

# Financial repression as a tool for debt management: Evidence from late-eighteenth century Spain

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► **To cite this version:**

Cyril Milhaud. Financial repression as a tool for debt management: Evidence from late-eighteenth century Spain. 2018. hal-01767927

**HAL Id: hal-01767927**

**<https://hal-pse.archives-ouvertes.fr/hal-01767927>**

Submitted on 17 Apr 2018

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# **Financial repression as a tool for debt management: Evidence from late-eighteenth century Spain**

By Cyril Milhaud

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## **Introduction**

Historically, early modern Spain was pointed as a serial defaulter and scholars have stressed the repeated restructuring of its public debt.<sup>1</sup> This soon becomes a drama when the sovereign's reputation is undermined.<sup>2</sup> But debt can also be reduced through financial repression, a set of economic policies (or regulations) aiming to ease the financing of fiscal deficit and public debt. The idea that governments use financial repression tools to help raise funds is a conventional one among financial historians. Reinhart (2015) showed how it was widely used by the majority of industrial countries in the post Second World War Period and Drelichman (2008) attributed the success of eighteenth-century England on its European counterparts to its debt management through financial repression.

In the case of Spain, Philip II's financial crises have attracted considerable attention and much has been said and written on Spanish alleged "debt intolerance".<sup>3</sup> Instead, the late eighteenth-century financial crisis has received little attention whereas it is deemed to be responsible of --- to cite Marichal's word --- the "bankruptcy of empire" and the end of the Old Regime.<sup>4</sup> Relying on the record rise in public debt caused by the Napoleonic wars, I propose a new interpretation of Spain's pre-modern debt management which was not that different from England's at the same time. Just like its European counterpart, Spain implemented a wide range of direct and indirect rules to channel money to the government at markedly lower interest rates, which allowed Spain to fight four wars within a span of 25 years. Despite its dramatic fiscal position, Spain suspended payments on part of its long-term debt only once in 1799. Until the French invasion (1808), it never defaulted.

Financial repression came at a cost though. It allowed Spain to borrow at below-market rates but had a large crowding-out effect. Economic history has brought many contributions on Britain to address this question, especially on the consequences of higher government spending and borrowing during the French Wars. However critical they may be, these contributions are hardly conclusive. In his seminal contribution on the British industrial revolution, Williamson attributes relatively slow economic growth and industrialization between the 1760s and the 1820s to a crowding out effect caused by the British government's debt financing of the French

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<sup>1</sup> Reinhart (2003); Drelichman (2014).

<sup>2</sup> The role of reputation is essential in sovereign lending as explained by Eaton (1981) and Eaton (1995).

<sup>3</sup> This term has been coined by Reinhart (2003): a history of defaults predict future defaults. For a discussion, see Drelichman (2014), Chamley (2014), Drelichman (2016), and Chamley (2016).

<sup>4</sup> Marichal (2007); Fontana (1971).

Wars.<sup>5</sup> Barro contended that government borrowing had a neutral effect on industrialization because it raised total savings to pay the future tax increase instead of reducing private investment.<sup>6</sup> Very recently, Ventura and Voth argued instead that Britain's debt accumulation had a positive effect on industrialization by accelerating structural change.<sup>7</sup>

Through a Spanish lens, the crowding out effect was potentially of crucial importance since warfare has been a central feature of its history at the turn of the nineteenth century. War borrowing often has been charged to have negative repercussions on the private credit market in Spain although this study is, to my knowledge, the first to measure its real impact. Instrumental-variable estimation suggests that a 1 per cent increase in government borrowing reduced by 0.4 per cent private lending. This is not the 1:1 effect observed by Williamson (1984) but is comparable to what Temin (2005) found for Britain. Indeed, the process of disentail of mortmain assets, initiated to finance the crown's debt, also brought important structural changes.<sup>8</sup> A stunning peculiarity of Spanish long-term credit markets was the predominance of ecclesiastical institutions as financial intermediaries and lenders. Prior to the outset of the war in the 1780s, they received more than 70 per cent of private annuities' revenue. Two decades later though, they completely disappeared from the credit market panorama stopping their lending activities, and the stock of long-term credit divided by five for four decades. The withdrawal of ecclesiastical institutions left a significant vacuum within the private credit market characterized then by uncertainty and higher interest.<sup>9</sup>

This chapter focuses on the clear link between government borrowing, financial repression, and the collapse of private credit in the late eighteenth century. Section 1 examines the impact of government borrowing on the volume of private credit using original annual data on long-term loans in Madrid. Then, section 2 analyses the role of financial repression as a tool of late eighteenth-century debt management. Finally, section 3 shows the persistent negative outcomes of this debt management on the private credit market. Section 4 concludes.

## **I Government borrowing and crowding-out (1768-1808)**

At the time of the outset of the American Independence War, Spain had only a small national debt. In the next 30 years, the total debt stock rose dramatically. Between 1779 and 1808, debt increased sixfold, from approximately 1,200 million reales to 7,200 million.<sup>10</sup> To put these sums in perspective, the average annual income from ordinary taxes in Spain between 1784 and 1788, years of peace, was around 500 million reales.<sup>11</sup> The cost of the numerous wars that followed the Independence War was largely responsible. Between 1779 and 1807, Spain

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<sup>5</sup> For the impact of British government spending during the French Wars, see Williamson (1984), Heim (1987), Black (1990), Clark (2001), and Temin (2005).

<sup>6</sup> Barro (1987).

<sup>7</sup> Ventura and Voth (2015).

<sup>8</sup> According to Congost (2009), it was at the origins of many social transformations of the nineteenth century, among which the evolution of the structure of private credit markets was essential.

<sup>9</sup> Tello (2001).

<sup>10</sup> Fontana (2001), pp. 198-9.

<sup>11</sup> Merino (1987).

found at war for 16 years, or almost two out of every three. The expenditure on the armed forces was considerable, and constituted by far the single most important item of the government budget. In this period, spending on the Army and Navy was equivalent to 58% of total spending.<sup>12</sup> Once the debt service costs were added to this figure, there was hardly any money left for non-military spending.

The crowding out model explains the negative impact of government borrowing on private investment. Due to frequent wars between 1779 and 1808, borrowing needs were substantial. The usual ways to finance deficit, namely to resort to new taxes or donations, ran dry. Fear of riots, especially after the French Revolution, and ancient fiscal privileges of Spanish historic territories and towns restrained any leaning to increase revenues from taxes. The traditional remedy, custom duties and transfers from Spanish America, dropped down to a minimum because of the British blockade.<sup>13</sup>

New financial instruments facilitated the growth in public debt. Prior to the eighteenth century, most borrowing of the Spanish crown was financed through *juros*. These perpetual bonds were issued in the second half of the sixteenth century and the beginning of the seventeenth century, backed by a specific tax stream. In addition, short term borrowing in case of war by the armed forces produced so-called *asientos*, effectively short-dated promises to pay. At the end of the eighteenth century, Spain finally introduced a new type of annuities backed by the revenue of the Tobacco Monopoly ("*Tobacco censos*"). In parallel, it issued the *vales reales*, long-term annuities with a 20 years amortization scheme and carrying a yield of 4 per cent. The vales were first issued in 1780 and were the first form of paper money in Spain. They were used as currency, but since the unit value was large (600, 300, or 150 pesos each), they did not serve for retail purchases, salaries, or similar payments. They rapidly became the chief public debt instrument at the end of the eighteenth century.<sup>14</sup> Between 1779 and 1783, they already represented 68% of total borrowing.<sup>15</sup>

In the crowding out model, expansionary public spending reduces investment spending by the private sector. The government is "crowding out" private investment by increasing the demand of loanable funds, thereby raising interest rates and depressing private investment. Price analysis has been an attractive research strategy for economic historian.<sup>16</sup> However, I argue that this strategy is both practically and conceptually flawed. As Temin (2005) pointed out, "private-sector interest rates are not the right indicator of scarcity in the case of eighteenth-century finance". One potential problem that could affect the response was the usury laws. At the end of the eighteenth century, private interest rates were capped and could not exceed a 3 per cent ceiling. Such a ceiling would have enhanced the ability of the government to sell bonds whenever the market rate was pushed at the top or above the ceiling of 3 per cent. This could increase the wartime crowding out of private investment by diverting even more funds to the government when private borrowers could not pay the higher rates even if they wanted to.

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<sup>12</sup> Merino (1987).

<sup>13</sup> Liehr (1984), p. 558.

<sup>14</sup> Issues of vales are recorded in App. E.

