"Confronting financial crises under different monetary regimes: Spain in the Great Depression years" [1]

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Abstract

Spain was effectively on silver from 1868 down to the II Republic in 1931. Being off the gold standard and on a depreciating silver standard from the 1890s on helped the economy adjust almost painlessly to the several economic crises it suffered during that period and resulted in a much milder recession than the rest of the world in the 1930s.

Devaluation corrects past policy mistakes at the cost of making the country poorer; but it will only hold in the longer term if it is accompanied by sound fiscal and monetary policies. During WWI a neutral Spain had accumulated a large gold reserve by selling to all belligerent countries. Pressure to move to gold was resisted but the slow depreciation of the silver anchor after WWI was accompanied by a surprisingly sound Bank of Spain monetary policy. Though the Treasury did use its power to borrow from the Bank from time to time the Board of the Bank correspondingly tightened interest rates to maintain monetary stability. This resulted in quite moderate rates of growth of the money supply that helped keep internal prices in check. In fact, the peseta behaved like a properly managed nominal currency. In the 'twenties the rate of exchange of the peseta versus the pound sterling fell along with silver against gold, due to a persistent structural deficit in the balance of payments; and though from 1929 to 1935 the peseta fell less rapidly than silver, it did fall more than if it had been on gold.

Being on the silver standard dampened the effects of the Great Depression in Spain. Under a gold standard regime the balance of payments would have rebalanced quickly but with a large restructuring cost such as that suffered by Spain today under the 'euro-standard': Then as now, almost immovable structural inflexibility makes external depreciation a more acceptable policy than harshly imposed internal devaluation.

Another positive effect of the peseta being anchored on a depreciating silver standard was to allow the Bank of Spain freely to act as lender of last resort in

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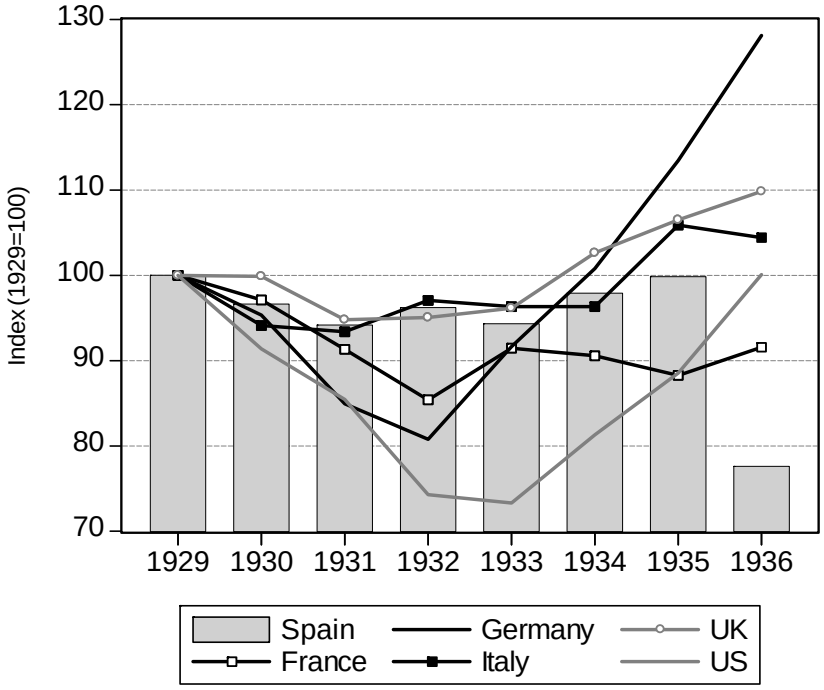
1931 and thus prevent the deep banking crisis that struck other developed economies.

However one must not exaggerate the effect of a flexible monetary policy in a country like Spain in the 1930ies: Spain still was an agricultural country and she enjoyed two bumper crops in wheat in 1933 and 1935; and in any case the relative smallness of the foreign sector helped dampen the effects of what was happening in the rest of the world.

