

War and economics: Spanish civil war finances revisited

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This paper reviews the financing of the Spanish civil war. We present new evidence showing that the combatants, the Republican government, and the Franco administration followed similar financial strategies. We argue, contrary to established wisdom, that both sides consumed similar shares of domestic and foreign resources. Using new price indexes, we offer budgetary figures in nominal and real terms for both sides. The Spanish civil war suggests that the outcome of wars, civil or otherwise, is independent of the point of departure. The economic and financial position of the combatants influences the development of wars. But the evolution of the economy is affected by the changing military fortunes of each of the sides.

Economic conditions strongly determine war outcomes. Resource advantages are readily transformed into superiority on the battlefield, but also into better support of the rearguard, essential for keeping up civilian morale. Resource superiority usually reflects a higher level of economic development, which allows for greater flexibility in adapting the productive structure to the war demands. This argument has been confirmed for the case of the two world wars where the final outcome has been considered “primarily a matter of levels of economic development of each side and the scale of resources that they wielded.”¹ This was also the case for the American civil war, where the Union’s more developed markets and industrial base are considered key to the Union victory. The North spent twice as much on the war as the South.²

The Spanish civil war has seemed to contradict this general conclusion. When civil strife started in July 1936, the Spanish economy was divided in two. Most of the industrial base and the financial wealth were concentrated in areas controlled by the Republican government. And yet the Republicans lost the war three years later, when in March 1939 Franco’s Army claimed total victory over a demoralized Republican Army. The prevailing explanation for this apparent contradiction has been that the Republicans grossly mismanaged the resources at their disposal. This interpretation originated from a report published in 1940 by the Francoist minister of Finance and former head of the research department of the Bank of Spain, José Larraz.³ In his report, Larraz detailed that while both parties spent heavily, the Republican government spent more than the so-called national government.

¹ Broadberry and Harrison (2005) and Harrison (1998).

² Ransom (2001) and the references provided therein.

³ “Resumen provisional sobre la evolución de la Hacienda desde el 18 de julio hasta el presente,” *Ministerio de Hacienda* (1940). In what follows, we will use the term “Francoists” or “nationalists”—as the Franco side has also been called—indistinctively.

The document highlighted the “squandering” of “red finances” in contrast to the austerity of “national finances.” The “Larraz Report” was intended to demonstrate how Franco’s economic authorities managed the economy efficiently, while the Republicans pillaged and wasted the resources of the country. The report contains blatant errors and numerous inconsistencies, which were recognized later by the director of the Research Office of the Ministry of Commerce, when in 1960 he cast out doubts about the reliability of its figures. But it has been widely cited.

Since the publication of the Larraz report, much research has been done on this subject. [Hubbard \(1953\)](#) was the first author to approach the issue and showed that Franco financed the war mainly with German and Italian long-term credits. [Viñas \(1976, 1977, 1984\)](#), in two books and various articles, has illuminated the central questions about the financial requirements of the war. He examined how the Republicans financed their civil and military purchases abroad by depleting the huge gold reserves of the Bank of Spain, and how Franco received most of his resources from Germany, Italy, and also from financiers in Portugal and Switzerland. [Whealey \(1986\)](#) has also studied how Franco obtained the resources to finance his Army. Thanks to [García Pérez \(1994\)](#) and [Leitz \(1996\)](#), we have a good knowledge of the trade relationship between Franco’s Spain and the Third Reich. [Delgado \(1980\)](#) and [Oliveira \(1987\)](#) have looked at the Portuguese commercial and financial connections, and [Giura \(2002\)](#) focused on the relevance of Italian aid. [Sánchez Asiaín \(1999\)](#) has done extensive work on the economy of the civil war, paying special attention to money and banking. More recently, [Martin-Aceña \(2001, 2008\)](#) reviewed the much-debated issue of the gold reserves of the Bank of Spain and has cast doubt over how timely and convenient it was to employ the reserves in the way this was done.

However, domestic financial means have not received as much attention as international means, due to the lack of documentation. The Larraz report is practically the only document to trace how both sides raised internal funds to meet war needs. Only the recent publication of new budgetary data by [Pons \(2006\)](#), employing new archival sources, has made it possible to present an accurate overview of both the Francoist and Republican domestic finances.⁴

We argue that, contrary to Larraz’s report, there was not much difference between the two sides, either in funds spent or in their financial strategies. Both sides were forced to resort to all possible means to meet the huge expenditures of the conflict. Taxes, requisition, confiscation, payment moratoria, sale of assets, borrowing, and money creation were used to finance the war effort. External sources were also significant. Franco borrowed from Germany and Italy, while the Republicans depleted their holdings of foreign exchange reserves. The two parties spent similar amounts. We also argue that the Republicans’ continuous military setbacks during the first year reduced their economic power and that tilted the economic balance in favor of the rebel administration and army.

1. Spain at war: 1936–1939

The civil war was the most significant event in the history of contemporary Spain. The war lasted nearly three years, from July 1936 to March 1939, and ended with the establishment of an authoritarian and undemocratic regime that introduced vast changes into Spanish society.

⁴ [Comín and López \(2008\)](#) used the data provided by Pons in their revision of the Republican finances. For the Francoist finances, see [Martorell and Comín \(2008\)](#).

The military rebellion of July 1936 put an end to a long period of parliamentarism and interrupted a slow but continuous process of economic modernization.

On the eve of the war, Spanish industry, armed forces, and diplomacy were entirely unprepared for any kind of war, civil or international, short or long. In 1935, the level of public expenditure stood at around 13 percent of GDP. Reported military spending was low, 16 percent of total budget expenditure.⁵ The quantity and quality of the military equipment and supplies were insufficient to wage a long confrontation. The rebel forces planned a *coup d'état* and expected to seize power in days. But as the Republic did not crumble, the military coup turned into a drawn-out and devastating war.⁶

The military uprising split the country in two, each with its own government. The war broke the financial and monetary union of the country. Although the headquarters of the main banks and saving banks remained in Republican territory, many branches and a large number of regional and local financial institutions operated independently in the area occupied by the Franco forces. Two central banks (one in Madrid and another in Burgos) and two “pesetas” (the former Spanish currency) coexisted during the war. Financial institutions on both sides were closely supervised. Moreover, Republican authorities suspended the operations of the Stock Exchange, took measures to defer the redemption and payment of interest on public debt, and declared a moratorium on bank mortgages. They also introduced rigorous foreign exchange controls and enforced strict measures to regulate the financial system. The Franco administration adopted similar measures: price and exchange controls were introduced, and the financial system was subjected to strict regulations.⁷

On paper, with more developed markets and an industrial base that could ultimately produce the goods needed for war, the Republican government was in a better position to mobilize resources and defeat the rebels. The Republican territory initially encompassed 60 percent of the country’s population (14 million inhabitants), the main commercial cities (Madrid, Barcelona, Bilbao, Valencia), practically the entire industrial base concentrated in Catalonia, the Basque country, Asturias, and the main agrarian exporting area in the Mediterranean coast. They also controlled the central administration apparatus and had a financial advantage that included all the metallic (gold and silver) reserves of the Bank of Spain. The rebels had virtually no manufacturing industry to produce military supplies. Without any initial financial resources, they relied entirely on private donations and on funds borrowed from abroad to purchase foreign supplies. The only initial advantages Franco had were the control of large grain-producing regions, and the support and aid of many entrepreneurs, firm managers, and financiers who moved to the rebel zone immediately after the outbreak of the war.