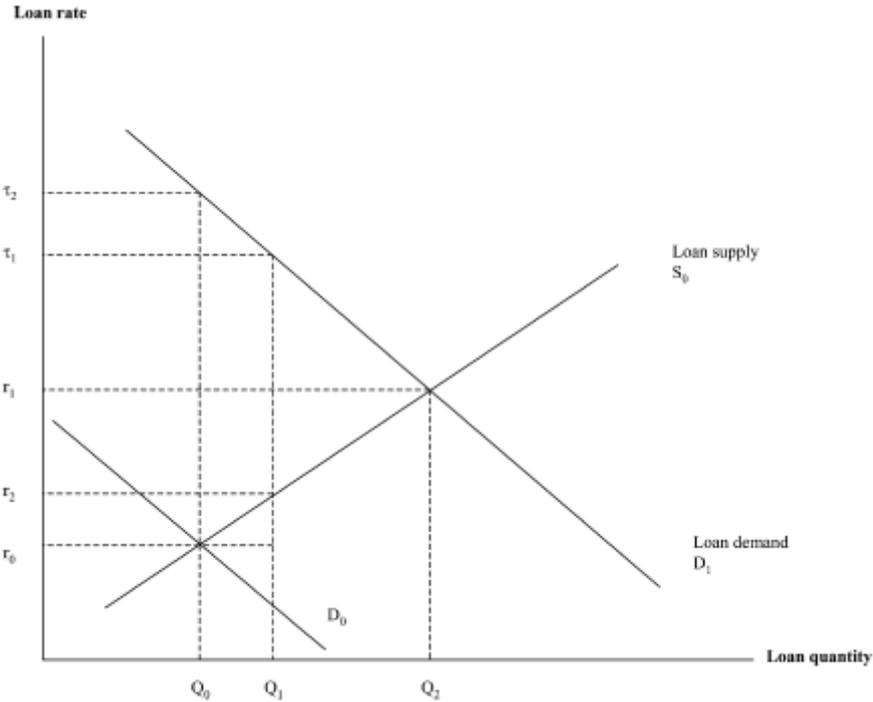
<sup>15</sup> Torres (2013).

<sup>16</sup> Clark (2001), Mirowski (1981), Mokyr (1987), Quinn (2001), Sussman (2002).

Rationing, not changes in interest rates, was the only way to restore equilibrium since usury laws set up a maximum interest rate below the market-clearing rate for private loans.<sup>17</sup>

Figure 1 presents a simple model of credit rationing. Initially, the market balances at  $r_0$  and the lending volume is equal to  $q_0$ . Assume a demand shock that moves the demand curve outwards --- war extra borrowing for example --- lending volume should rise to  $q_1$  and the loan market should clear at  $r_1$ . But if the legal maximum interest rate  $r_2$  defined by usury laws is lower than  $r_1$ , then lending volume would be rationed at  $q_2$ . The shadow cost of borrowing  $t_1$  will be much higher than  $r_2$ .

**Figure 1: A simple model of credit rationing**



In the type of credit market described here, looking at the changes from  $r_0$  to  $r_1$  is theoretically meaningless and empirically impossible. To assess the impact of government borrowing on private lending, information is needed on the total volume of loans made.

Crucially, information on aggregate lending volume is unavailable. Instead, I use the records of the mortgage registry of Madrid, to examine the issue of credit rationing. At that time, the *censo consignativo* was the dominant long-term instrument as well as a mortgage

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<sup>17</sup> Temin (2005). Crucially, the question raised here is: what best describe an eighteenth-century economy? For a discussion, see Williamson (1984), Heim (1987), Williamson (1987). In addition, available data on interest rates is hard to find and data on commercial interest rates is still lacking. One exception would be Cadiz between 1723 and 1788 (Nogues (2011)).

backed loan. I extracted from the mortgage registry the annual volume of new *censos*. This archive has never been used until now.<sup>18</sup> In order to foster the development of credit markets, the Spanish monarchy decided to create a public and universal system of information on mortgages.

**Figure 2: Topographic map of the city of Madrid, 1768**



This formal registration of mortgages started in 1768 with the creation of the mortgage registry by the Bourbons.<sup>19</sup> In these registries, each mortgaged loan had to be registered as soon as it was secured by collateral.<sup>20</sup> In theory, all the mortgages had to be recorded in the mortgage registry but, in practice, these lien registries were not widely used at first, especially in Castile. However, over time, Spaniards came to register more and more their mortgaged assets. This archive is divided in 553 blocks, called *manzanas*, which correspond to blocks of properties in

<sup>18</sup> It is still conserved in the Registro de la Propiedad in Madrid. Under Franco's regime, mortgage registries archives across Spain were transferred to the Historical Archives of their respective regions. However, the archive of the mortgage registry of Madrid remained in the Registro de la Propiedad buildings which created some confusion about the location of this archive.

<sup>19</sup> For a complete history of mortgage registries, and in particular of the *Contadurías de Hipotecas*, until the end of the nineteenth century, see Serna (1996).

<sup>20</sup> The collateral was a real asset, such as a land, a farm, or a house. Sometimes, it could be another mortgage loan or an office.

the city of Madrid (see Figure 2). I selected 191 *manzanas* where I recorded all the new *censos* between 1768 and 1808: 63 blocks are located mainly in South East Madrid where owners are in majority individuals (*particulares*) and 128 blocks are disseminated across Madrid and inhabited in majority by nobles.<sup>21</sup> This sample represents 34 per cent of the whole population, it includes poor areas as well as rich areas, and selected *manzanas* come from South, North, West, East and central Madrid, which makes it fairly representative. The last two columns of Appendix B present the nominal volume of new *censos* per year, as well as the real volume using the Reher and Ballesteros' consumer price index.

The second step in testing the crowding out effect is to compute the size of government borrowing. Crowding out, and the scarce-factor-constrained vision of the economy generally, require measures of real resource flows. In the case of government borrowing, the appropriate measure should capture the real resource transfer to the government that results from the borrowing operations. Such information is available in Merino Navarro's book.<sup>22</sup> Appendix C summarizes the new loans taken out by the government in a given year in nominal values and real terms using Reher and Ballesteros' consumer price index as a deflator. Dramatic spikes in total borrowing almost always coincided with major wars. The rise in government borrowing during the three periods 1780-83, 1793-1802, and 1805-7, occurred while Spain was either fighting overseas or at war with its neighbours. Once peace was concluded, borrowing levels typically declined to very small amounts.

A cursory look at Appendix D already seems to support the crowding out argument for this period. Indeed, real private lending is generally lower at wartime when government borrowing is high. To separate trend from cycle for all our variables, I regress the log of each variable  $Z$  on a constant, a time trend, and the trend squared (to capture non-linearities):

$$\log(Z) = c + \alpha T + \beta T^2 + \epsilon$$

In my analysis, I use the residuals epsilon of private lending (PrivLEND) and of government borrowing (GovBOR). Figure 3 gives an impression of the reduction in private lending. This long, continuous downward trend in total lending was sometimes checked or even reversed by conditions in any one year. These are the type of shocks that need to be explained.

In Figure 4, I plot the lending residual PrivLEND alongside the growth of public borrowing (GovBOR) to examine the impact of wartime financing. The overall impression is one of a strong, inverse correlation between lending and government borrowing. The American Independence War in the late 1770s and early 1780s shows a striking deceleration of private lending growth. During the Revolutionary and Napoleonic Wars, lending fell dramatically for a number of years. A similar, sudden --- if much less sustained --- fall occurred during the

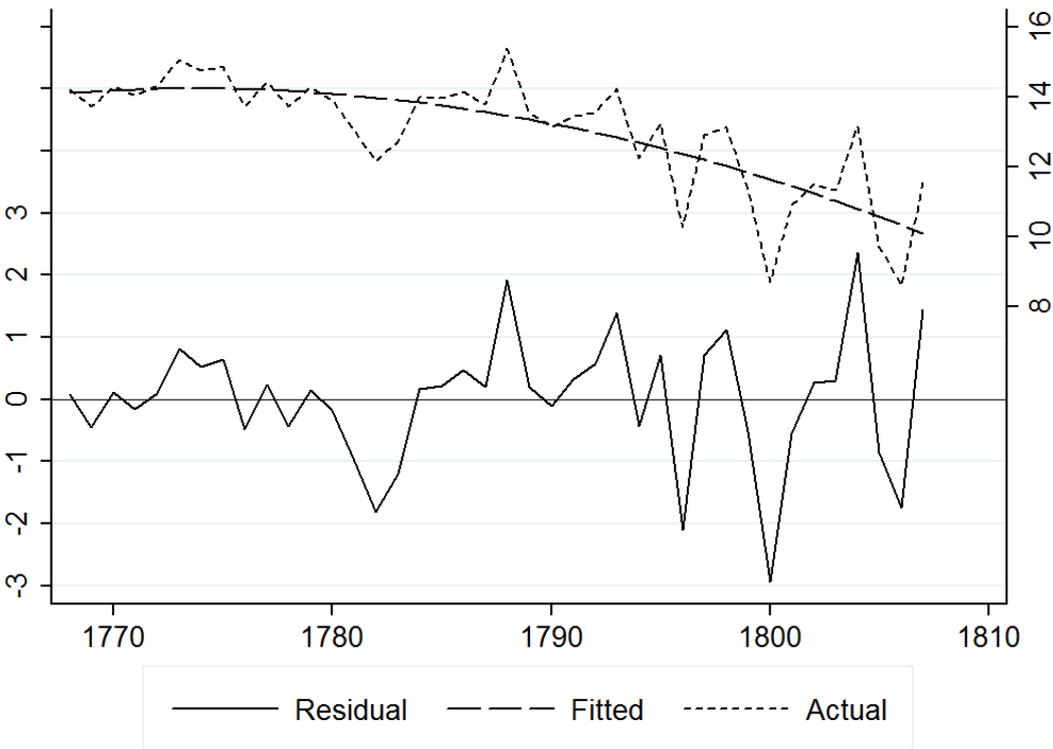
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<sup>21</sup> The prevalence of a social group within a block can be found in Pinto (1995), p. 113.