1. The thesis of this essay

A number of historians have suggested that the Great Contraction of the US economy from 1929 to 1933 and the banking failures and subsequent financial upheaval in Europe after 1931 played large role in the breakdown of the II Spanish Republic, founded precisely in '31, and in the final nemesis of the Civil War. (1936-39). [2] On the contrary, we underline the fact that Spain fared much better than other countries during the crucial years of 1929-1933 (See fig. 1)

Figure 1: Real GDP Growth in Selected European Countries and US



Source: *GDP data for Germany and France from Mitchell (2003), UK GDP from Feinstein (1972), as quoted by Cole and Ohanian (2007). US GDP from the US Bureau of Economic Analysis statistics. Spain GDP from Prados (2003).*

First, we attribute the relatively mild character of the recession of those years mainly to domestic factors. And secondly, we discount a faltering private sector investment or a supposedly deflationary monetary policy of the Bank of Spain

[2] Among them is Hugh Thomas (1976), chapter 12: "La economía durante la República". Thomas is also wrong about Jaume Carner's financial policy as Treasury Secretary in the early 'thirties, when he let the peseta float, see below.

as the main causes of that mild recession. We attribute it to a sudden attempt to rebalance the Budget in 1930 with a drastic retrenchment of public investment. This change of policy was felt to be necessary because the Spanish Government found it impossible to go on sustaining the growth model of the mid 'twenties. In any case, the change in budgetary policy did not affect the greater part of the private sector, especially agriculture and consumer industries ; and the relative downturn did not originate with the Bank of Spain, whose quick reaction when depositors took fright at the sudden fall of the Monarchy avoided a catastrophic bank run in 1931.[3] To evidence this, we estimate the Bank of Spain reaction function in those years and thus show that the Bank acted as a successful lender of last resort in 1931.

Apart from looking at the structure of the Spanish economy, we give another reason for our view that there was nothing more than a short-lived domestic downturn from 1929 to 1933. In our view, the downturn looked artificially large by comparison with the boom of the late twenties brought about by an unsustainable expansion of Government investment. This can be seen by looking at the secular growth trend (see Figure 3, below).

Data for unemployment, company returns, and international trade (Tables 4 to 6) show that the mild Spanish recession of the thirties left some sectors practically unscathed, given the weight of agriculture in the Spanish economy and the relative isolation of Spain from the world. The *de facto* flotation of the peseta also helped – but then made for a weaker recovery in the thirties compared to other countries The Republic in 1931 brought acute social conflict, which finally led to the 1936-39 civil war. This is what deviated Spain from its secular growth path – not world depression.

In sum, the thesis of the present essay is that the recession was much lighter in Spain than in the US, Italy, Germany or France (see Figure 1); that the causes of the contraction were domestic rather than epidemic; and that the relative shallowness of the contraction in Spain, and of the UK after abandoning gold, may have been due in some measure to similarly flexible monetary arrangements.