However, the initial advantages of the Republic soon vanished. First, this was because of internal political conflicts within its own territory. In the first weeks of the war, the central government faced a revolutionary movement led by socialist and anarchist trade unions, and by independent and uncontrolled peasants and workers’ committees. In Catalonia and the Basque country, separatist groups claimed total independence, and authorities in Barcelona and Bilbao demanding more political autonomy assumed “de facto” legislative

⁵ Data in Comín and Diaz Fuentes (2005).

⁶ The literature on the Spanish Civil War is almost unlimited and therefore impossible to list here. The most recent contributions are included in Malefakis (2006) and Fuentes Quintana (2008).

⁷ A comprehensive analysis of the Spanish economy during the war can be found in Martín-Aceña and Martínez Ruiz (2006).

powers until then in the hands of the Spanish Parliament in Madrid. The central government was overrun by these events, its power reduced, and its legitimacy undermined. In contrast, the generals that commanded the rebellion avoided the political turmoil that plagued the Republicans. They suppressed all workers' organizations and political parties, imposed strict domestic order, and militarized the industrial infrastructure in its zone. That does not imply they had a plan to organize a war economy. Rather, the unexpected resistance of the Republic surprised the rebels, and they were forced to establish a brand new administration with serious coordination problems and disagreements about the best economic strategy.

Second, the international situation in the 1930s did not help the Republic's cause. The "non-intervention accord" promoted by Paris and London and signed in the month of September 1936 by thirty-four nations drastically reduced the initial economic superiority of the Republic. The accord precluded the sale of arms to either of the two sides, but in fact penalized the Republic, as Franco's army was from the beginning of the war well supplied by its ideological allies, Germany and Italy, which blatantly disregarded the accord. Although the Soviet Union also ignored the arms embargo, the military equipment sent by Stalin to the Republic never matched the war material sent by Hitler and Mussolini.⁸ Another difference was that the Soviet dictator requested payment in cash (gold), while Nazi and fascist leaders extended unlimited amounts of credit to Franco.

Finally, we must mention the course of the war itself. In a few weeks, the rebels were able to capture almost all of the west side of the country (bordering Portugal) and cut off the North coast from the main Republican zone around Madrid and the Mediterranean coast. In June 1937, when the rebel army occupied the most developed northern provinces, with the largest coal deposits, iron and steel, shipyards and the merchant fleet, the economic balance shifted in their favor. Moreover, the constant expansion of the territory under the control of the nationalist army put most of the arable land of the country in their hands, which allowed them to feed the population and avoid the shortages suffered by the inhabitants of Republican cities.

2. Financing the war: how the war was paid for

There are four ways of paying for a war: taxation, public borrowing on the domestic market, borrowing from foreign markets, and money creation. War financing methods have varied greatly, depending on internal and external constraints, institutional factors, and the length and intensity of the conflict. Evidence shows that governments have financed wars by using a mixture of direct contemporaneous taxes, debt, and money creation. Adam Smith argued that taxes were the best method of financing because they conveyed the real cost of wars to the general public. A.C. Pigou added debt, although he considered this policy as equivalent to taxation. John Maynard Keynes suggested that money creation would be acceptable until the point of full employment was reached. Moreover, Keynes argued against the use of debt financing and wrote in favor of the use of rationing and price controls.

Recent books edited by Harrison (1998) and Broadberry and Harrison (2005) reviewed the economics of World Wars I and II. Although the contributions are quite different in

⁸ Howson (1998), Moradiellos (2001), and Viñas (2008).

approach and methodology, one feature stands out. In all cases, public expenditures increased and governments resorted to all possible means to finance the war effort. Governments used a mix of contemporaneous taxes, debt, and money creation. When it was possible, taxes were raised. Borrowing was intense and, as a result, government indebtedness multiplied. Deficits were unavoidable and as a result new money was thrown into circulation causing inflation and currency depreciation.

The experience of at least three previous nineteenth and twentieth century civil wars tells the same story. In the American civil war, the Union covered its expenses by collecting new taxes, but most of the war financing came from money creation (the well-known greenbacks) and from debt. Inflation both in the North and in the South was the concomitant result of printing money (Ransom 2001). In the long Mexican civil war, the two opposed armies tried to raise taxes, to borrow from the public, and to sell bonds abroad. However, this was not sufficient to meet expenses, and hence the printing press was given additional work. Prices skyrocketed and the Mexican peso depreciated sharply (Gómez-Galvarriato and Musacchio 2000). Revolutionary Russia offers a third example. The Bolsheviks faced insurmountable difficulties in financing the war. The fiscal administration collapsed, the domestic financial market vanished, and foreign markets were closed to Soviet issues. Paper money became the sole means of financing the deficit caused by war expenditures. As happened in other instances during civil or international wars, in Russia prices also rose to hyperinflation levels (Gatrell, 1994, 2005).

2.1. *Internal financing*

In Spain, taxes were not a significant source of income for either of the combatants. Neither introduced major changes in the tax system. Most of the measures merely raised some tax rates or duties, and only in the last month of the conflict was a tax on excess profits introduced.⁹

We have no aggregate data for taxes in the Republican zone. We know, however, that the Republican fiscal administration collapsed in the first months of the war and took almost a year to rebuild. Revolutionary organizations suppressed what they considered “capitalist taxes,” blocking the collection of land rents. The confiscation of private property and of many industrial companies and service firms interrupted the payment of corporate and other taxes (Comín and Lopez 2008). An official report released by the bureau of the Prime Minister, Juan Negrín, on 8 February, 1938, indicated that in the first months of the war, tax revenues dropped abruptly, although later there was a slight recovery.¹⁰ Income from all taxes during the second semester of 1936 amounted to around 420 million pesetas, well short of the 2,000 million pesetas collected in 1935 over the same period. Tax revenues increased to 550 million pesetas in the second semester of 1937, a figure that suggests some improvement in the Republican fiscal administration. The government was able to collect 1,100 million pesetas at the most per fiscal year, considerably less than the 4,140 million pesetas in the 1935 budget.

⁹ An extensive review of tax legislation on the Francoist side is available in Martorell and Comín (2008). Pons (2006) provides information on taxation on the Republican side.

¹⁰ Negrín (1938): “Al Servicio del Pueblo. Un hombre contra el caos. La Hacienda y la Economía de la república en plena guerra,” Barcelona, 8 febrero 1938, Archivo Juan Negrín, Legajo 136.

Table 1. *Tax revenues in Francoist Spain*

	Millions of pesetas
Second half of 1936	396
First half of 1937	552
Second half of 1937	680
First half of 1938	791
Second half of 1938	847
First quarter of 1939	418
Total	3,684

Source: Ministerio de Hacienda (1940).

The figures available for Catalonia and Valencia tell a similar story. In Catalonia, revenue from taxation fell from 45 million pesetas in 1935 to 9.4 million in 1937.¹¹ The data for Valencia confirm the reduction in tax revenues (property tax and tax on profits and rental income), from 44.4 million pesetas in January 1936 to 0.8 million pesetas in January 1937.¹²

The official figures for the zone under Franco's control, shown in table 1, display a rising trend as the rebel army occupied the largest areas of the peninsula. Tax revenue was nonetheless modest. In fact, in the last year of the war, when the Francoists already controlled two-thirds of the territory, tax revenues only represented 38 percent of the amount collected in 1935.

Neither of the two sides issued debt, although the Republicans made an attempt to in the last year of war, without success. This decision to forego internal debt as a method of financing is surprising, as both sides were in great need. The decision, however, can be understood if we take into account that the authorities in both zones temporarily suspended payments on outstanding debt, making investor interest in new issues unlikely.

