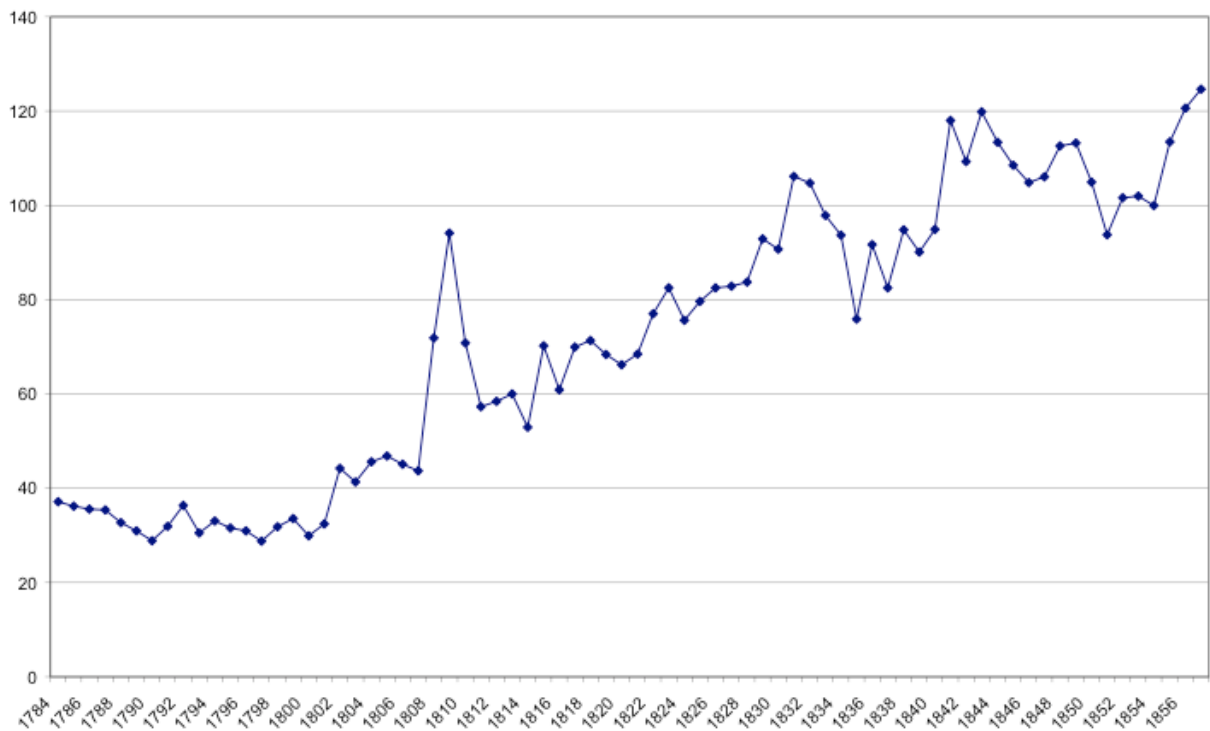


**Figure 19:** Investment in Catalan Cotton Textiles, 1760-1840 (1760-1771=100)

*Source:* Sánchez (2000)