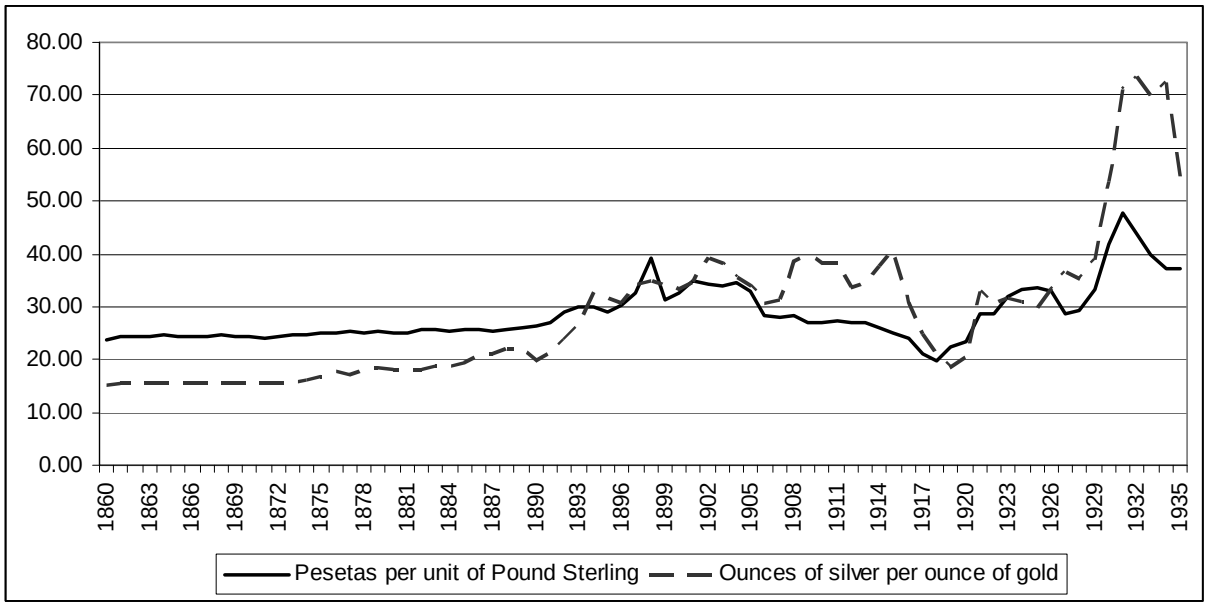
2. Spain on silver

For centuries the Spanish currency had had a special link with silver. The discovery in the 16th c. of a cheap method of separating the metal from sulphur without toasting the mineral allowed Spain to inundate the world with silver discovered in American mines. The loss of the greater part of Empire at the beginning of the 19th c. plunged the monetary arrangements of Spain in

[3] Palafox (1980 a, b) and Comín and Martín Aceña (1984) were the first to suggest that the Spanish recession of the thirties was caused by domestic rather than international factors; and Tortella and Palafox (1983) underlined the isolation of the Spanish economy and a floating peseta as a protection from international deflation and recession. Further, Tortella and Palafox also stressed that the Spanish financial sector remained quite stable in the thirties, in contrast with widespread collapses all over the developed world. This goes against those, who like Sardá (1948), criticised a supposed restrictive monetary policy of the central bank. We go further in the criticism of Sardá when we show that the central bank injected the necessary amount of liquidity when the danger of a bank run loomed.

disarray. In 1868 a Revolutionary Government tried to mend matters by joining the Latin Monetary Union. To that end the new peseta was made the standard of the country, coined with the same silver weight and fineness as the French, Swiss and Belgian francs. Spain however did not follow suit when the Continent of Europe joined the United Kingdom in adopting gold as the anchor. Though Spain was officially bimetallic and for a short period gold coins were minted, in effect the peseta was purely on silver. This was made official in 1883 when the reference to gold and gold coinage was officially abandoned. As silver slowly lost value up to WWI and after 1920 (see Figure 2 below), the peseta coins did not change their face value. The result was that the Spanish currency functioned as a nominal currency. This slow loss of value except for the years of the Spanish-American war and during WWI did not lead to inflation: the reason was that Bank of Spain note issue was limited by law. This monetary arrangement lasted up to the Civil War in 1936 and served Spain well during the Great Depression.[4]

Figure 2: Exchange rate of silver versus gold and of the Peseta versus Pound Sterling (1860-1935)



Sources: Data on the exchange rate of silver versus gold from Officer and Williamson (2014). The exchange rate of the Peseta versus Sterling from Fernández Baños (1930), as quoted by Tena (2005).

3. Two institutional constraints

Apart from the silver anchor, two further institutional constraints must be noted for the period leading to the Depression. The first is protection and relatively little foreign trade. Fifty years of protectionism had led to industry being mainly

[4] Curiously, the political and monetary establishment always hankered after the gold standard and hoped that some day the peseta would join the club of respectable currencies. Repeated efforts were made to go back to gold at the 1868 parity but they were never successful. When the peseta went into steep decline after WWI compared with currencies on the gold standard, an official Commission was formed in 1929 to examine the pros and cons of moving to gold but it all came to nothing. Spain remained a silver country and so avoided the 1929-33 monetary contraction.

concentrated in two regions, the Basque Country and Catalonia. The industrialists in both regions were able to argue that a return to free trade (attempted from 1868 to 1891) would create unemployment and inflame passions[5]: hence the relentless march towards greater protection, starting with the Tariff law of 1891 and culminating with the virtually prohibitive Cambó tariff of 1921.