Instead, both contenders made extensive use of confiscation and expropriation of goods and properties of families and firms considered sympathetic with the enemy. There is little evidence of the amounts obtained in this manner. In the case of the Republicans, in the first months of the war confiscations were made through illegal (or at least had no legal status) procedures. As a result, there are no figures accounting for the amounts collected. From December 1936, the General Directorate of Security (Dirección General de Seguridad) through the Caja de Reparaciones (War Reparations Fund) became the organism responsible for all sorts of confiscations.¹³ However, most of these funds were put aside with the aim of financing the reconstruction of the country after the war and were eventually used to finance the Republican government in exile.

The confiscation of assets in retaliation for political opposition was a significant source of revenue for the Francoist administration, even long after the war had finished. Expropriations were not confined to those suspected of being political opponents. For instance, General Queipo de Llano, commander of the Francoist troops in western Andalusia, decreed the confiscation of all property and assets he deemed useful to sustain the war effort, from motor vehicles and buildings to mining production. The British firm Riotinto was one of the first to suffer this type of requisition, as nearly 60 percent of all

¹¹ Generalitat de Catalunya (1937), vol. I.

¹² Data from Archivo del Antic Regne de Valencia, Intervención de Hacienda, Legajos 5781–82.

¹³ Sánchez Recio (1991).

Table 2. *Bank of Spain loans and advances 1936–1939 (in millions of pesetas)*

	Republican zone	Francoist zone
Credit lines	24,000	7,200
Debit balances		1,060
Total	24,000	8,260
Percentages of total expenditures	60	69

Note: The figures for total expenditures used to compute the percentages in the last row are shown in table 6.

Sources: [Ministerio de Hacienda \(1940\)](#) and [Pons \(2006\)](#).

pyrite extracted during the war was confiscated and sent to Germany in compensation for the aid received from the Nazi regime. This was by no means the only case. The production from the Rif and Setolazar mines was also used to compensate German aid. While there is no estimation of total confiscations on the Franco side, scattered evidence suggests that they were substantial.

The Francoists also asked for voluntary contributions, although it is difficult to know whether these contributions were truly voluntary, as the military authorities used various forms of coercion to force donations.¹⁴ The drive for funds was initiated by the so-called National Subscription established in August 1936, asking the population to donate jewelry and gold. The quantitative relevance of these contributions remains unknown, although [Viñas \(1976\)](#) has estimated that they may have amounted to 668 gold ingots weighing a total of 3.5 tons, and to 162 silver ingots.¹⁵

The main source of internal financing of both sides was money creation. By means of advances and credits from the Bank of Spain, the Republic raised more than 24,000 million pesetas. According to the provisional budgets mentioned below, the total expenditures of the Republican government during the war amounted to 40,000 million pesetas. We can therefore deduce that the issue of new money represented 60 percent of the Republicans' total revenue (table 2). As regards the Francoist Treasury, the deficit during the war, expenses over tax revenues, amounted to 8,260 million pesetas, according to Larraz. Out of this figure, 7,200 million were covered by loans and advances from the nationalist Bank of Spain and the rest (1,060 million) by debit balances in different accounts of the Bank. All in all, new money accounted for almost 70 percent of the acknowledged internal expenses of the civil and military administration of the nationalist State during the war (table 2). The financial strategy of both combatants was quite similar. As a result, it cannot be argued that Francoist policy was sounder than that of the Republicans.¹⁶

2.2. External financing

Foreign resources to pay for the war were especially relevant because Spain lacked a military equipment industry. Imports were essential to maintain the war effort. Franco was able to purchase his military equipment with German and Italian “aid” and with loans from

¹⁴ See [Martorell and Comín \(2008\)](#).

¹⁵ As the gold from the National Subscriptions was sold to a New York bank after the war, it cannot be included as an asset used to finance the conflict.

¹⁶ Orthodoxy has been defended, among others, by [Velarde \(1999\)](#).

Table 3. *Foreign loans (Francoist)*

		Million	Dollars (million)
Axis powers aid	Italy	8,300 lire	447.0
	Germany	629 reichsmark	253.0
Loans from Portuguese financial institutions			6.8
Loans from other sources			11.0
Total			728.7

Sources: Martínez Ruiz (2006a) and Martín-Aceña *et al.* (2010).

private banks in Portugal, Switzerland, and the UK. The most important source, because of its magnitude and strategic significance, was the so-called aid received from the Axis powers, which included troops, military experts, and military supplies on credit. The terms of financial assistance varied by time and country. The mechanism, timing, and control of the funds were always in the hands of the nations providing the aid. Nonetheless, it was always agreed that the advances and credits were to be settled at the end of the conflict. In fact, the total amount to be paid by Spanish authorities was established in bilateral diplomatic negotiations once the war was over.

In the case of Mussolini's Italy, the total aid has been calculated at between 7,000 and 8,668 million lire (377–467 million dollars). These figures include both the military supplies and the expenses of voluntary troops (6,927–7,827 million lire), plus the principal and interests of a revolving credit (300 million lire in all). The best estimate for the Italian aid is 8,300 millions lire, the amount that was actually accepted by the Spanish government in 25 June, 1940.¹⁷

A final figure for the German aid is more problematic, because all the available reconstructions are based on Nazi documentation or on the accounts produced by the Spanish authorities. Our estimates of German assistance to Franco includes: supplies to three armies channeled directly through the administration and indirectly through private agents; the cost of the personal expenses of the German air forces, the Legion Condor; obligations with HISMA (the German company responsible for bilateral trade), and finally various credits granted by the Department of Economy and by private agents. In addition, the Francoist government bought and paid in cash for part of the supplies that came from Germany and hence these payments were also included in the total of the so-called German aid.¹⁸ All in all, Nazi aid was 629 million reichsmark (253 million dollars).

We estimate that the Francoist civil and military administration borrowed as much as 729 million dollars, as shown in table 3. "Italian aid" accounted for 60 percent and Germany aid 35 percent.¹⁹

The Republic received insignificant foreign financial assistance, except a Soviet credit in 1938 (around 70 million dollars). The Republican government did not float debt in London, Paris, or New York, in spite of having a large amount of gold to be used as

¹⁷ Establishing precise figures is difficult, particularly because after the war and long negotiations, the Italian government agreed to a substantial reduction of the Spanish debt to 5,000 million lire. See the figures in Martínez Ruiz (2006a). For more details, see Martín-Aceña *et al.* (2010).

¹⁸ See the detailed account of German aid in Martínez Ruiz (2006a) and Martín-Aceña *et al.* (2010).

¹⁹ These figures are not deflated because we only have total amounts that cannot be decomposed for each year of the war.

Table 4. *Sales of Bank of Spain's gold reserves*

	Fine gold (tons)	Dollars (millions)
1936	175.0	195.8
1937	374.0	394.6
1938	52.0	75.0
Total	601.0	665.4

Sources: Sardá (1970), Viñas (1976), Martín-Aceña (2008).

guarantee. The reasons for this are controversial: either they were blocked by the political aversion of international banks and financiers, or it was a deliberate policy decision.