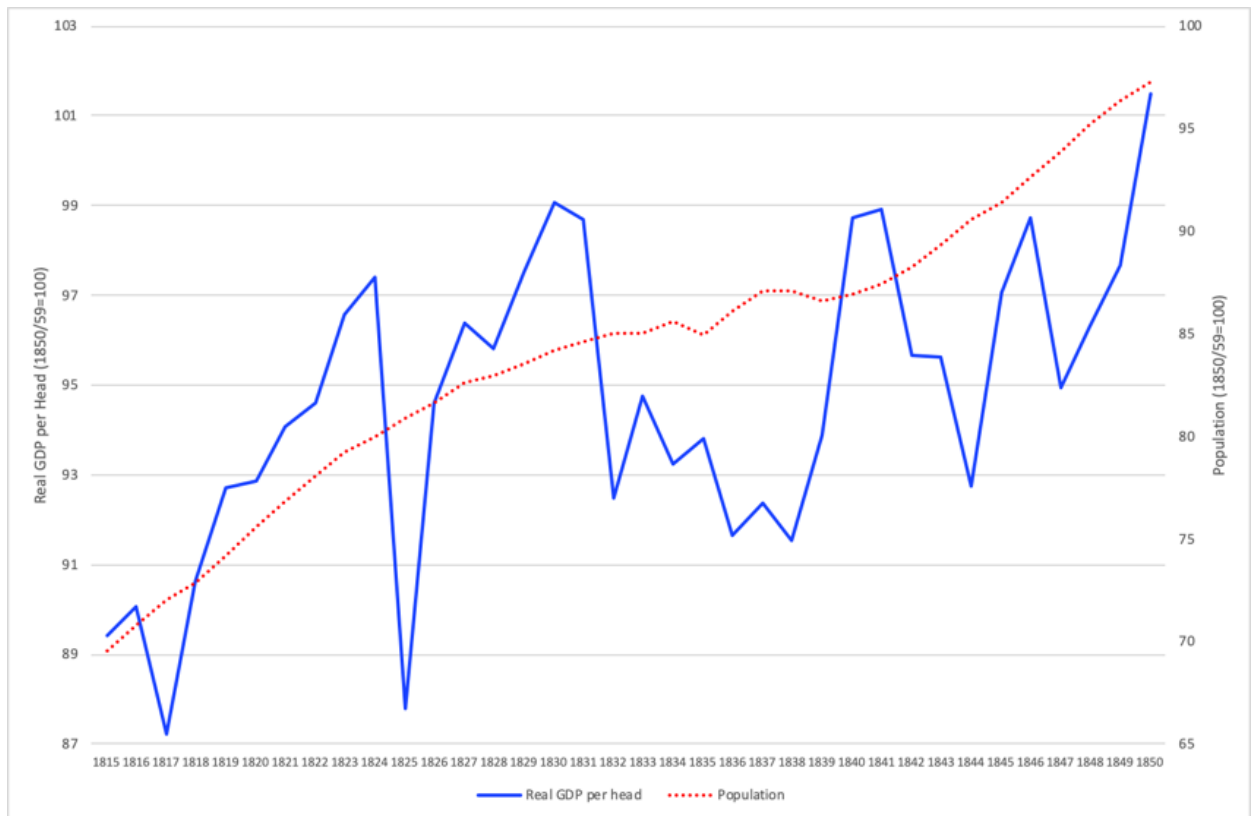
The more competitive and flexible sectors of the economy eventually adapted to new circumstances, particularly commercial agriculture, which turned towards exporting to growing markets in Western Europe. France and Britain became the leading markets for Spanish exports, accounting for more than half of Spain's sales abroad until the end of the nineteenth century. The terms of trade moved favourably for Spanish primary producers. Technological progress lowered the prices of industrial goods and growing demand raised agricultural prices. As a result, the purchasing power in terms of imports per unit of exports trebled (Figure 20). Meanwhile, Latin

American markets never recovered the significance they had before emancipation absorbing, at best, a fourth of all exports from Spain, mostly in Cuba.



**Figure 20** Terms of Trade between Spain and Britain, 1784-1857 (1854=100).  
Sources: Prados de la Escosura (1994)

On the whole, the economy expanded steadily during the early nineteenth century (except during Carlist War 1833-1839), and population growth was accompanied by a sustained increase in GDP per head. For some European countries that would imply the overcoming of the Malthusian trap. This was, however, not the case in Spain, a frontier economy, in which population and per capita income had evolved together over time (Figure 21). The novelty was that both population and per capita GDP growth had intensified, with yearly rates of 1.0 and 0.5 %, respectively, over 1815-1850, compared to 0.4 and 0.3 % during 1714-1808. On the downside, despite exhibiting faster growth and higher levels of per capita income than ever before, Spain fell gradually behind north western European countries, particularly Britain and France (Prados de la Escosura et al. 2020).