Another institutional constraint was the creation of a legal banking cartel with the pretext of a reordering of the banking sector in 1922. This was also at the hand of the Catalan minister Francesc Cambó, who was trying to protect the Spanish financial sector from events such as that of the bankrupcy of the Banco de Barcelona. According to the new dispensation banks registered with the Superior Banking Council (in Spanish, "Consejo Superior Bancario") enjoyed the guarantee of a Deposit Insurance scheme. Banking licenses were frozen. Territorial limits to banking competition were drawn up. The Bank of Spain, the monopoly note issuer, became subject to intervention by the Government, which henceforth appointed the Governor. The Bank was also required to discount Government debt whenever presented to it by the banks on the official Register. The positive side of the new regime was that the Bank of Spain was expected to act as lender of last resort for the financial establishments in its 'club'. In sum, competition was restricted both in foreign trade and in finance at the behest and for the enrichment of Catalonia.

A second institutional element, which turned out to be decisive when the Recession struck, was, as mentioned before, that after the demise of the silver Latin Monetary Union in 1883 the peseta stayed on a silver standard, while sterling, dollar, franc and mark went over to gold. In the years that followed silver slowly lost value but the five peseta silver coins did not change their face value and neither did the bank notes. The peseta thus became a fiduciary currency in fact if not in name.

4. The Spanish economy in the twenties and thirties

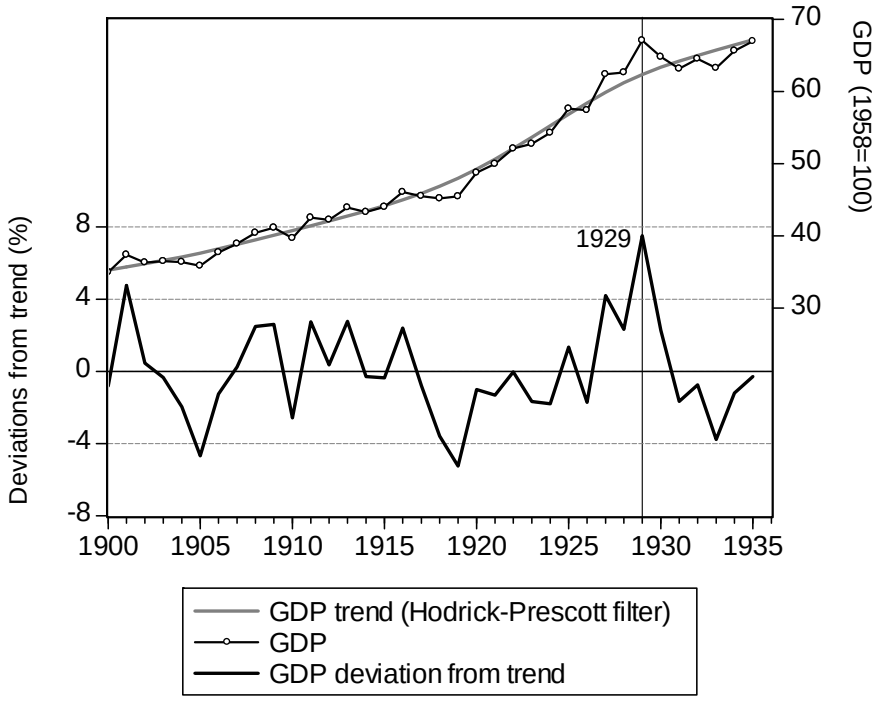
The Spanish GDP in the ´twenties followed an expansive path similar to that of the US and other European countries. In the case of Spain the 1925 to 1929 expansion was due to the direct and indirect effects of a large increase in public works during the Primo de Rivera dictatorship and was helped by an excellent 1929 harvest. The spectacular trend of Spanish growth in the first 35 years of the century hides a number of weaknesses. One is the lingering dependence on agriculture, and extensive agriculture at that. Another is the skewed development of industry behind a tariff wall, enhanced by an oligopolistic banking sector. And third one is the politically driven role of public works financed by ballooning debt. In the years of the Great Recession the Spanish GDP fell but not by as much as in other industrial countries (see Figure 1). It seems however that the downturn of 1930-31 had little to do with the Wall

[5] Both the Basque region, with its strong Socialist movement, and Catalonia, where working class Anarchism was endemic, were in constant turmoil.