Although the Republican government did not resort to external borrowing, it had ample international means of payment, in the gold and silver reserves of the Bank of Spain. At the outbreak of the civil war, the metallic reserves in the Bank of Spain amounted to about 635 tons of fine gold, equivalent to 715 million dollars. These reserves ranked fourth in the world, behind only the reserves held by the Federal Reserve System, the Bank of France, and the Bank of England (excluding the Soviet Gosbank reserves). This huge gold stock was accumulated during World War I, thanks to the special conditions created by Spanish neutrality. By the end of the war, the Republican government had exhausted these reserves to purchase military equipment, ammunition, food, and raw materials abroad.²⁰

The sale of the gold reserves was carried out in two stages. The Bank of France acquired 175 tons of fine gold, paying 3,922 million francs (196 million dollars). All the remaining gold, 460 tons valued at 519 million dollars, was sent to the USSR and deposited in Moscow in the vaults of the Gosbank, the Soviet central bank. In 1937 and 1938, the Gosbank bought 426 tons of fine gold from the Republican government, for 245 million dollars, 42 million pounds, and 375 million francs (in all, 469.6 million dollars). The Soviet government retained 132 million dollars as payment for supplies and the rest was transferred to Paris to different accounts in the Banque Commerciale por L'Europe du Nord (a Soviet financial institution in Paris). The Republic used these accounts to pay for armaments, foodstuffs, and raw materials. Table 4 summarizes the gold sales and the sums obtained.²¹

In addition to the direct sales, a few months before the end of the war the Republican government obtained a 70 million dollar credit guarantee from the Soviets with the remaining (34 tons) gold deposit made in 1936. When the conflict was over, the entire gold reserves of the Bank of Spain had been exhausted. After most of the gold had gone, the silver holdings of the Bank (1,225 tons) were sold. The main buyers were the United States Treasury and the Bank of France. In exchange, the Republican government received 15 million dollars. There were also silver sales to private French and Belgian firms, yielding an additional 5 million dollars.

²⁰ For more information about the sale and final use of the gold reserves, see Viñas (1976) and also Martín-Aceña (2001, 2008).

²¹ The difference between the total value of the metallic reserves (715 million dollars) and the amount received by the government for the sale of total assets (665.4 million dollars from the sale of gold plus 38 million dollars used as a guarantee for the loan) is due to the differences in the dollar–gold exchange rate applied at each time and also to the transfer costs (melting, refinery and transport costs, etc.) that the Spanish government had to pay Gosbank.

Table 5. *Total foreign means of payment (millions of dollars)*

	Francoist administration	Republican government
Allies credits (aid)	717.7	70.0
Assets sales		
Gold		665.4
Silver		20.0
Others	11.0	14.0
Total	728.7	769.4

Source: See text.

Table 6. *Total expenditure (millions of pesetas)*

		Francoist administration	Republican government
1936	December	819	5,752
1937	June	1,291	
	December	2,252	13,217
1938	June	2,602	
	December	3,208	21,335
1939	March	1,722	
Total		11,894	40,304

Sources: Ministerio de Hacienda (1940) and Pons (2006).

The decision to deposit the Bank of Spain gold in Moscow sparked heated debate among contemporary politicians, a debate that has continued until our days. One widely accepted explanation is that the Soviet Union was the only ally of the Spanish Republic, so Gosbank was the most suitable place to deposit the gold. However, [Martin-Aceña \(2001, 2008\)](#) argues the Republican Ministry of Finance had other options (such as London, Paris, Zurich, or New York), which were not considered. While this is true, the non-intervention agreement promoted by France and Great Britain, and the reluctance of the democratic powers to support the Republican government, may have influenced the minister's final decision. He might well have feared that signatories to the non-intervention agreement would have frozen gold reserves transferred to their territory. And yet, at the same time, gold was being sold in Paris with no difficulty whatsoever. Another plausible explanation is that Stalin pressed, or forced, the Spanish Minister of Finance to ship the gold to Moscow to guarantee payment of the military supplies that were already arriving at the ports of Barcelona and Valencia.

Table 5 shows that both parties spent roughly the same amount of foreign funds. The Republican government obtained 769 million dollars from their dealings with the Bank of France and the Soviets, Franco 729 million dollars received from Germany and Italy.

3. War expenditures: which side spent the most financial resources?

At the outbreak of the war, the prevailing budget was that of 1932, which was continuously extended in subsequent years. The official budget, however, did not include all expenditures

on behalf of the Republican government during the war, as was recently explained by Pons (2006). In February 1939, the Ministry of Finance produced an internal document summarizing budgetary expenses for 1936, 1937, and 1938.²² This summary, never published, distinguished among ordinary, extraordinary, and undisclosed credits. Only the first two were included in the budget published in the Official Gazette. When the figures of the undisclosed credits are taken into consideration, the picture that emerges is completely different to that portrayed by the official figures in the Gazette. According to this new evidence, Republican expenditure during the war multiplied five-fold, from 5,752 million pesetas in 1936 to 21,335 million pesetas in 1938. As can be seen in table 6, the amount spent by the Republicans totaled 40,335 million pesetas. More than half of this figure was spent on military goods and services. That is, in 1937, the Ministry of War received 54 percent of total budget expenses and this percentage rose to 67 percent in 1938.

According to the data compiled by Larraz in 1940, the budgetary expenses of the Francoist administration only rose by 11,894 million pesetas, less than a third of that recorded in the Republican budget. Therefore, if these figures are accurate, the figures in table 6 would seem to validate Larraz's claim that Franco won the war despite the considerable difference in the volume of expenditure on behalf of the two sides.

The official accounts prepared by the Ministry of Finance after the war mis-state the real budgetary position of the Francoist administration, because large quantities of military supplies were not paid for until after the conflict. Larraz estimated total deferrals represented 800 million pesetas (500 million for supplies and construction and 300 million for military transport). But even this figure still underestimates the unpaid war bills of the Franco administration. The official government budgets for the years 1940–1946 include 8,060 million pesetas paid to cover debts and expenditure made during the civil war. Twenty-two percent of this went toward the interest and principal of public debt and more than 50 percent to military supplies to the Army. The rest were other deferred payments of war-related expenditure made by the Air Force, the Navy, and the Ministry of Internal Affairs.²³

Moreover, the Francoists drastically reduced all expenditure not directly linked to the war effort. Civil servants' salaries were cut and they were forced to contribute to the war effort with one or two days of their monthly salary. The Francoist military administration also had a spare institutional structure, not having to finance institutions such as the Parliament or the Constitutional Guarantees Court.²⁴ Republican war prisoners contributed to the reduction in expenditure as well. A decree of May 1937 established that prisoners could be put to work, mostly in the construction sector, without pay, a measure that might have created significant savings. Although the exact amount is unknown, Franco's army and administration costs during the war exceeded the figure reported by Larraz. If we add both the 11.9 billion pesetas in table 6 and the 8.1 billion pesetas of the officially recognized deferred payments, then the amount spent by the Francoist side rises to 20 billion, which still falls short of the amount spent by the Republicans.

On the other hand, prices behaved differently in the two zones. The inflation rate was consistently higher in the Republican territory than in the area under Franco's control. Unfortunately, we only have wholesale prices for the entire period of war for the Francoist side. Official prices on the Republican side are only available for the first year of the war. Table 7 includes the information available for the two zones for the first twelve months of

²² Pons (2006) provides the figures of this internal document.

²³ Data in Comín and Díaz Fuentes (2005).

²⁴ See Martorell and Comín (2008).

Table 7. Wholesale prices (July 1936 = 100)

		Republican zone		Francoist zone
		National	Barcelona	National
1936	July	100.0	100.0	100.0
	August	102.0	102.4	101.5
	September	109.7	104.8	102.1
	October	117.2	111.2	105.1
	November	129.4	116.1	106.1
	December	149.0	120.0	107.2
1937	January	166.2	128.1	111.2
	February	179.9	139.9	112.2
	March	202.2	152.5	113.1
	April	234.6	168.5	112.5
	May		170.3	114.0
	June		173.8	113.8
	July		180.8	114.2

Sources: Miguel (1944). For Barcelona, see Maluquer de Motes i Bernet (2008).