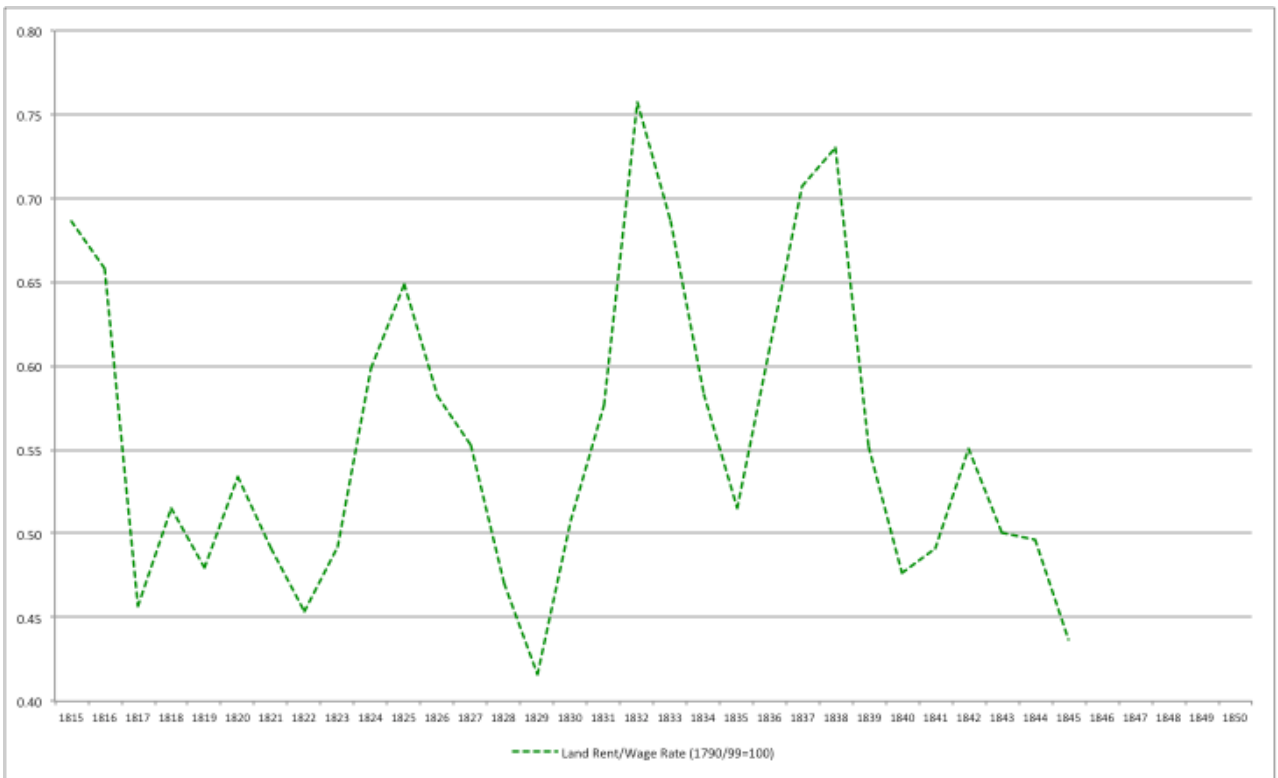


**Figure 21** *Real GDP per head and Population, 1815-1850 [1850/59=100]*  
 Source: Prados de la Escosura *et al.* (2020)

How was this progress distributed? Real wage rates increased in the 1820s, but fell steadily during the Carlist War, and recovered through to the 1840s (Figure 22). Real land rents, in turn, rose to the beginning of the Carlist war showing a declining tendency thereafter. The ratio between land rents and wages provides a measure of income distribution that suggests a long-term decline in inequality punctuated, nonetheless, by reversals in 1825 and at the beginning and end of the Carlist War (Figure 23).