Street crash and the World depression. It was rather due, first, to an attempt to rebalance the Budget after the profligate Governments of General Primo de Rivera; and secondly to the financial panic caused by the fall of the Monarchy. The rest of the series reflects the bumper 1932 and 1934 harvests and the pick-up in public works in 1932-34: there was however no strong recovery as in the US and the UK (or in Germany for other reasons). And in the middle of 1936, civil war started.

The GDP deviations from its long term trend (see Figure 3), clearly show the two crises of 1905 and 1917, and the unsustainable above-trend growth in the last three years of the expansionary fiscal policy under General Primo de Rivera. The 'output gap' reached a 7% above trend in 1929; it ended with a return to orthodox policies of the early thirties (see Table 1). Public investment had increased markedly and this policy resulted in an economy artificially driven by the over-expansion of industries associated with construction and public works (Figure 3).

Figure 3: Spanish GDP (1900-35), deviations from trend



Source: GDP data from Prados (2003).

Agriculture

During the first thirty years of the 20th century the productive structure of Spain had slowly evolved from that of a mainly agricultural country to one where industry progressively gained weight. A good or a bad harvest, however, still made a great deal of difference to national production; and domestic agricultural prices, modified by the ups and downs of food exports, told markedly on the economy.

Table 1: Spain: Primary sector and the GDP

	(1)		(2) GDP			
	Wheat Harvest (thousands of tonnes)	Rate of growth (%)	Value added by primary sector (growth, %)	GDP (Total, %)	GDP (Index, 1958=100)	GDP (deviations from H-P trend, %)
1920	3772	7.22	5.12	7.22	48.75	-1.00
1921	3950	4.71	-1.96	2.47	49.95	-1.32
1922	3415	-13.54	3.01	4.26	52.08	-0.03
1923	4276	25.21	-6.27	1.29	52.76	-1.67
1924	3314	-22.49	-0.1	2.82	54.25	-1.80
1925	4425	33.52	10.32	6.18	57.61	1.35
1926	3990	-9.83	-9.1	-0.37	57.39	-1.71
1927	3942	-1.2	16.39	8.66	62.37	4.19
1928	3338	-15.32	-13.87	0.39	62.61	2.33
1929	**4198**	**25.76**	**20.6**	**7.07**	**67.04**	**7.51**
1930	3993	-4.88	-13.58	-3.35	64.78	2.27
1931	3659	-8.36	6.97	-2.54	63.14	-1.67
1932	**5013**	**37**	**10.87**	**2.15**	**64.50**	-0.74
1933	3762	-24.95	-10.57	-1.95	63.24	-3.76
1934	**5085**	**35.16**	**11.84**	**3.77**	**65.62**	-1.20
1935	4300	-15.43	-0.89	2.01	66.94	-0.29

Source: (1) Data from GEHR (1991) as quoted by Barciela et al. (2005). (2) GDP calculations based on data from Prados (2003).