Table 8. Official wholesale price index for the Francoist zone (1936–1939)

1936	July	100
	September	102
	December	107
1937	March	113
	June	114
	September	116
1938	December	121
	March	125
	June	127
	September	130
1939	December	137
	March	141

Source: Miguel (1944).

the war. Prices rose rapidly in Republican Spain. They doubled between July 1936 and March 1937. In the rebel zone, prices remained more stable, recording a moderate increase of only 15 percent.

Official prices were also published on a monthly basis for Spain's nationalist territory. This information was later used by Miguel (1944) to produce a price index for the entire war period, which has been included in table 8. The index shows relative price stability in the Francoist zone until the end of the war.

In contrast, we do not have official prices for the Republican zone after August 1937. To offset this lack of information, we have two different series. One is an estimation made by Miguel in 1944. According to this author, prices rose exponentially after July 1937, unleashing uncontrollable hyperinflation and a simultaneous flight from currency (a typical phenomenon for the currency of the losing side in a military conflict).

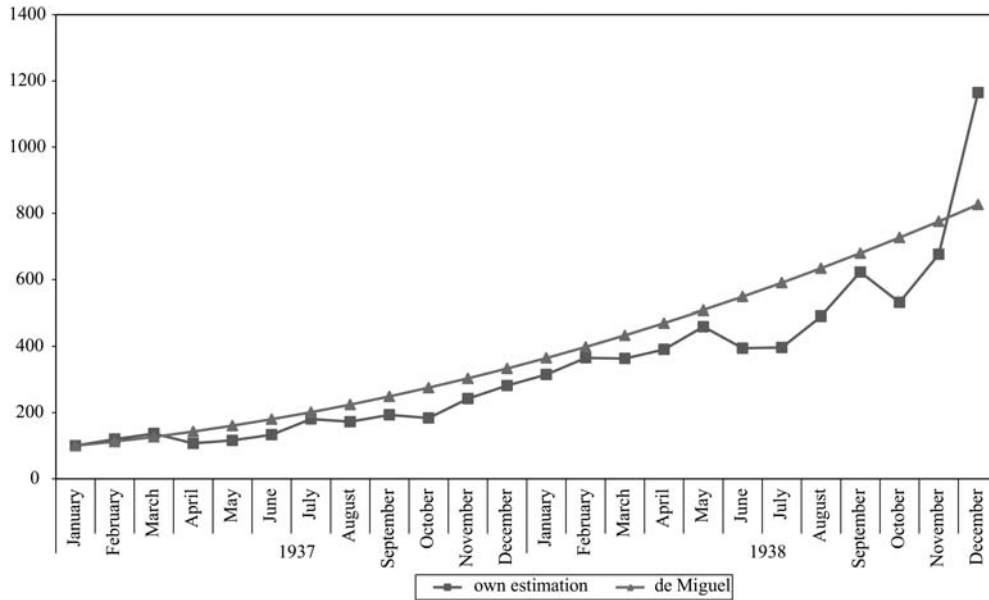


Figure 1. Wholesale prices in the Republican zone (January 1937 = 100). Sources: Miguel (1944), and our estimates.

In order to test the plausibility of Miguel's series and to improve our information, we have attempted to construct a new estimate using the French franc exchange rate of the peseta and the French wholesale price index.²⁵ According to purchasing power theory, the exchange rate should reflect the inflation differential. Taking into account this theoretical identity, we obtained a price index and compare it to the estimate published by Miguel (figure 1). It can be seen that the new index replicates that of Miguel until mid-1938, although our estimation is below his index. In the summer of 1938, our index shows that Republican prices seem to have reached a plateau that coincided with the decisive Ebro battle in which the Republicans obtained a temporary victory over the Franco army. Afterward, the rapid advance of the rebel army toward the Mediterranean coast led to a flight from the Republican peseta and to an upturn in the inflation rate.

The evolution of the exchange rate of the nationalist peseta also provides an alternative indicator for the behavior of the prices in the zone controlled by the rebels (figure 2). The evidence suggests that the Franco peseta did indeed lose more value than official price figures suggest, dropping by 33 percent against the French franc between July and December 1938 and by 51 percent against the dollar. Such a fall in the external value of the Francoist peseta was not reflected in the official price index, which only registered a 10 percent increase in the same period. Moreover, the oscillations of the exchange rate of the national peseta against the dollar suggest that the stability of the Francoist peseta only lasted until the end of 1937. It seems that either the system of price controls and rationing established by the Francoists was very effective, or that the price statistics recorded by the

²⁵ Wholesale prices for France (1937–1939) at <http://www.nber.org/databases/macroeconomic/contents/chapter04.html>.

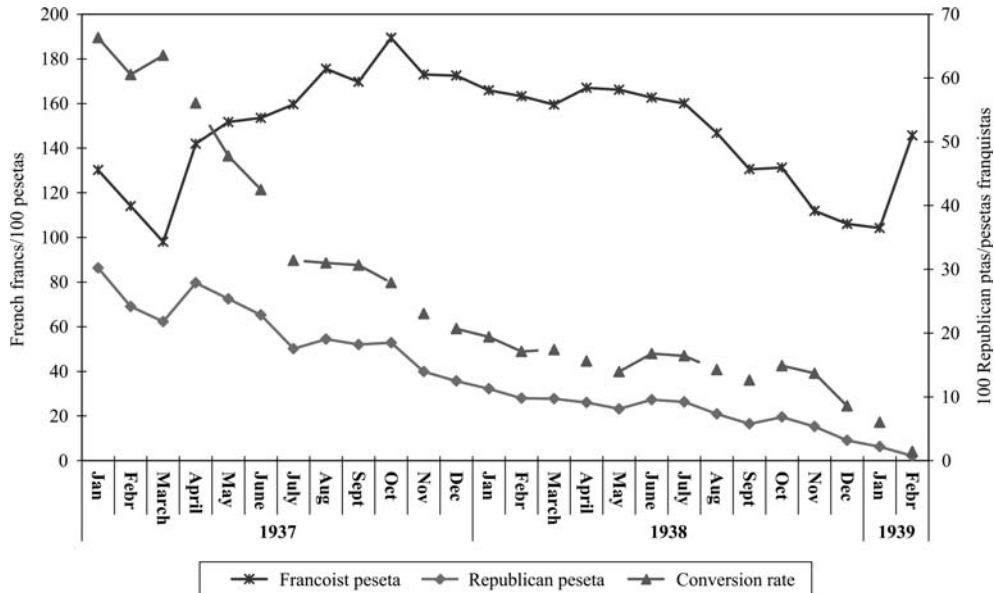


Figure 2. Exchange rates of the two pesetas in Paris. Source: Miguel (1944).

Francoist authorities failed to capture movements in black markets. The repressed inflation in the nationalist zone seems to have been quite strong and significant, since prices rose at an annual average rate of 12 percent after 1939.

Table 9 compares the overall expenditure of both sides, using the official price index to deflate the Francoist figures and our new estimated Republican price index to deflate the Republican figures.²⁶ The expenditure picture that emerges in the two territories is quite different from that shown in table 6. When nominal figures are transformed into real values, Francoist expenditures now exceed Republican: 9.4 versus 7.5 billion pesetas. And these estimates do not include the deferred payments of the Franco side discussed above.