**Figure 22:** Real land rent and wages, 1815-1850 (1790/99=100)  
 Source: Álvarez-Nogal and Prados de la Escosura (2013)



**Figure 23:** Inequality Trends: Real Land Rent/Wage Rate ratio, 1815-1845 (1790/99=100)  
 Source: Álvarez-Nogal and Prados de la Escosura (2013)

## The Napoleonic Wars: a Watershed?

The empirical evidence on the post-war era marshalled here suggests that the Napoleonic Wars constituted a conjuncture in Spanish history. This might however simply be an *ex post ergo propter hoc* argument. The relevant question seems to be: in the absence of war, would an enlightened elite have reformed Spain's absolutist state and initiated a gradual transition towards a liberal society? Historians have published evidence to support this hypothesis. They refer to the sound public finances of Charles IV prior to the war (Barbier and Klein, 1985; Cuenca, 1981; Merino, 1987; Tedde, 1990); to Spain's integration in the international financial world, with Cadiz and Madrid stock exchanges closely connected with those of Amsterdam, London, and Paris (Tedde, 1988); Spain's active involvement in the Anglo-French trade liberalization plans of the 1780s, which were never implemented because war broke out (Ehrman, 1962). Finally, the best minds in Spain as Jovellanos and Campomanes, contributed to the liberal ideas spreading throughout Western Europe (Anes, 1995; de Castro, 1996; Llombart, 1992). Nevertheless, there are also arguments against this historiography. The colonial empire reinforced absolutism and only the war brought it to an end (Yun Casalilla, 1998). Moreover, the difficulties and reversals faced by the liberal reformers militate against the notion of gradual transition from absolutism to liberalism in the absence of war.

Pursuing these lines of enquiry and posing the adequate counterfactuals represent, however, a complete research programme way beyond the scope of this essay. As a provisional solution we have ventured to put our hypothesis to a cliometric test. The exercise consists of ascertaining if structural breaks can be detected in the series of the economic variables previously discussed. Of course, such an exercise falls short of a proper historical explanation but, if breaks are present in the data we propose to conclude that our narrative is not far-fetched.

Thus, we have tested our series of real GDP per capita, agricultural consumption, wages, land rents, the rent/wage ratio, and agricultural prices for structural breaks, either in the trend or the level, over the century from 1750 to 1850. But a caveat is needed. Rather than exogenously choosing the dates at



which the series are tested for structural breaks, we allowed the data to endogenously identify where the break (if there was any) appeared.

As there could be more than just one structural break we used the Clemente-Montañés-Reyes unit root tests that allow us to establish the existence of one or two structural breaks.<sup>6</sup> Table 1 summarises our results. In the case of Land Rent and the Rent/Wage Ratio only one structural break was found and, therefore, the specific test designed to identify only one break was preferred.

**Table 1**  
**Structural Breaks in Main Economic Variables, 1750-1850**

	<b>Coefficient</b>	<b>Year 1</b>	<b>Coefficient</b>	<b>Year 2</b>
<b>Per Capita GDP</b>	4.1***	1783	9.8***	1814
<b>Agricultural Consumption per Head</b>	9.6***	1762	6.0***	1817
<b>Agricultural Prices</b>	7.5***	1785	-6.2***	1811
<b>Wages</b>	-15.8***	1761	22.7***	1818
<b>Land Rent</b>			-14.6***	1809
<b>Rent/Wage Ratio</b>			-18.8***	1811

*Note:* \*\*\* statistical significant at 1%; \*\* at 5%; \* at 10%;

The breaks found before the war reveal an increase in per capita GDP growth, but also decreasing wages, increasing inequality, falling agricultural consumption per person, and a rise agricultural prices. After the war, per capita GDP growth accelerated with a break point around 1814, similar to the case of real wages that also increased rapidly after the conflict, with a break around 1818. The end of the war also meant an improvement in agriculture, with consumption expanding and prices decreasing, as the break points around 1817 and 1811, respectively, show, while land rent showed a decrease at the beginning of the French invasion with a break point around 1809. Inequality measures also declined with the beginning of the war, showing a break point for the Rent/Wage ratio around 1811.