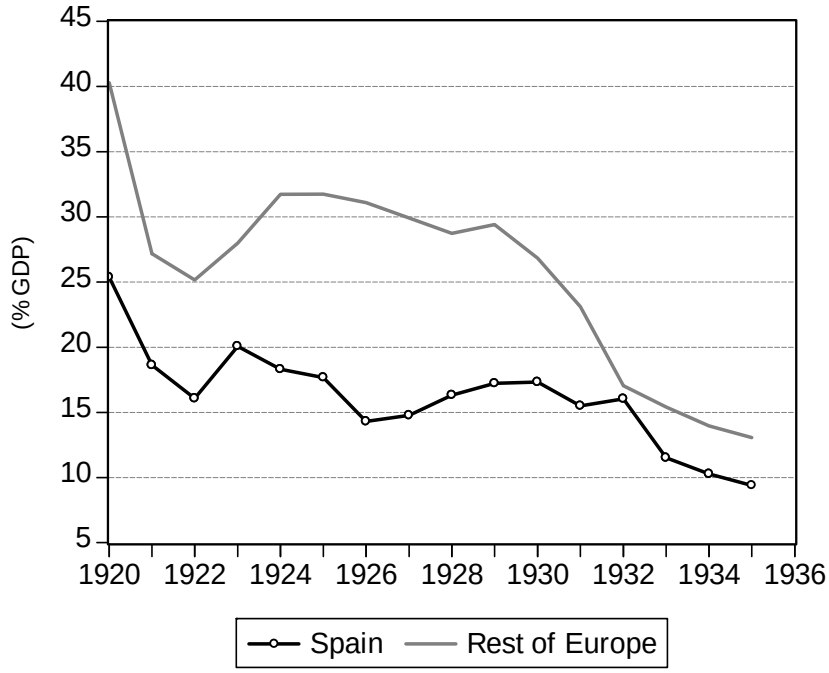
Spain still had quite a significant primary sector in the nineteen twenties and thirties with large agricultural employment. In 1900 the people employed in agriculture and fisheries amounted to 63.3 % of the total working population; by 1930 that proportion had fallen to 45.5%. Mining, industry and construction, on the other hand, went from 16% to 26.5%. Services only grew 7 percentage points compared with the ten and a half percentage points of the secondary sector. As regards output, agriculture accounted for around 30% of the GDP in 1920 and 26% in 1929. Cereals (in particular wheat) and beans took up more than 75% of the total arable land. Agricultural growth rates, both positive and negative, were not governed by the macroeconomic situation nor even by foreign markets but by rainfall. Spain had enjoyed bumper wheat harvests in 1929 (a 25% growth on previous year) and in 1932 (a 37% increase on 1931 (see Table 1). In each case harvests reverted to trend.

Increasing protectionism

The 1921 ‘Cambó tariff’ increased the isolation of the Spanish economy under the 1883 tariff. The effect of protection was to turn Spain into a relatively isolated economy, with low exposure to international trade (18% in 1929, nearly half of that of the rest of European countries in the twenties, see Figure 4). Hence, the driving elements of the Spanish economy in the twenties were:

domestic demand and, as regards output, the primary sector, public works with their inputs, and low value added industry, especially in textiles.

Figure 4: Spain's degree of openness (Exports + Imports)/GDP



Source: Data for Spain and Europe (average of Germany, France and Italy) from Tena (1992), as quoted by Tena (2005, Appended CD, chart 8.3).

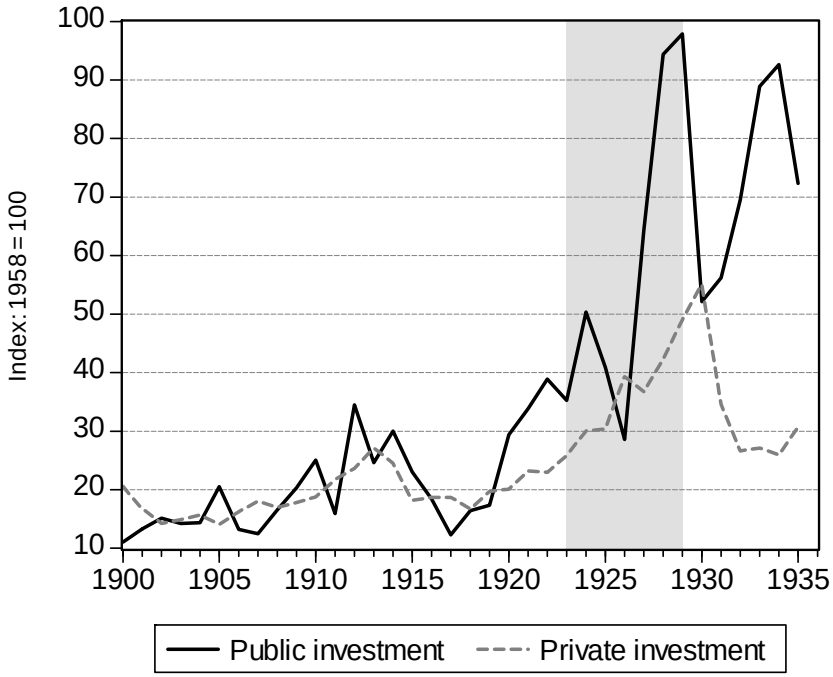
Also, ,as we have noted, the peseta was tied to silver and floated mostly downwards in a gold standard world. Its depreciation from the mid-twenties onwards (which continued in the early thirties), reduced the effects of world trade contraction on the export oriented sectors and made Spanish goods and services – at least in some degree – more competitive.