4. Why did the Republicans suffer higher inflation?

As shown above, the two sides relied almost entirely on money creation to pay for their domestic current expenditure. Increases in the money stock far greater than the growth in production created strong inflationary pressures, particularly in the Republican territory. In fact, one could argue that the more rapid and sustained rise in prices in the Republican zone was a key factor tipping the balance of resources toward the Francoists. Why did the Republicans suffer higher inflation? Is the higher inflation rate definite proof of gross economic mismanagement by the Republican government?

The more intensive use of the Bank of Spain by the Republican Treasury has been considered the key element behind the difference in inflation rates. But the evidence presented

²⁶ Our new estimate begins in January 1937. In order to include 1936, we have linked our series with the official price index. The results are included in the appendix.

Table 9. *Total expenditure (millions of pesetas 1936)*

		Francoist administration	Republican government
1936	December	765	3,940
1937	June	1,133	
	December	1,861	2,226
1938	June	2,049	
	December	2,342	1,103
1939	March	1,221	
Total		9,371	7,489

Sources: See Tables 6, 7, and Appendix.

Table 10. *Monetary supply (pesetas)*

	Money supply ^a (million)		Money per capita	
	Francoist zone	Republican zone	Francoist zone	Republican zone
1936 (July)	2,299	6,595	230	441
1936 (December)	2,378	9,083	193	720
1937 (June)	3,440	12,194		
1937 (December)	5,166	17,053	355	1,601
1938 (June)	6,971	20,929		
1938 (December)	9,239	26,613	592	2,620
1939 (March) ^b	14,873	28,027	952	2,758

^aIncludes currency and short-term deposits.

^bPopulation as of 31 December, 1938.

Sources: Money supply from Miguel (1944), population at the end of each year from Ortega and Silvestre (2006), population in July 1936 from Martín-Aceña (2004).

above suggests that both sides resorted to the central banks. Furthermore, the percentage increase in the money stock was similar, as is apparent in table 10. In the Republican zone, by March 1939, the public had four times the amount of money in their hands than at the beginning of the war (a quarterly growth rate of 14 percent). The stock of money in the Francoist zone grew more slowly at first, but as Franco's Army extended the territory under its control, the money in circulation multiplied by nearly 6.5 (a quarterly growth rate of 18 percent).

However, when comparing the change in the stock of money in both zones, it is also necessary to consider the size of the economy. As there are no figures available for production as a whole, we take the population as a proxy. The figures for money per capita are in table 10. As the population in the Republican territory dwindled, the quantity of money per capita rose six-fold (a quarterly growth rate of 18 percent).²⁷ On the contrary, as the population in the Francoist zone grew, the per capita quantity of money only increased four-fold (a quarterly growth rate of 14 percent). As a result, the money supply grew at a faster rate in the Republican zone in per capita terms.

²⁷ Population figures come from new estimates by Ortega and Silvestre (2006).

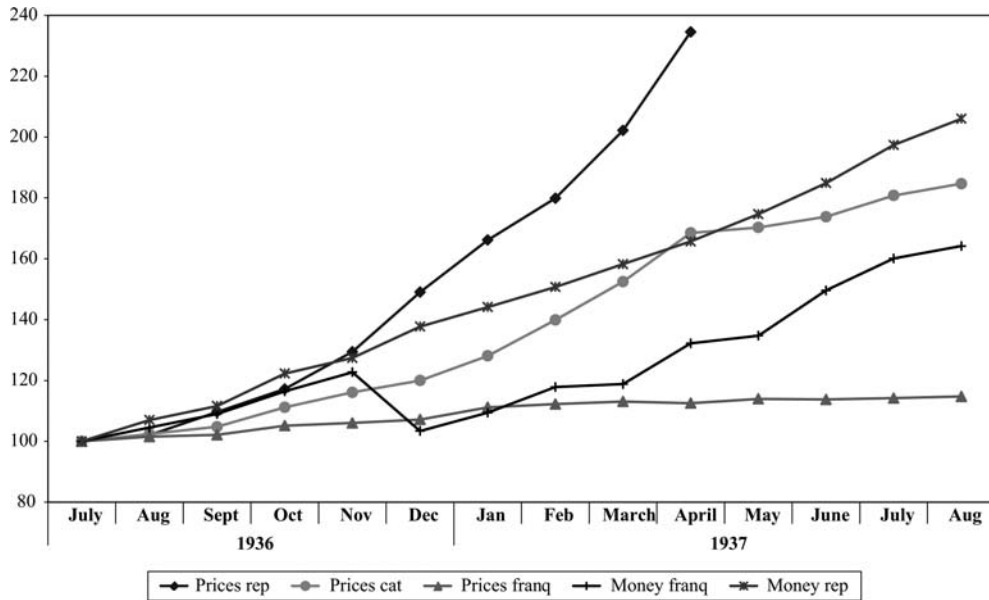


Figure 3. Money and prices (July 1936 = 100). Sources: Miguel (1944). For the price index for Catalonia, see Maluquer de Motes i Bernet (2008).

Figure 3 shows that the price lines did not shadow population losses. For instance, until December 1936 when the population fell by 2.3 million in the Republican zone, prices rose in line with the money supply. In contrast, from December 1936, when the population decreased by a much lesser extent, prices increased significantly more rapidly than the quantity of money.

One factor that might explain why prices rose more than the stock of money is a downturn in production not related to the fall in population. Although recent studies have suggested that agrarian and industrial production did not collapse in the area controlled by the Republican government, as is frequently asserted, there were marked energy and raw material shortages as well as widespread food and consumer goods scarcities in the Republican zone.²⁸ This was a consequence of the unbalanced distribution of population and agrarian supplies between the Republican and Francoist zones. While the largest part of the population was in the Republican area, the agrarian producing area was largely under the control of Franco's army. A greater imbalance between cash in circulation and total output contributed to the escalation of wholesale prices in the Republican zone. Moreover, the fact that prices rose by more than the stock of money and more than the decline in output means that money velocity rose as well. Velocity might have risen because inflation itself discouraged the public from holding cash, adding to the pressure on prices.

Political factors may also explain some of the faster increase in Republican prices. Regional authorities and revolutionary organizations printed their own money as a way of asserting their political independence. Consequently, there was a boom in local banknotes and

²⁸ Catalán (2006) and Martínez Ruiz (2006b).

coins in the Republican zone.²⁹ The fact that numerous issuing centers were operating (the central government, the autonomous governments, and many regional and local institutions) and that there were a variety of currencies in circulation undermined the credibility of the Republican peseta. The Republican government failed to see this problem, and did not put a stop to this monetary anarchy until autumn 1937. However, the fact that Catalan prices experienced a more moderate rise than the prices in the Republican territory as a whole, despite the fact that Catalonia was probably the area with the most currencies in circulation—as shown in figure 3—suggests that this was not the determinant factor.

The continuous military setbacks suffered by the Republican Army was another factor that fueled inflation, as people lost faith in the currency and fled from it. The currency war declared by the Francoist against the Republican peseta should also be taken into consideration.³⁰ Rebel authorities declared all banknotes issued after July 1936 by the Republican Bank of Spain illegal, while at the same time approving the new banknotes to be circulated by the newly created nationalist Bank of Spain. This decision generated anxiety and uncertainty among the population, particularly in the zones close to the front lines. When they anticipated that Franco's troops would launch a final attack to overrun the territory, they disposed of their Republican pesetas, which were worthless if the village was occupied, buying as much scarce tangible goods as they could. After the occupation of the industrial North, in the summer of 1937, Francoists took action that put additional pressure on the Republican economy. An act was passed blocking all current accounts and bank deposits opened or increased after the outbreak of the war. When news of the advance of the Franco army reached the population in Republican cities, holders of deposits reacted by transforming them into cash and then into goods and services. Prices simply rose to clear the market. Only the fact that the Republican army was permanently retreating allowed the Francoist measures to have an effect. The Republican government took approximately the same measures against the Francoist peseta without any results, which indicates that military outcomes and not more or less appropriate political measures were the key.