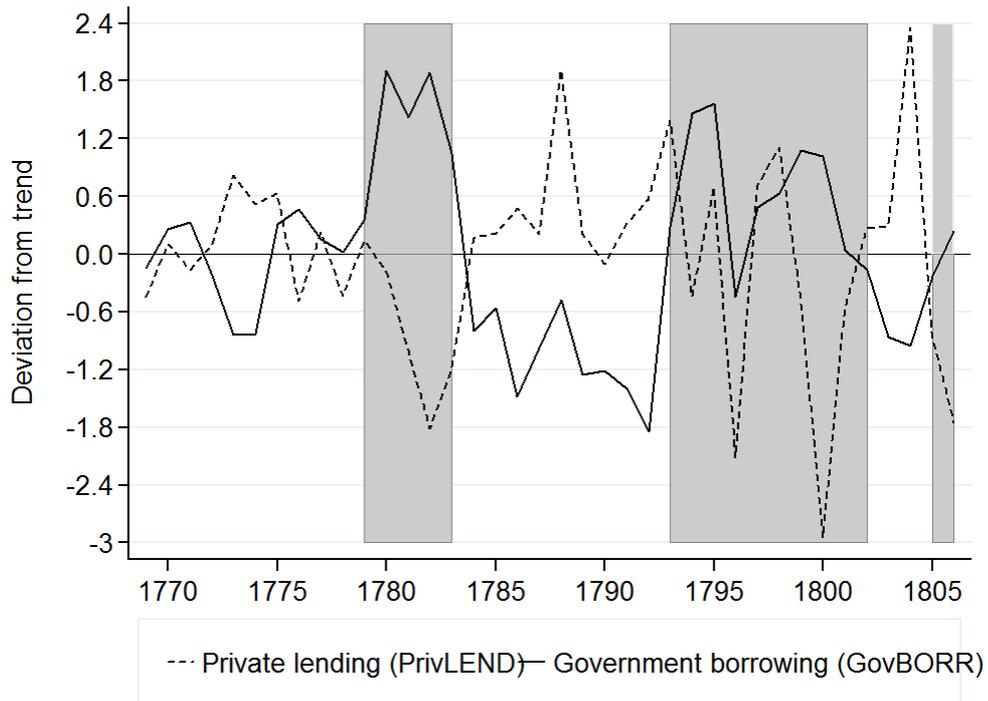
<sup>22</sup> Merino (1987).

resumption of hostilities with England in 1805. Figure 4 suggests that declines in private lending were common in wartime.

**Figure 3: Lending volume (*censos*) in Madrid, trend, and residual (PrivLEND), 1768-1807**



**Figure 4: Government borrowing and lending in Madrid (deviations from trend)**



In Table 1, I examine the relationship between government borrowing and private lending. I use the lending growth depicted in Figure 3 as the dependent variable in the regressions, taking the overall downward trend of lending between 1768 and 1807 as given. This has the added benefit that the dependent variable is stationary. I estimate:

$$PrivLEND = \alpha + \beta X + \epsilon$$

where *PrivLEND* is the residual from Figure 3,  $\alpha$  is the constant,  $X$  is one of the independent variables, and epsilon is the error term.

**Table 1: OLS regression results: government borrowing and private lending**

Dependent variable	(1)	(2)	(3)
PrivLEND			
War	-0.765*** (0.327)		
ivales		-0.455*** (0.141)	
GovBOR			-0.404*** (0.146)

R <sup>2</sup>	0.13	0.30	0.13
Observations	40	26	40

Notes: Significance levels: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01. Robust standard errors are in parentheses. Sample period is 1768-1807, except for equation (2), where data availability on *ivales* requires to start on 1782.

Table 1 shows the impact of more costly government debt service and wartime conditions on lending volume. I use the real yield on *vales reales* to proxy the cost of the government debt. The *vales* were the chief public debt instrument previously mentioned. Unlike most private debt instruments, they were not subject to the usury laws, and were thus free to reflect conditions of stringency in the debt market. I extracted from Tedde the annual average price of vales between 1782 and 1808 in the secondary market.<sup>23</sup> Tedde recorded the quotation of vales in the secondary market for the years 1782-1808.<sup>24</sup> The nominal yield is defined as the coupon yield divided by the average price of the vales on that year. To control for inflation, "real" variables have to be computed, corrected for changes in the price level. Thus the real interest rate will be defined as the nominal yield minus the percentage rate of change of the consumer price index. Column 2 of Appendix F presents the real vales rate, using the Reher and Ballesteros' consumer price index.<sup>25</sup> We can notice from the table that the yields are generally higher during war years than during the years of peace immediately preceding and following. Indeed, for every percentage point extra, lending in Madrid declined by 36% more than it otherwise would have done.<sup>26</sup> During wartime, lending is about 53% lower than normal. This is consistent with the fact that vales rates during wartime are one percentage point higher on average than during peacetime. Government borrowing above trend also depresses lending strongly and significantly. A 1 percent increase of government borrowing above trend decreases private lending by 0.4 per cent.

In estimating equation (4.2), I implicitly assume government borrowing was unaffected by lending in Madrid --- the error term epsilon is uncorrelated with any of the explanatory variables. This is probably true for the war dummy, but the Crown's financial needs could be correlated with the error term. If a drop in government's revenues because of, say, an interruption in American flows, provoked an increase in government borrowing, this interruption of silver flows may also have made it harder for private borrowers to obtain credit. As a result, I would have over-estimated the true effect of government borrowing. To sidestep this issue, I use an instrumental variable approach and estimate:

$$PrivLEND = \alpha_1 + \beta_1 GovBOR + \epsilon_1$$

<sup>23</sup> Tedde (1988), pp. 54, 234.

<sup>24</sup> I assume that variations in the quotation of vales on the secondary market can be considered as a proxy of the primary market history.

<sup>25</sup> Reher (1989).

<sup>26</sup> The formula is  $\exp(x)-1$ .

$$GovBOR = \alpha_2 + \beta_2 War + \epsilon_2$$

where *GovBOR* is the government borrowing residual, *War* is a war dummy, and epsilon is the error term. The second equation identifies the component of *GovBOR* that is driven by wartime borrowing. This is then used to explain lending shocks, using two stage least squares (2SLS) for estimation. The underlying assumption is that private lending was not influenced by war in any way other than through the effect on government borrowing. Until 1808, battle fields had not reached the Spanish soil. Commercial credit had certainly been affected by the interruptions of trade during war years, but this type of credit was mainly short term. On the contrary, *censos* contracts, mostly involved in construction, concerned long-term credit, and this is not clear how construction would have been impacted in Madrid during naval wars.<sup>27</sup>

**Table 2: IV regression results: government borrowing and private lending**

First-stage estimates	
Dependent variable: GovBOR	
War	1.307*** (0.222)
R <sup>2</sup>	0.48
Second-stage estimates	
Dependent variable: PrivLEND	
GovBOR	-0.585**
Observations	40

Notes: Significance levels: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01. Robust standard errors are in parentheses. Sample period is 1768-1807.

The instrument is significant at the 1 per cent level and the coefficient on *War* has the expected sign. The Fisher statistic is high (34.5). In the second stage, the effect of the variation in government borrowing is significant at the 5 percent level. For every additional 1 percent increase in government borrowing above trend, lending declines by 0.44 percent. In the case of Britain, Williamson assumed a 1:1 crowding out between private lending and government borrowing.<sup>28</sup> My estimates are smaller than Williamson's but still substantial and closer to those found by Voth (2005) (a range of 0.20-0.34).

One of the other potential biases may be the autocorrelation of *GovBOR* and *PrivLEND* with their lagged values. To address this autocorrelation problem, I use a VAR

<sup>27</sup> One might think that silver flows are correlated with the dummy *War* which would undermine the instrument. OLS estimation shows no significant correlation between the two variables.