The banking oligopoly and its ties to big industry

The banking sector was highly concentrated and strongly tied to heavy industry. (Tortella and Palafox, 1983). The so-called 'six large banks' (Banco Hispano Americano, Banco de Bilbao, Banco de Vizcaya, Banco Urquijo, Banco Central and Banco Español de Crédito) accounted for more than 40% of the total capital of the banking sector, and more than 50% of deposits. At the behest of Government these banks took a major interest in the larger industrial companies (mining, railways, iron and steel and electric power). Conversely, this conglomerate of big banks and industry, especially up to 1931, captured Government economic policy. These mutual links were particularly strong during the Primo de Rivera's dictatorship. In those years the Government set in train an ambitious public works plan, mostly concentrated on creating and improving basic infrastructures (roads, railways, and dams for hydroelectric power), with some positive effects on construction and related industrial sectors.

This policy was financed with “extraordinary budgets” and their corresponding public debt, side by side with “ordinary budgets” financed with taxes. This active fiscal policy fostered domestic industrial expansion and hence domestic demand.

Figure 5: Public investment vs. private



Source: Data from Prados (2003). Shaded area corresponds to the Primo de Rivera Directorate.

Thus, at the end of the Directorate in 1929 the amount of public investment had more than tripled that of 1923 (see Figure 5 above). In 1926 public investment was still under 10% of total investment in the economy: from 1927 to 1929 public investment on average almost reached a 20% of total investment. Even though private investment did not grow as fast as public investment, it also experienced an average 10% rate of growth in those six years. This was the consequence of a deliberate plan to foster domestic investment, though the public sector stimulus had a more moderate spill-over effect on the private sector. Doubts have been expressed about the true effect of public investment on the economy, since the size of the public sector was quite modest at that time (10% to 15% GDP). It is difficult to deny, however, that the expansionary fiscal policy of the late twenties had a direct effect on the economy and also led to an increase of private investment in industry and construction[6]. As shown on table 2, the exceptional increase in public works led to an expansion of metal goods industries (basic and transformed), transport goods, and construction inputs (quarries, bricks, cement and glass), especially after 1927.

[6] Keynes (1936), ch. X, 3, on foreign trade and the multiplier.

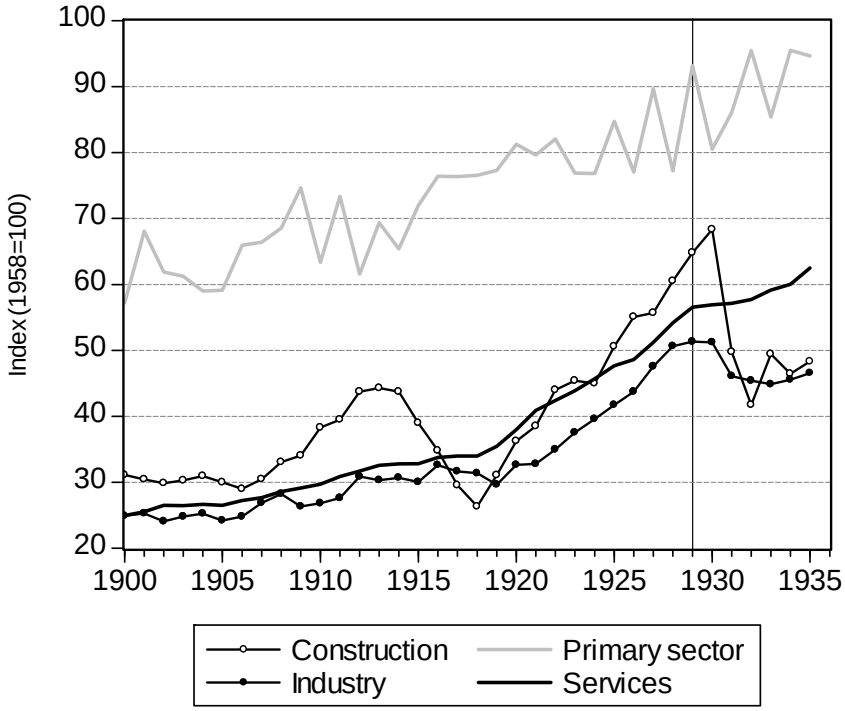
Table 2: Expansion of the industries connected with construction and public works