5. Conclusions

In this paper, we present new budgetary data and a detailed account of the financing of the Spanish civil war. The two contenders consumed approximately the same amount of domestic and foreign resources. Table II summarizes the information included in tables 6 and 10. The figures are sufficiently clear and do not need more than a few final comments. Both sides spent about 2,000 million dollars, at 1936 prices, a significant amount.

Two-thirds were obtained from domestic sources, mainly money creation, and spent in domestic markets. The rest was acquired abroad and the two combatants used that money to pay for supplies in foreign markets. New means of payment was the basic tool employed by both Republicans and Francoists. The two sides had substantial quantities of external resources. The Republicans sold gold to buy foreign currencies, while the other side obtained direct credit and forthright aid from fascist nations. Neither side, however, resorted to the issue of foreign debt. The poor credibility of the Spanish government given past debt defaults, plus the unfriendly positions of the British and French governments toward the

²⁹ Martorell (2006).

³⁰ This has been extensively studied by Sánchez Asiain (1999).

Table II. *Total resources (millions of dollars 1936)*

	Francoist administration	Republican government
External resources	760	769
Domestic resources	1,282	1,086
Total	2,042	1,855

Note: For the exchange rate of the peseta, see [Svennilson \(1954\)](#), pp. 318–19.

Sources: Tables 6 and 10.

Republic, precluded issuing paper in London, Paris, or even New York. On the other hand, as the Franco government was not diplomatically recognized by the Western powers, bourses were closed to possible nationalist issues.

The financial decisions made by the two contenders shared a common objective: to win the war. Although the militarization of the economy was apparent in the Franco zone, the Republican government also concentrated its energies on the military, which is apparent from the increasing proportion of military expenses in the budget. As this last argument has been frequently questioned, it is worth emphasizing. Nevertheless, despite having the same resources, the Republicans obtained less and lower quality military equipment and supplies. Inefficiency or inexperience was not the main cause. The non-intervention agreement prevented the Republican government from obtaining arms legally in the markets of producing nations. On the contrary, Franco received a constant flow of arms from Germany and Italy. Moreover, the supplies to the nationalists were sent on credit, and payment was postponed to the end of the war.

What lesson can be learned from the Spanish civil war concerning the relationship between its final outcome and the volume of resources employed by the two parties in the conflict? Was the result of the Spanish civil war different to what was expected, given the initial distribution of wealth and resources?

Taking into account the initial distribution of resources, since the Republic controlled the industrial areas of the country, such as Catalonia and the Basque provinces, and the financial hub of Madrid, the legitimate government should have won the war. However, the final outcome was the opposite. What the Spanish case shows is that wars are not always and not only a matter of levels of economic development on each side and the scale of resources that they wield. What happens on the battlefield affects the economy. In the early weeks of the conflict, the Republican government, taken aback by the revolt of part of the Army and facing severe internal turmoil, suffered a series of military defeats. After a year, the question was not whether the revolt would succeed, but how long the Republic could resist. As time went by and Franco's army inflicted further defeats on the increasingly demoralized Republican troops, the market began to anticipate the victory of the Francoist side. The lack of confidence in a future victory of the Republican army undermined the possibility of the government obtaining fresh financial resources. These negative expectations reduced the financial possibilities of the Republic, precluding debt issuing, payment deferrals, or even the use of clearing agreements. They prevented the Republican government from converting its initial economic and financial superiority into military superiority. The inflation spiral and rapid devaluation of the Republican peseta also reflected this situation.

As we believe, the Spanish Republic did not lose the war because of a lack of financial resources, other factors should be attributed the major role. How the resources were managed is a crucial issue that has to be considered. The debate is still open and should

be included in the agenda for future research.³¹ As pointed out in the political literature, the Republic suffered from poor internal cohesion, with regional autonomous governments and socialist and anarchist trade unions fighting the central government for power and the control of military operations. The non-intervention agreement is also mentioned as a serious constraint that limited the capacity of the Republic to obtain weaponry supplies in legal markets.³² As a matter of fact, both Manuel Azaña, the president, and Juan Negrín, the prime minister, when in exile, attributed the fate of the Second Spanish Republic to internal conflicts and to external interference rather than a lack of material resources.

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References

- BROADBERRY, S. and HARRISON, M. (eds) (2005). *The Economics of World War I*. Cambridge: Cambridge University Press.
- CATALÁN, J. (2006). Guerra e industria en la dos Españas, 1936–1939. In P. MARTÍN-ACEÑA and E. MARTÍNEZ RUIZ (eds), *La economía de la Guerra Civil*. Madrid: Marcial Pons.
- COMÍN, F. and DÍAZ FUENTES, D. (2005). Sector público administrativo y Estado del bienestar. *Estadísticas históricas de España. Siglos XIX y XX*. Madrid: Fundación BBVA, pp. 873–965.
- COMÍN, F. and LÓPEZ, S. (2008). La Hacienda del gobierno de la República española (1936–1939). In E. FUENTES QUINTANA (dir.) (ed.), *Economía y Economistas españoles en la Guerra Civil*, vol. II. Barcelona: Galaxia-Gutenberg, pp. 851–99.
- DELGADO, I. (1980). *Portugal e a guerra civil de Espanha*. Lisboa: Publicações Europa-America.
- FUENTES QUINTANA, E. (dir.) (2008). *Economía y Economistas españoles en la Guerra Civil*. Barcelona: Galaxia-Gutenberg.
- GARCÍA PÉREZ, R. (1994). *Franquismo y Tercer Reich*. Madrid: Centro de Estudios Constitucionales.
- GATRELL, P. (1994). The First World War and War Communism, 1914–1920. In R.W. DAVIES, M. HARRISON and S.G. WHEATCROFT (eds), *The Economic Transformation of the Soviet Union, 1913–1945*. Cambridge: Cambridge University Press.
- GATRELL, P. (2005). Poor Russia, poor show: mobilising a backward economy for war, 1914–1917. In S. BROADBERRY and M. HARRISON (eds), *The Economics of War World I*. Cambridge: Cambridge University Press, pp. 235–75.

³¹ The debate has been addressed in the papers included in Martín-Aceña and Martínez Ruiz (2006).

³² See the chapters included in Malefakis (2006).