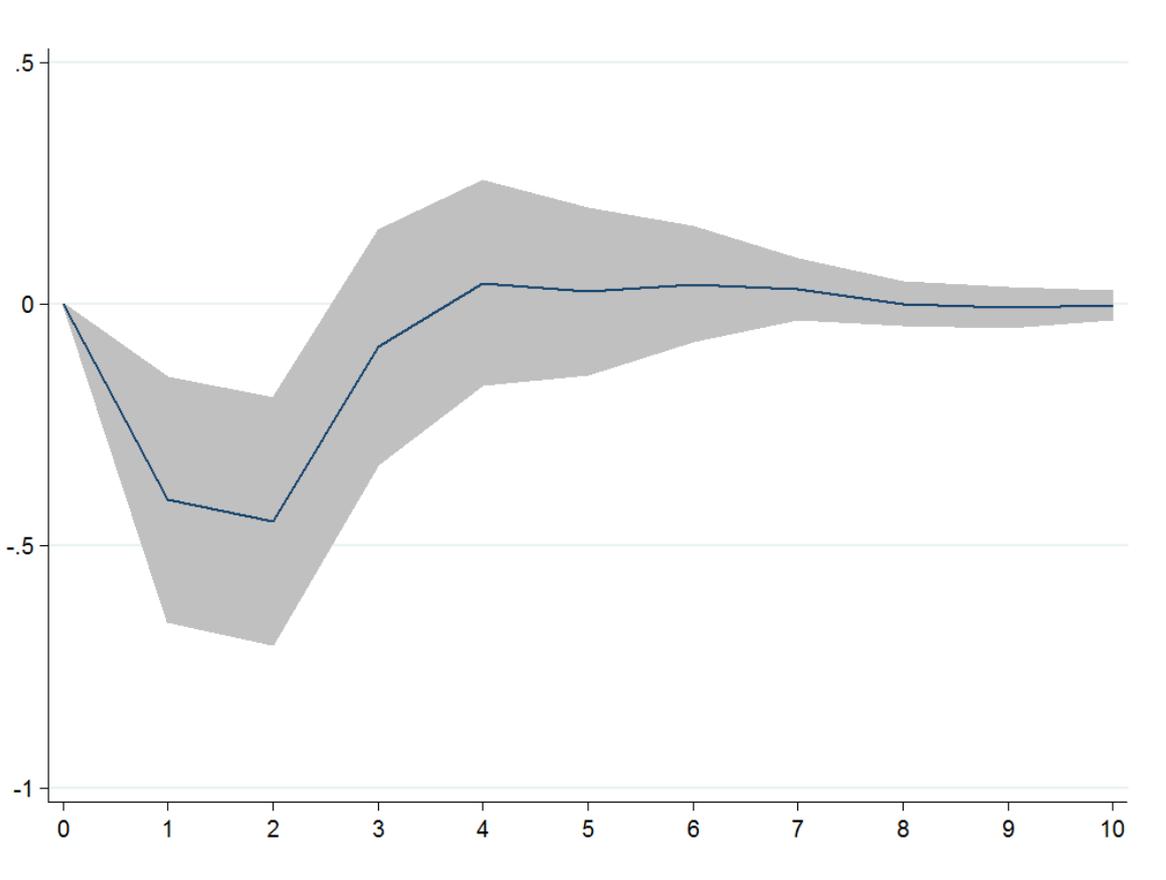
<sup>28</sup> Williamson (1984).

approach which allows for feedback effects from private lending to government borrowing. I estimate with two lags.

$$PrivLEND_t = \alpha_{t-1}PrivLEND_{t-1} + \alpha_{t-2}PrivLEND_{t-2} + \beta_{t-1}GovBOR_{t-1} + \beta_{t-2}GovBOR_{t-2} + c + \epsilon_t$$

$$GovBOR_t = \alpha_{t-1}GovBOR_{t-1} + \alpha_{t-2}GovBOR_{t-2} + \beta_{t-1}PrivLEND_{t-1} + \beta_{t-2}PrivLEND_{t-2} + c + \epsilon_t$$

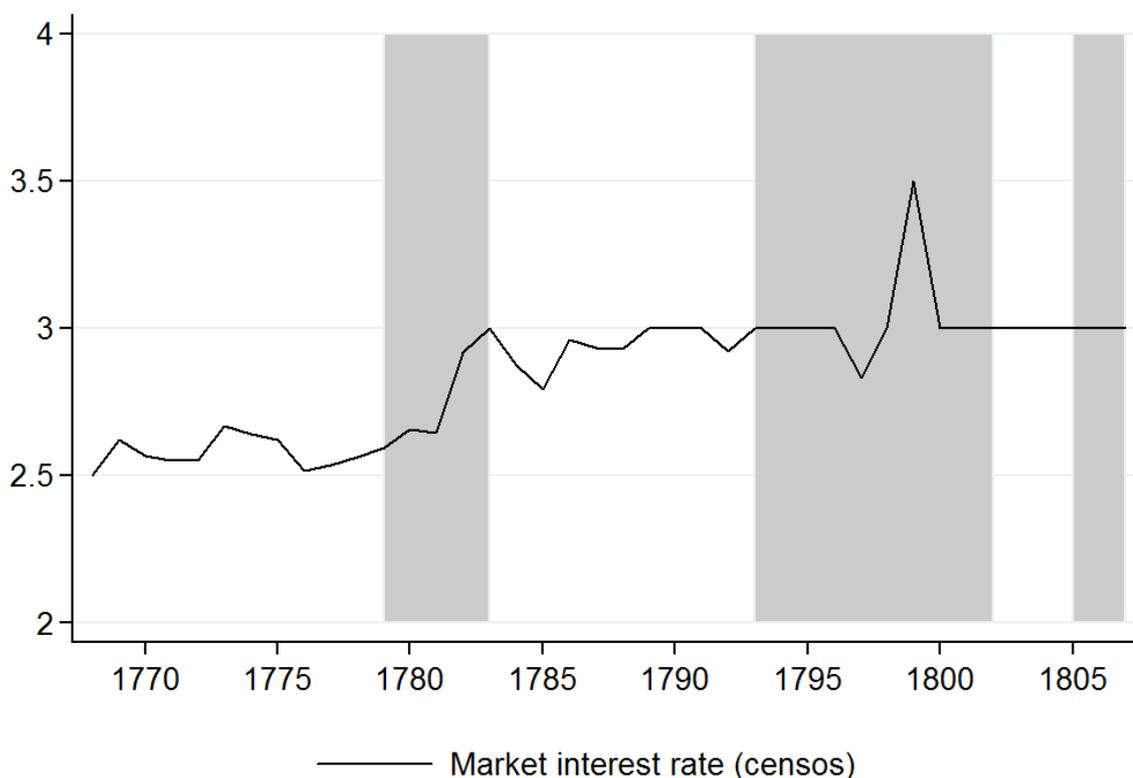
**Figure 5: Response of PrivLEND to 1 percent increase in GovBOR**



The impulse response function for lending is plotted in Figure 5. A 1 percent increase in government borrowing above trend reduced lending by 0.4 percent in the first year and by almost 0.5 percent in the second year. The effect is statistically significant for the first two years. This shows how important the shock was for the credit system.

The evidence on private market interest rates also suggests a retraction of the supply in private credit markets. If supply is contracting with respect to the demand, credit would decrease. In that case, the interest should be drawn tight, the average rate should increase, and almost all private annuities (*censos*) should get closer to the maximum legal ceiling (3 percent). I recorded from my sample the interest rate bore by *censos*. Figure 6 shows the evolution of this interest rate. We can notice that the Independence War (1779-83) provoked an increase of the market interest rate from 2.5 per cent to its top ceiling 3 per cent. The increasing burden of the war debt from 1779 to 1808 resulted in the increase in private interest rates to their maximum legal ceiling. In 1799, the average interest bore by *censos* even exceeded this ceiling and reached 3.5 per cent. It might be the case that during these years, characterised by very tight market conditions, private rates sometimes exceeded the legal ceiling.<sup>29</sup>

**Figure 6: Market interest rate on *censos*, 1768-1807**



The data on private *censos* described by Álvarez Vázquez (1987) showed the same trend. After a decrease in private interest rates over the eighteenth century down to 2 percent,

<sup>29</sup> On 12 September 1799, for example, the pious memory of Don Rodrigo de Herrera lent 44,000 reales to the convent of San Felipe el Real in Madrid with a 4% interest rate. ARPM, Contaduría de Hipotecas, Ma 203, 2484991, 48.

he noticed that they went up at the turn of the nineteenth century to reach 3 percent, their top ceiling.

## **II The role of financial repression**

Financial repression occurs when a set of economic policies (or regulations) aim to ease the financing of fiscal deficits and public debt. Drelichman (2008) explored how financial repression, as a tool of debt management, allowed eighteenth-century Britain to emerge without defaults whereas sixteenth-century Spain was a synonym for fiscal disaster. Britain could squeeze domestic borrowers and lenders through interest-rate regulations, whereas the Spanish crown had to turn to imported capital from Genoese, German, and Portuguese bankers.