Using the structural break points located in the series, we can now compute the trends of the different variables before the war and extrapolate them to the post-war period and compare, then, the counterfactual values to the actual values. This way, we

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<sup>6</sup> We computed two different specifications of the tests, but finally opted for the innovational outlier unit root test that allows for more gradual changes rather than for the additive outlier unit root, which is more adequate to capturing very sudden variations in the series (Clemente et al., 1998).

can get a crude idea of whether the war represented a discontinuity in economic trends.

**Table 2**  
**Main Economic Variables: Post-war Counterfactual and Actual Levels**

	Counterfactual	Actual	% Change	% Yearly Rate	Year
<b>Per Capita GDP</b>	883	985	12	0,3	1850
<b>Agricultural Consumption per head</b>	83	107	29	0,7	1850
<b>Agricultural Prices</b>	196	82	-58	-2.5	1850
<b>Wages</b>	71	171	139	2.5	1850
<b>Land Rent</b>	96	67	-30	-1.2	1845
<b>Rent/Wage Ratio</b>	128	44	-66	-3.6	1845

Table 2 presents the actual and counterfactual values at the end of the considered period and the implied change with respect to the pre-war trend projection. We can observe that GDP per capita levels were 12 per cent higher by mid-nineteenth century than what they would have been had pre-war trends prevailed. Also, real wages were 139 per cent higher and land rents 30 per cent lower. There was also an improvement in the case of inequality, as the Rent/Wage ratio that was two-thirds lower than the pre-war projected value. Agricultural consumption per head increased by nearly one-third and prices more than halved compared to the predicted levels with pre-war trends.

Thus, it can be suggested that there were important gains that would not have been achieved had pre-war trends persisted in the early nineteenth century and that, consequently, the war can be plausibly represented as a defining conjuncture for the development of the Spanish economy.

#### **IV. Conclusions**

The economic consequences of the Peninsular War in Spain were clearly negative in the short term. The immediate demographic effects of the war were harder than any other conflict in the history of the country. Agriculture was affected in different ways. While forced expropriations had a clear negative effect, the elimination of the Ancien Régime controls made it possible to increase production and provided a

more flexible institutional framework favouring economic growth. Industry was hampered by the impoverishment of the population and the disruption of trade that increased the cost of inputs. War represented a heavy blow for traditional and inefficient industries. International trade suffered a severe contraction. GDP per head fell during the Peninsular War, with its effects unevenly distributed.

The loss of the American colonies, another by-product of the Napoleonic Wars, had short-run negative effects on capital formation, trade, and manufacturing industry, and Government revenues, but the overall impact on GDP was much lower than previously assumed in qualitative assessments, and was concentrated in particular regions and economic sectors. Furthermore a direct link has been posited between Spanish America independence and the fall of the Ancien Régime. Thus, the loss of the colonies would have contributed significantly to the transition to liberalism in Spain.

In the long run, the Napoleonic Wars triggered a complex transition from an absolutist empire to a modern nation. The liberal reforms redefined property rights, making all citizens equal before the law, freed commodity and factor markets, and introduced new legislation and regulation for economic activities. Moreover, liberalism represented control of the executive through the parliament. The long-term consequences were a more efficient allocation of resources and sustained economic growth. Needless to say, serious obstacles emerged on the way, with civil wars and military takeovers as major setbacks that deferred the transition. On the whole, the Napoleonic Wars may be plausibly depicted as a watershed.

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