- GENERALITAT DE CATALUÑA (1937). *La Política Financiera de la Generalitat durante la revolución y la guerra*. Barcelona: Generalitat de Cataluña.
- GIURA, V. (2002). *Tra política ed economia. L'Italia e la guerra civile spagnola*. Roma-Napoli: Edizioni Scientifiche Italiane.
- GÓMEZ-GALVARRIATO, A. and MUSACCHIO, A. (2000). Un nuevo índice de precios para México, 1886–1929. *El Trimestre Económico* 67, pp. 47–91.
- HARRISON, M. (ed.) (1998). *The Economics of World War II: Six Great Powers in International Comparison*. Cambridge: Cambridge University Press.
- HOWSON, G. (1998). *Arms for Spain: The Untold Story of the Spanish Civil War*. London: J. Murray.
- HUBBARD, J.R. (1953). How Franco Financed His War. *Journal of Modern History* 25, pp. 390–406.
- LEITZ, C. (1996). *Economic Relations between Nazi Germany and Franco's Spain 1936–1945*. Oxford: Oxford University Press.
- MALEFAKIS, E. (dir.) (2006). *La Guerra Civil Española*. Madrid: Taurus.
- MALUQUER DE MOTES I BERNET, J. (2008). Inflación y guerra: la evolución del nivel general de precios en las dos Españas (1936–1939). In E. FUENTES QUINTANA (dir.) (ed.), *Economía y Economistas españoles en la Guerra Civil*, vol. II. Barcelona: Galaxia-Gutenberg, pp. 1121–40.
- MARTÍN-ACEÑA, P. (2001). *El Oro de Moscú y el Oro de Berlín*. Madrid: Taurus.
- MARTÍN ACEÑA, P. (2004). La economía española de los años treinta. In S. JULIÁ (coord.) (ed.), *Republica y Guerra Civil. Historia de España dirigida por Menéndez Pidal*, vol. XL. Madrid: Espasa Calpe, pp. 348–444.
- MARTÍN-ACEÑA, P. (2008). El oro del Banco de España y la guerra civil. In E. FUENTES QUINTANA (dir.) (ed.), *Economía y Economistas españoles en la Guerra Civil*, vol. I. Barcelona: Galaxia-Gutenberg, pp. 1079–120.
- MARTÍN-ACEÑA, P. and MARTÍNEZ RUIZ, E. (eds) (2006). *La economía de la Guerra Civil*. Madrid: Marcial Pons.
- MARTÍN-ACEÑA, P., MARTÍNEZ RUIZ, E. and PONS, M.A. (2010). The financing of the Spanish Civil War, 1936–1939. In P. BAUBEAU and A. ÖGREN (eds), *Convergence and Divergence of National Financial Systems: Evidence from the Gold Standards, 1871–1971*. London: Pickering & Chatto.
- MARTÍNEZ RUIZ, E. (2006a). *Guerra civil, comercio y capital extranjero. El sector exterior de la economía española (1936–1939)*. Madrid: Banco de España.
- MARTÍNEZ RUIZ, E. (2006b). El campo en guerra: organización y producción agraria. In P. MARTÍN-ACEÑA and E. MARTÍNEZ RUIZ (eds), *La economía de la Guerra Civil*. Madrid: Marcial Pons.
- MARTEORELL, M. (2006). Una guerra, dos pesetas. In P. MARTÍN-ACEÑA and E. MARTÍNEZ RUIZ (eds), *La economía de la Guerra Civil*. Madrid: Marcial Pons, pp. 329–56.
- MARTEORELL, M. and COMÍN, F. (2008). La Hacienda de guerra franquista. In E. FUENTES QUINTANA (dir.) (ed.), *Economía y Economistas españoles en la Guerra Civil*, vol. II. Barcelona: Galaxia-Gutenberg, pp. 901–37.
- MIGUEL, A.D.E. (1944). Fundamentos técnicos para la construcción de una escala de desbloqueo. El tránsito de la peseta roja a la peseta nacional. *Moneda y Crédito* II, pp. 9–24.
- MINISTERIO DE HACIENDA (1940). *Resumen provisional sobre la evolución de la Hacienda desde el 18 de julio de 1936 hasta el presente*. Madrid: Ministerio de Hacienda.
- MORADIELLOS, E. (2001). *El refugio de Europa. Las dimensiones internacionales de la Guerra Civil española*. Barcelona: Ediciones Península.
- NEGRÍN, J. (1938). Al Servicio del Pueblo. Un hombre contra el caso. La Hacienda y la Economía de la república en plena guerra, Barcelona, 8 febrero 1938, Archivo Juan Negrín, Legajo 136.
- OLIVEIRA, C. (1987). *Salazar e a guerra civil de Espanha*. Lisboa: O Jornal.
- ORTEGA, J.A. and SILVESTRE, J. (2006). Las consecuencias demográficas. In P. MARTÍN-ACEÑA and E. MARTÍNEZ RUIZ (eds), *La economía de la Guerra Civil*. Madrid: Marcial Pons, pp. 53–101.
- PONS, M.A. (2006). La Hacienda pública y la financiación de la guerra. In P. MARTÍN-ACEÑA and E. MARTÍNEZ RUIZ (eds), *La economía de la Guerra Civil*. Madrid: Marcial Pons, pp. 357–91.

- RANSOM, R.L. (2001). The economics of the civil war. *EH Net Encyclopedia*, edited by R. WHAPLES, available at <http://eh.net/encyclopedia/article/ransom.civil.war.us>.
- SÁNCHEZ ASIAÍN, J.A. (1999). *Economía y finanzas en la guerra civil española (1936–1939)*. Madrid: Real Academia de la Historia.
- SÁNCHEZ RECIO, G. (1991). *La República contra los rebeldes y los desafectos. La represión económica durante la guerra civil*. Alicante: Universidad de Alicante.
- SARDÁ, J. (1970). El Banco de España, 1931–1962. *El Banco de España. Una historia económica*. Madrid: Banco de España, pp. 421–79.
- SVENNILSON, I. (1954). *Growth and Stagnation in the European Economy*. Geneva: U.N. Economic Commission for Europe.
- VELARDE FUERTES, J. (1999). Aspectos económicos de la Guerra Civil (1936–1939). In M. ALONSO BAQUER (ed.), *La guerra civil española. Sesenta años después*. Madrid: Actas, pp. 367–96.
- VIÑAS, A. (1976). *El oro español en la Guerra Civil*. Madrid: Instituto de Estudios Fiscales.
- VIÑAS, A. (1977). *La Alemania nazi y el 18 de julio*. Madrid: Alianza.
- VIÑAS, A. (1984). *Guerra, dinero, dictadura, ayuda fascista y autarquía en la España de Franco*. Barcelona: Crítica.
- VIÑAS, A. (2008). Armas y hombres para España. Los apoyos exteriores en la guerra civil. In E. FUENTES QUINTANA (dir.) (ed.), *Economía y Economistas españoles en la Guerra Civil*, vol I. Barcelona: Galaxia-Gutenberg, pp. 339–424.
- WHEALEY, R. (1986). How Franco financed his war—reconsidered. In M. BLINKORN (ed.), *Spain in Conflict 1931–1939. Democracy and Its Enemies*. London: Sage Publications, pp. 245–63.

Appendix

Prices indexes for the Republican zone (July 1936 = 100)

		New estimate	De Miguel's estimate
1936	July	100	100.0
	August	102.0	103.6
	September	109.7	110.0
	October	117.2	58.1
	November	129.4	131.3
	December	149.0	146.2
1937	January	166.2	163.9
	February	199.1	184.5
	March	227.3	207.9
	April	178.1	234.1
	May	193.1	263.2
	June	221.5	295.1
	July	300.3	329.9
	August	286.6	367.5
	September	321.2	408.1
	October	305.3	451.1
	November	402.5	497.2
	December	468.4	546.2
1938	January	523.3	597.9
	February	607.3	652.5
	March	604.0	710.0
	April	649.7	770.2
	May	763.7	833.3
	June	655.8	899.3
	July	659.2	968.0
	August	814.6	1,039.7
	September	1,034.9	1,114.1
	October	882.7	1,191.4
	November	1,123.9	1,271.5
	December	1,935.1	1,354.5
1939	January	2,843.1	1,440.2
	February	8,424.5	1,528.9

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