However, this interpretation has already been undermined. Interest rate reductions had often been confused with debt reduction in the Peninsula. But the Crown always offered the repayment of the face value of the principal or the increase of this later as a way to offset the interest rate reduction.<sup>30</sup> The "serial defaulter" actually never defaulted.

When war reared its ugly head again in the late eighteenth century, the Spanish Crown actually had changed its debt management strategy. From the first Bourbon, the government debt was not set up in formal public debt market. Contrary to the two centuries before, the Crown relied on domestic financiers and withdrew from international credit markets. These informal markets were sufficient to raise any extraordinary resources that the Crown might need.<sup>31</sup> Spain's entry into the Independence War (1779-83) on the side of France and the new American nation initiated a period of financial turmoil and the Crown had to turn to a formal debt market to raise the necessary funds.

Between 1779 and 1807, the Spanish treasury suffered from the cost of Spain's participation in not less than four wars. From 1785 to 1807, government spending more than doubled due to military expenditure. As already said, during those years (1779-1808), government debt increased sixfold, passing from approximately 1,200 million reales to 7,200 million.<sup>32</sup> It was barely impossible to resort to new taxes to cover this deficit or to rely on silver transfers due to British blockades. Borrowing was the only way to wage war.

Interest rates were already heavily regulated. Usury laws created artificially easy borrowing conditions for the government. But, to ensure low interest rates and the sustainability of new public debt, the Crown carefully ensured the government's privileged access to citizens' savings.

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<sup>30</sup> Chamley (2014).

<sup>31</sup> Torres (2015), p. 103-13.

<sup>32</sup> Fontana (2001), pp. 198-9.

At that time, ecclesiastical institutions represented a considerable source of capital, in which the government could tap into. These benefited from many sources of capital pledged in religious funds that they could subsequently lend out. Among these funds, pious works (*obras pías*), patronage benefices (*patronatos*), and chantries (*capellanías*) were of primary interest. In 1794, an anonymous memorandum reported that the estates of benefices, confraternities, and pious foundations must be worth 3,000 million reales, and those of churches and religious orders another 4,500, more than the total public debt reported to Napoleon in 1808.<sup>33</sup>

Very rapidly after the outset of the American Independence War, Spain had to turn to new ways to raise capital to wage warfare. One solution found to borrow at a low interest rate was to tap into a credit market we can call "captive", that is, private deposits kept through pious foundations and *mayorazgos*.<sup>34</sup> Indeed, in the case of pious foundations or *patronatos*, administrators had to invest the capital in *censos* to generate a regular income and to accomplish the donor's will as it was an obligation stemming from the contract of the said foundation. As for entails, administrators could only legally invest capital in *censos* as well.<sup>35</sup>

In 1780, to attract these private funds to royal coffers, the Spanish Treasury first issued public redeemable annuities secured with the revenues of the Tobacco Monopoly. These were later called the Tobacco *censos*. Charles III decreed that all public deposits (namely pious foundations and *mayorazgos* throughout Spain could be pledged on the Tobacco Monopoly, paying a 3 per cent interest rate.<sup>36</sup> This operation offered very advantageous conditions for the administrators of these funds and for the Spanish monarchy. For the king, it was an easy way to raise cheap capital. For the administrators of these funds, it was a safe and profitable investment. In 1780, the market interest rate of *censos* was much closer to 2.5 per cent than 3 per cent (see Figure 6) and the Tobacco Monopoly, which was considered as one of the safest income of the monarchy, was a much better guaranty than any individual. With a higher rate of return and better guaranties for the administrators of foundations and entails, Tobacco *censos* could only be a success.

Between 1780 and 1786, a total amount of 95.5 million reales was raised with Tobacco *censos*.<sup>37</sup> This represented almost 14 per cent of the Spanish new public debt raised between 1779 and 1783.<sup>38</sup> Three main public debt instruments were used in this period, the Tobacco *censos*, the *vales reales*, and the *vitalicios*. These four years also concentrated 96 per cent of the total capital borrowed by the government through the Monopoly between 1779 and 1786.

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<sup>33</sup> Herr (1989), p. 91. The debt of the Spanish Crown reported to Napoleon in 1808 was 7,198 million reales. The memorandum evaluates to 200 million pesos the estates of benefices, confraternities and pious foundations and 300 million pesos those of the secular and regular Church. One peso is worth 15 reales.

<sup>34</sup> *Mayorazgo* is the Spanish term for an arrangement giving the right of succession to a specific parcel of property associated with a title of nobility to a single heir. In Spain, it was a title of property, landed or funded.

<sup>35</sup> Administrators had to send a request to royal jurisdictions in order to lend capital linked to an entail.

<sup>36</sup> Royal Decree (RD) 15-03-1780.

<sup>37</sup> Torres (2015), p. 151.

<sup>38</sup> Torres (2013), pp. 404-5.

Much of these public *censos* were signed in Madrid. They represented almost 50 per cent of the total amount issued throughout Spain for the years 1780-6. The mortgage registry records in a separate section all the *censos* pledged on the Tobacco Monopoly that were signed in the capital.

**Table 3: Tobacco *censos* signed in Madrid, 1780-6**

	Tobacco <i>censos</i> Spain	Tobacco <i>censos</i> Madrid	%
<b>1780</b>	<b>47,430,963</b>	<b>16,941,241</b>	<b>35.7</b>
<b>1781</b>	<b>22,213,763</b>	<b>13,419,350</b>	<b>60.4</b>
<b>1782</b>	<b>15,224,263</b>	<b>9,203,350</b>	<b>60.5</b>
<b>1783</b>	<b>7,160,049</b>	<b>3,734,659</b>	<b>52.1</b>
1784	2,752,013	2,238,501	81.3
1785	582,938	118,926	20.4
1786	216,292	54,937	25.4
Total	95,580,281	45,710,964	47.8

Note: War years are in bold.

In 1794, confronted to increasing war expenditure due to the outset of hostilities against the French Convention in 1793, the monarchy relied once more on the Tobacco Monopoly to raise capital. Between 1794 and 1795, it issued *censos* for 14 million reales just in Madrid, whereas it had almost not borrowed for 10 years since the end of the War of Independence. Then, until 1801 and the end of hostilities with the British, the Crown regularly used the Tobacco Monopoly as a way to borrow cheap capital.

One of the effects of these incentives or, in the case of usury laws, limitations and restrictions, had certainly been the resource transfer to the government of saving that could have been lent within the private credit market. As shown in Section 1, there is ample evidence that government borrowing crowded out private credit on a large scale. In Appendix H, the reduction of the volume of new private *censos* is clearly visible between 1780 and 1783 during the Independence War when the Tobacco Monopoly started to borrow. The mortgage registry allows tracing back the buyers of Tobacco *censos* signed in the city of Madrid. Table 4 records the lenders to the Tobacco Monopoly.

**Table 4: Lenders to the Tobacco Monopoly in Madrid, 1780-1808**

		Ecclesiastical institutions		Entails	Others
		Pious foundations	Others	Total	
%	total	47.07	9.57	56.64	38.27
	contracts				14.66

% capital lent	25.86	21.67	47.53	37.16	15.31
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Source: See text.

Ecclesiastical institutions provided almost 50 per cent of the amount lent to the Tobacco Monopoly in Madrid. Within this group, pious foundations were the main sources of capital for public credit by providing 26 per cent of the total amount lent. In second position, the nobility through their entails provided another 35 per cent of the amount lent to the Monopoly.

Similarly, ecclesiastical institutions and the nobility were the main providers of private credit in eighteenth-century Madrid. In Table 5, I traced back the lenders between 1768 and 1808 within the long-term private credit market. Ecclesiastical institutions and the nobility provided 92 per cent of the capital lent on the long-term private credit market. Compared to the whole Spain, the share of ecclesiastical institutions is lower than the figures provided by the Cadastre of Ensenada (44 per cent versus 70 per cent). This is explained by the over representation of the nobility in Madrid as the economic and political capital.

**Table 5: Lenders in Madrid (*censos*), 1768-1808**

	Ecclesiastical institutions			Nobility		Others	
	Pious foundations	Others	Total	Entails	Nobles	Total	
% total contracts	42.71	21.45	64.16	24.46	2.85	27.31	8.53
% capital lent	22.70	21.13	43.83	40.47	7.89	48.36	7.81

Source: See text.

**Table 6: Borrowers in Madrid (*censos*), 1768-1808**

	Ecclesiastical institutions	Nobility and Don	Ordinary people	Others
% total contracts	14.57	29.98	54.6	0.85
% capital lent	10.86	56.71	24.2	8.23

Source: See text.

Crucially here, Tables 4 and 5 show that the lenders to public authorities were the same as the lenders in the private credit market. There is only one step to conclude that the drop in private investment during war years is due to the lenders' preference to invest in Tobacco

*censos*, at least in Madrid. Capital from pious foundations and entails were diverted to Tobacco coffers instead of being re-invested in the private credit market.

This is not surprising since private *censos* and Tobacco *censos* can be considered as perfect substitutes. They were exactly the same instruments with the difference that Tobacco *censos* provided a higher rate of return and better guarantees. In addition, Tobacco *censos* are specially oriented to pious foundations and entails which are the main providers of private credit. Qualitative evidence supports that hypothesis. Many examples of redemptions of *censos* during those years stipulated that the redeemed capital had been pledged on the Tobacco Monopoly. In these cases, I could find the annotation: "considered paid and redeemed the said *censo* owned by the said memory of Don Ygnacio Buitrago, and free the said house, through the transfer that made the owner to the General Treasury of Her Majesty for a new *censos* secured by the Tobacco Monopoly".<sup>39</sup> It shows that once the capital of a *censo* was redeemed during the years of interest, it was more interesting to invest it in public *censos* (Tobacco *censos*). In Table 6, we can also see that the diverted capital was originally oriented in majority to individuals in Madrid, be nobles, craftsmen, merchants, civil servants, or other ordinary people, which could have used this money to start a new business, to buy or build a new house, or to do some repairs. Ecclesiastical institutions represent only 11 percent of the capital borrowed: this was not ecclesiastical institutions lending to other ecclesiastical institutions.

In parallel to Tobacco *censos*, the Spanish government borrowed via the creation of paper money, the so-called *vales reales* mentioned earlier. In 1780, it first issued 16,500 vales and made two more issues in 1781 and 1782. Between 1779 and 1783, the vales contributed for 68 per cent of the new public debt for a total amount of 450 million reales.<sup>40</sup> Until 1794, despite two further issues in 1785 and 1788 for 99 million to subsidize the building of the canals of Aragon and Tauste, vales were broadly quoted at face value. Actually, at the opening of the last decade of the century, Spain was in a strong financial position.

Spain's entry into the war against the French Convention in 1793 set off a new period of trial for its fiscal strength. Very rapidly, the monarchy found itself confronted to a growing annual deficit. The reply of the monarchy to the imperative needs for funds was to renew the creation of vales as for Tobacco *censos*. On 1 February 1794, the government issued 16,200,000 pesos, approximately 243 million reales. In parallel, the king signed along with this decree another that proclaimed the vales to be a "national debt contracted in the public interest" and created an amortization fund (*fondo de amortización*). In order to maintain the reputation of the vales, this fund was charged with extinguishing this debt and was provided with two sources of income. Municipalities were ordered to pay the fund 10 per cent of their incomes and the national Bank of Saint Charles was to contribute the fees it received for the export of specie from Spain. Requiring banks and other financial intermediaries to hold more government bonds

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<sup>39</sup> "da por quitado y redimido el expresado censo perteneciente a dicha memoria de Don Ygnacio Buitrago, y por libre de el la Casa referida, mediante la entrega que hizo S.E. la Dueña en Tesoreria Mayor de S.M. para nueva imposicion sobre la Real Renta del Tabacco". ARPM, Contaduría de Hipotecas, Ma 494, 2484277, 18.

<sup>40</sup> Torres (2013), pp. 404-5.

than they would if policies did not require it is one important part of financial repression. For example, historians of banking have persuasively argued that the Bank of England was founded specifically to raise funds for war expenditure, as the Bank Saint Charles.

Very soon, the government was forced to make two more issues of vales, one on 15 September 1794 for 18 million pesos and another on 15 March 1795 for 30 million pesos, respectively 270 and 450 million reales. To sustain the value of the vales, the king further provided new sources of income for the amortization fund. Among these, the clergy was to provide an annual subsidy of seven million reales out of its income from properties, including *censos* and, on 21 August 1795, the king decreed a capital levy of 15 per cent on all property acquired in the future by mortmain institutions (secular *vínculos*, entails, and ecclesiastical institutions). These three issues of vales brought 964 million reales to the royal treasury, three-quarters of the total deficit for the years 1793-96.<sup>41</sup>

Between 1796 and 1798, the government resorted mainly to free and forced loans to avoid overissue and paper money inflation.<sup>42</sup> However, the resumption of hostilities against Great Britain in 1796 severely undermined the credit worthiness granted to the monarchy. The impact on the vales quotation was immediate and, by the beginning of 1798, these quoted at a 15 per cent discount. On 9 March 1798, the king established an Amortization Fund (*Caja de Amortización*) as a separate institution with its own director to support the vales quotation. He charged it with redeeming and paying the interest on the government debt. It was assigned the sources of income previously established for the first amortization fund created in 1794. However, the creation of a new fund did not have any effect on the royal credit and the discount on the vales even worsened from 15 to 17 percent in May. To get things worse, the predicted deficit for the year 1798 was 800 million reales and the government urgently had to find new sources of revenue. Confronted to the gravity of the situation, the king took extraordinary measures and initiated the first step of the long process of *desamortización*. On 19 September 1798, he decreed:

“In order to continue procuring the welfare of my beloved subjects by all possible means amid the present urgent needs of the crown, I have believed it necessary to dispose of a massive fund that can serve two objectives. One is to substitute for the vales reales another debt with lower interest and fewer problems. The other is to give relief to the industry and commerce by extinguishing the vales reales through more effective measures than those already adopted. Since my sovereign authority to make use of public establishments for these and other ends of the state is undisputed, I have resolved after mature consideration to alienate all the real property belonging to hospitals, hospices, houses of charity, homes of the aged, foundling homes, confraternities, pious memories, pious works, and lay benefices. The product of these sales will be deposited in my Royal Amortization Fund at three-percent interest per annum, as will the capital of any *censos* owed to these establishments and foundations that are redeemed”.<sup>43</sup>

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<sup>41</sup> Herr (1989), pp. 81-3.

<sup>42</sup> Barbier (1981), p. 325.

<sup>43</sup> RD 19-09-1798.

In brief, this decree ordered that liens and mortgages whose interest supported pious works, chantries, and the like should be redeemed and the proceeds to be loaned to the monarchy. It permitted persons whose properties were encumbered by *censos* in favour of these institutions to redeem them by depositing their capital value in the Amortization Fund in the name of the institution.<sup>44</sup> As a result, the capital was not re-lent to a private party but to the monarchy. Then, in 1801, capital endowments of *mayorazgos* and other secular entails were also targeted.<sup>45</sup> The owners of entails were not required to sell their lands, but they did have to deposit the capital received of a redeemed *censo* in the Amortization Fund. The opportunity for the monarchy was clear. Using the amortization funds, on which it paid 3 per cent, it could extinguish the vales debt bearing a 4 per cent interest rate.

Unfortunately for the crown, the announcement of the sale of entailed real assets did not restore its credit. On 8 April 1799, pressing financial needs led the crown to announce a new issue of vales for almost 800 million reales, the largest ever, to wage the deficit. The market value of vales fell between 30 and 45 percent below par in the first half of 1799 and one year later, they were being exchanged for little more than one quarter of their face value. In 1800, Charles IV decreed the creation of a new institution to collect and manage all the income assigned for the guarantee and amortization of the vales, entirely separate from the royal treasury. On 28 November 1804, the second phase of the consolidation even went one step further with the extension of the process of *desamortización* to the Spanish Empire.<sup>46</sup> Finally, between 1800 and 1808, the new Consolidation Fund only redeemed vales totaling 300 million over the 2,193 million in existence.<sup>47</sup>

It is relatively difficult to study the proceeds of *desamortización* assets for the Crown. Nevertheless, the total amount reported to Napoleon for the two funds in 1808 is 1,653 million reales.<sup>48</sup> This sum includes both money received by the monarchy for the sale of real properties and money received as redemption of *censos*.<sup>49</sup> Herr estimates that 4.5 per cent of the total ecclesiastical deposits came from redeemed *censos* totaling 112 million reales. However, this share hides important regional differences, since it goes up to 61.5 per cent in Catalonia.<sup>50</sup> In Madrid, redeemed *censos* from ecclesiastical deposits and from secular entails represented six per cent of the deposits in the two Funds amounting 14 million reales, which does not show a clear success of incentives to redeem the capital of *censos* considering that Tobacco *censos* signed in Madrid brought nearly 82 million reales.<sup>51</sup>

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<sup>44</sup> Also frequent was the establishment of a *censo perpetuo* as a permanent endowment without any loan being involved, that is why there are not taken into consideration here.

<sup>45</sup> Royal *Cédula* 17-04-1801.

<sup>46</sup> RD 28-11-1804.

<sup>47</sup> Herr (1989), p. 118.

<sup>48</sup> Herr (1989), p. 122.

<sup>49</sup> Unfortunately, we cannot distinguish between the two, and a fortiori between redeemable *censos* and perpetual ones.

<sup>50</sup> Herr (1989), p. 124.

<sup>51</sup> Idem. However, Herr estimates that 25 per cent of the ecclesiastical properties in Madrid were sold (Herr (1989), p. 129).

However, the impact on private lending was blatant. Talking about the Spanish American case, Grafe and Irigoien argued that the process of *desamortización* certainly "created severe interruptions in lending, mainly because the "dead hand" had been very much alive and active in banking".<sup>52</sup>

### III Persistent negative outcomes from debt management

To assess the considerable impact of the consolidation laws on the volume of long-term private credit, Appendix H is particularly enlightening. As we discussed earlier, the contraction of private credit between 1780 and 1783 is mainly due to the War of American Independence and Tobacco Monopoly issues. Then after a sharp decrease in 1790 that is mainly due to the presence of several outliers in 1789, the volume of new private *censos* declines significantly from 1794. On the same year, the Spanish government revived the creation of vales and the sale of Tobacco *censos* although it had almost not borrowed for 10 years. The perfect substitution with Tobacco *censos* and the alternative investment in vales undermined private investment. Appendix H shows the progressive withdrawal of the *censo* debt instrument from the mid-1790s. This withdrawal started four years before the consolidation laws and became completely effective in 1800 where the capital amount of new *censos* was almost zero. Since 1794 and the creation of the first sinking fund, ecclesiastical institutions and entails could already understand what would be the future of their funds. Ecclesiastical assets came more and more under attack since 1767 and the suppression of the Society of Jesus. More generally, mortmain institutions, including entails, were severely criticized by contemporaneous Spanish *arbitristas*.<sup>53</sup> Reformers blamed them with preventing the multiplication of small farms and causing great harm to agriculture. The Spanish monarchy just implemented the ideas of reformers but certainly had not in mind the consequences of a withdrawal of monetary funds attached to entails and pious foundations on the private credit market.

This decline in the volume of new *censos* is also associated to a complete disappearance of ecclesiastical institutions on the private credit market. From 1794, ecclesiastical institutions almost stopped their lending activities. Then, from 1798, they were in any case forced to re-invest their monetary funds in the Consolidation Fund. *Censos* destiny was actually linked to ecclesiastical institutions and entails as they represented almost 96 per cent of the market (at least in Madrid). Since these institutions stopped lending to private parties because of the consolidation laws, the *censo* progressively died.

At the same time, another type of loan already mentioned earlier became the leading debt instrument. Concomitantly to the removal of ecclesiastical institutions and *censos*, I could notice in the mortgage registry records that obligations became systematic in the first half of the nineteenth century. In addition, from the mid-1790s, they bore more and more an explicit interest rate, generally between 4 and 6 per cent, which was theoretically forbidden by usury

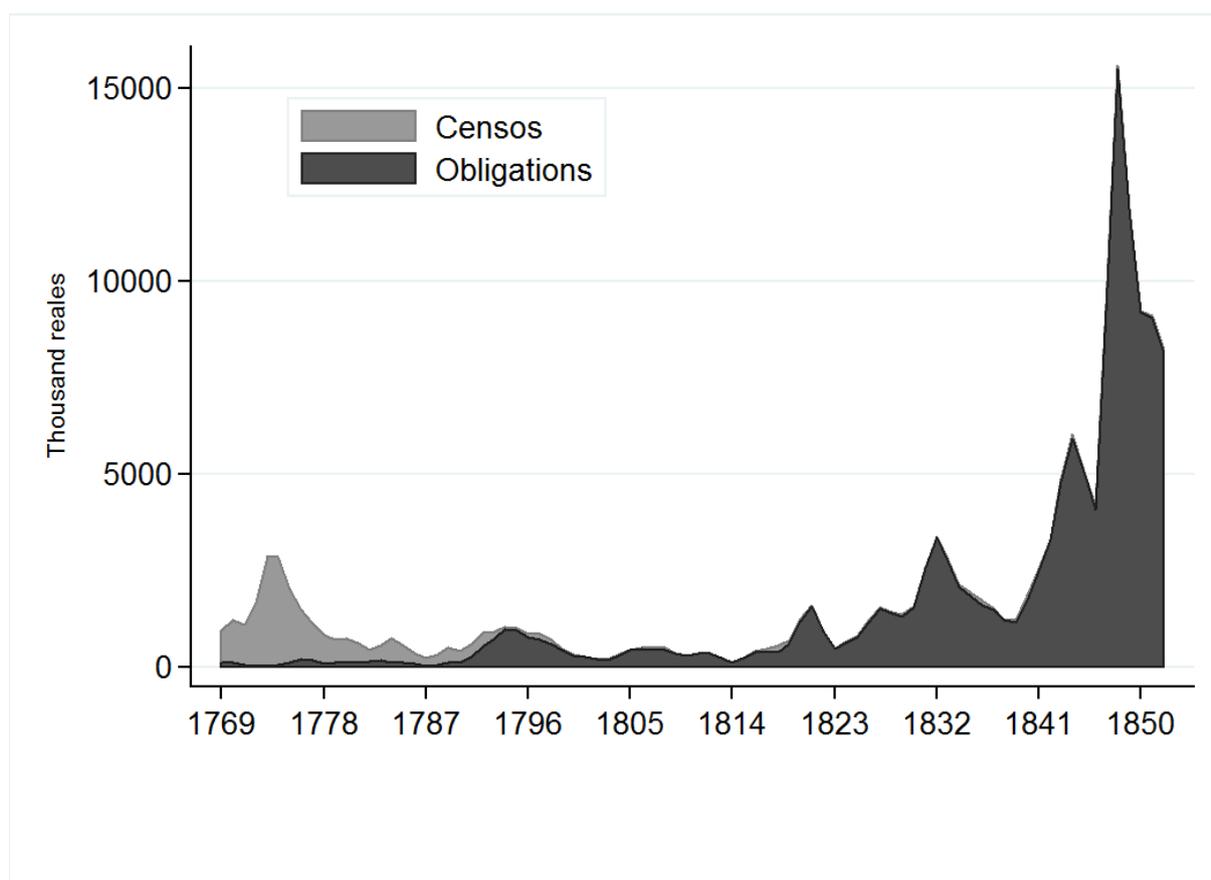
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<sup>52</sup> Grafe (2013). On Spanish America, see also Chowning (1989), Liehr (1984), Greenow (1983).

<sup>53</sup> See for example Jovellanos (1795) or Vizcaino (1766).

laws. Ecclesiastical institutions did not use that instrument since their monetary funds could only be lent via *censos* and these obligations could not meet their need for a regular stream of income. Figure 7 confirms that the *censos* almost completely disappeared from credit markets in the 1790s. Instead, the obligation became the dominant debt instrument and was more and more used across time.

**Figure 7: Real annual volume of new loans in Madrid, 1769-1852**



This evolution is not proper to Madrid. In many regions of Spain, the rise of the obligation as the predominant debt instrument has been observed. In Vizcaya, the substitution between *censos* and obligations occurred between 1790 and 1810, like in Madrid.<sup>54</sup> However, this substitution took place in some regions earlier in the second half of the eighteenth century, like in Catalonia and in Valencia, or in others later in the ominous decade (1823--33), like in Navarra.<sup>55</sup> What explains this substitution? Fernandez de Pinedo among other believes that the *censos* was not used anymore because it was not profitable, especially after the reduction of the usury rate to 3 percent in 1705 in Castile and then in 1750 in Aragon. But, as Tello noticed, if

<sup>54</sup> Fernandez (1985).

<sup>55</sup> Cuevas (2001), Torre (1994).

it was the case, why the *censo* was then massively used in Castile during the whole eighteenth century? Tello argued that the episode of the "*huelga de pensiones*" ("rent strike") was at the origins of the crisis of the *censos* and even broadly the Old Regime.<sup>56</sup> This explanation is certainly of great value but I offer an alternative interpretation. As we could see in Madrid, the *censos* precisely declined when the Crown started to appropriate church assets. As they were owners of more than 70 per cent of the *censos*, their withdrawal from the credit market signified the end of their favorite debt instrument. Indeed, this debt instrument was adapted to their need to secure a regular stream of income to fund their ceremonies and maintain their members. The rise of the obligation corresponded to different needs for different lenders. Concomitantly to the withdrawal of ecclesiastical institutions as financial intermediaries, lay individuals, especially merchant bankers, filled, although incompletely, the gap left by the Church.<sup>57</sup> They mainly used obligations on which they could expect a higher rate of return since it appeared common from the end of the eighteenth century to stipulate on the contract an interest rate. In addition, in these times of uncertainty, the shorter maturity of obligations was well appreciated.

The whole private credit market suffered considerably from the withdrawal of ecclesiastical institutions. In addition to the repeated complaints of landlords facing difficulties to access credit, especially in rural areas, the obligation had a much shorter lifetime than the *censos* even if it transformed over time into a mid-term debt instrument.<sup>58</sup> From the sample of obligations and *censos* that I constructed, the average maturity of an obligation increased from nine months between 1768 and 1777, to one year between 1778 and 1828, and two years between 1828 and 1853. On the contrary, the average lifetime of a *censos* was 14.8 years. This allows us to compute the stock of capital. The stock of capital in year  $t$  is defined as the stock of capital in year  $t-1$  plus the capital lent in year  $t$  minus the capital that was paid off in year  $t$ . The new loans are directly given by the new *censos* and obligations recorded in the mortgage registry. I can deduce the amount of capital paid off each year from the inverse of the theoretical maturity  $d$  of each kind of debt instrument ( $1/d$ ).<sup>59</sup> Figure 8 shows the stock of capital of *censos* and obligations between 1768 and 1853. It indicates that the collapse of the *censos* and of ecclesiastical institutions in the 1790s was dramatic for the private credit market. The stock of capital of the private credit market only got back to its 1770s level in the 1840s. In addition, the stock of obligations in the 1840s did not bear the same constraints as the stock of *censos* in the 1770s. Obligations had a shorter maturity than *censos* (two years versus 15 years). As a result, even if the amount of outstanding debt was equivalent in 1770 and in 1840, the result was quite different for the borrower. Facing the odds of frequent renewals, the stock of obligations, although it is similar in volume, is much more volatile than the stock of *censos* and implies huge uncertainties for the borrower.

The consolidation of the vales, by forcing ecclesiastical institutions to deposit their funds in the Consolidation Fund provoked a huge contraction of the private credit market. During four decades, the overall trend of the stock of private debt is divided by five. *Censos*, as

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<sup>56</sup> Tello (1994). At the beginning of the nineteenth century, facing an agrarian crisis, borrowers mainly in rural regions, stopped paying the rent associated to the *censos* as well as the tithe.

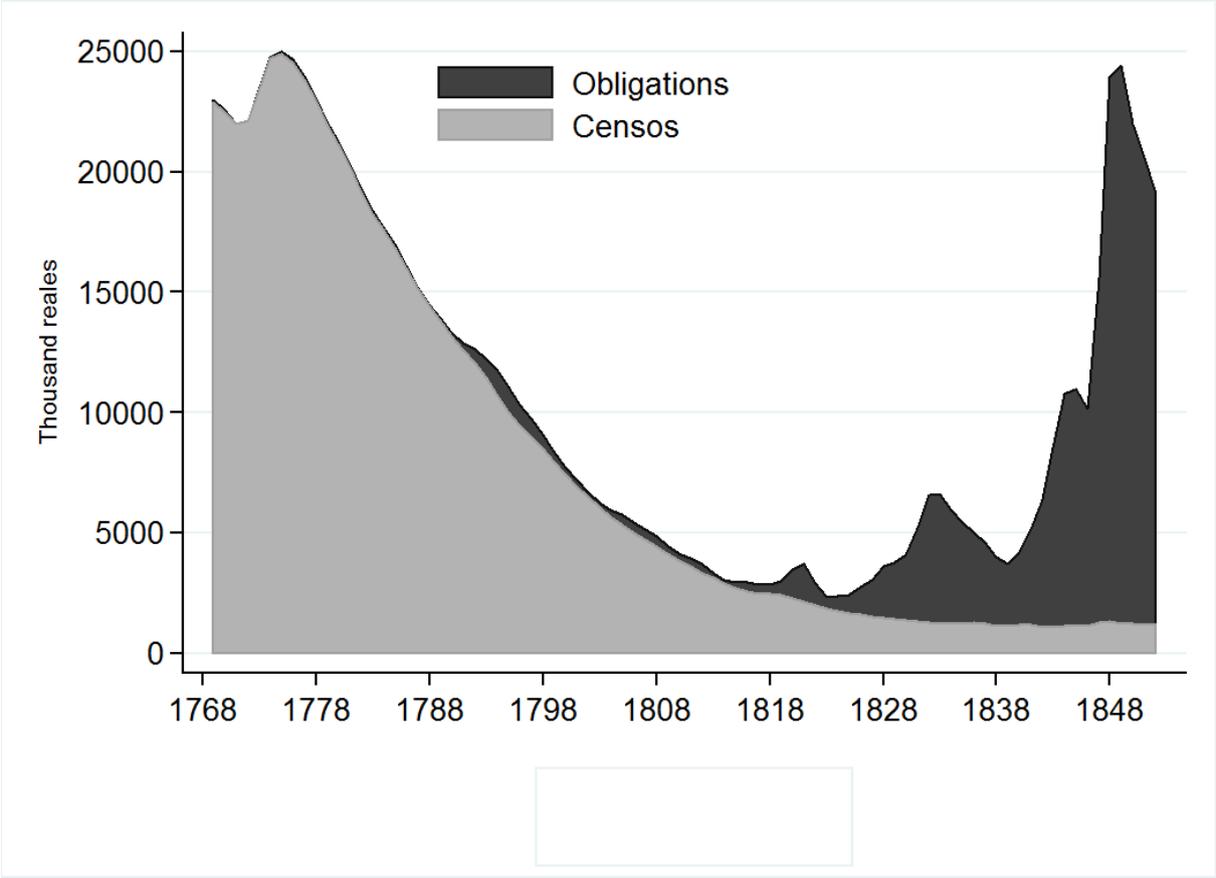
<sup>57</sup> On the rise of merchant bankers in the nineteenth century, see Ramon (2000).

<sup>58</sup> Congost (2009).

<sup>59</sup> I followed Hoffman (2001). For 1768, I took the average volume of new *censos* and obligations of the first five years and multiplied it by their respective maturities.

well as the Church, almost disappeared from the private credit market and left a gap in long-term lending that no debt instruments or financial institutions could fill.<sup>60</sup>

**Figure 8: Real annual stock of mortgage credit in Madrid, 1768-1853**



### Conclusion

This chapter establishes a clear link between government borrowing, financial repression, and the collapse of private credit in late eighteenth-century Spain. Very often, the Spanish serial defaulter is blamed compared to the British model of debt sustainability.<sup>61</sup> Actually, financial repression, not fiscal discipline, helped Britain to borrow at markedly lower interest rates. By contrast, Spain frequently had to reschedule his obligations because of its fiscal position beyond repair. Whereas this interpretation has already been called into question

<sup>60</sup> These results have to be qualified though. Although *censos* have to be systematically recorded in the mortgage registry because they were pledged on real properties, obligations were not all secured on real assets, thereby underestimating the stock of obligations. One result remains obvious: the collapse of ecclesiastical institutions in the 1790s came along with the demise of the *censos*, the most popular long-term debt instrument at the time.

<sup>61</sup> Voth (2008).

--- Spain actually never defaulted in the late sixteenth century ---, I offer a new interpretation of Spanish debt management. As its British counterpart, Spain extensively used a wide range of direct and indirect rules to channel money to the government at preferential interest rates. The *desamortización* process was a key feature of this plan. Financial repression comes at a cost though. There is ample evidence that government borrowing crowded out private investment in Britain.<sup>62</sup> Same was true for Spain, except that beyond the immediate credit rationing that it caused, the *desamortización* of ecclesiastical financial assets and secular entails shut down a large part of the private credit market for many years.

I use micro-level evidence to argue that quantity rationing was indeed a key feature of Spain's credit market during the French Wars and thereafter. Mortgage records from the Mortgage Registry of Madrid allow to trace changes in the volume of lending over 85 years between 1768 and 1853 in the capital. A number of findings stand out. Wartime borrowing did crowd out private lending on a massive scale. On balance, my results suggest substantial crowding out, but perhaps on a scale somewhat less than 1:1. Instrumental-variable estimation suggests that a 1 percent increase of government borrowing above trend reduced private lending by 0.4 percent.

Beyond this effect, I also provide ample evidence to suggest that the withdrawal of ecclesiastical institutions largely undermined the mortgage credit markets for a long time. The effect is huge. After a domination of almost three centuries on Spanish credit activities, ecclesiastical institutions, as the major actor in the credit market, vanished in only two decades. For 40 years, the overall stock of mortgage credit has been divided by five and mortgaged obligations only recovered the same volume as *censos* only in the 1840s. To my knowledge, there is nothing comparable elsewhere in Europe.

The sharp drop in long-term private lending is a first indication of a potential deleterious effect of the *desamortización* on the economy. Prior to the creation of the Banco Hipotecario in 1861, many voices claimed their difficulty to get access to credit, especially in rural areas.<sup>63</sup> Merchant bankers did not fill the gap left by ecclesiastical institutions that were "close to the consumer" even in remote areas. The rise of the obligation as the major debt instrument led to more expensive and short-term credit. Consumption certainly suffered from a higher level of market uncertainty.

Many questions are still left open. How did these structural changes in the credit market affect the economy? Confronted to that huge decline in mortgage credit, how did the state react? We need more studies on the causes and consequences of this sudden withdrawal of key financial actors.

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<sup>62</sup> Voth (2005).

<sup>63</sup> Congost (2009).