	Quarries, bricks, cement & glass	Annual rate of growth (%)	Basic metal	Annual rate of growth (%)	Metal industries	Annual rate of growth (%)	Transport goods	Annual rate of growth (%)
1920	7.99		25.95		15.00		41.50	
1921	7.33	-8.30	32.27	24.36	18.96	26.37	43.81	5.57
1922	14.40	96.46	25.09	-22.24	16.77	-11.56	46.57	6.29
1923	18.06	25.42	42.50	69.39	26.42	57.60	25.77	-44.65
1924	20.38	12.82	44.34	4.33	27.40	3.68	42.39	64.48
1925	26.95	32.25	49.89	12.51	31.44	14.75	38.46	-9.28
1926	25.75	-4.44	50.60	1.41	32.00	1.78	75.04	95.12
1927	41.35	**60.54**	57.65	**13.93**	36.09	**12.79**	105.32	**40.36**
1928	46.78	**13.14**	58.33	**1.18**	38.76	**7.38**	89.07	**-15.43**
1929	51.65	**10.41**	68.60	**17.60**	43.69	**12.74**	96.45	**8.29**
1930	45.41	-12.07	61.18	-10.81	40.03	-8.38	52.22	-45.86
1931	43.87	-3.41	48.42	-20.85	31.94	-20.22	38.01	-27.21
1932	40.60	-7.45	38.08	-21.37	26.03	-18.50	14.66	-61.42
1933	36.76	-9.46	37.63	-1.17	26.51	1.85	11.40	-22.25
1934	25.62	-30.29	40.91	8.71	29.73	12.13	9.60	-15.79
1935	24.81	-3.16	37.94	-7.26	32.00	7.66	9.40	-2.07

Source: Prados (2003).

The result, as shown in figure 6, was that manufacture and construction showed a sustained positive trend between 1923 and 1929 with a yearly average growth rate close to 5% for manufacture and to 6% for construction. In the next section we shall come back to what happened in 1930 and 1931. However, the consumption goods industry followed quite a different path from that of heavy industry and construction. The significant increase of public works from 1923 to 1929 mostly benefited heavy industry, much more than small and medium industries concentrated on the production of consumption goods, such as textiles, leather goods, and processed foods. (See Table 4, section 4, below).

Figure 6: Value added by industry



Source: GDP estimates from Prados (2003).

Clearly the highly protected and oligopolistic character of the industrial sector reduced the trickling down effect of public investment. However, the general opinion at that time was that the only way to promote sustainable growth was to protect and privilege national industry (Palafox, 1980 a). Keynes in his *General Theory* clearly saw that autarchy was a condition for State expenditure having its full effect on domestic activity and employment. Experience has shown, however, that this kind of policy is in the end not sustainable. Those extraordinary investment plans resulted in successive and substantial public deficits that imposed a heavy financial burden on the Government, as they had to be financed by a massive issue of public bonds. By 1930 the debt service had come to represent around 25% of total public expenditure. Retrenchment seemed inevitable and came in 1929 and 1930 with the fall of Primo de Rivera. This retrenchment may have contributed to the public unrest that helped bring the fall of the monarchy in 1931.

Exports and imports

As to the balance of payments, Spain's neutrality during WWI boosted Spanish exports and the industries associated with them. This led to massive surpluses in the balance of trade during the war years and to a significant increase of international reserves of the Bank of Spain[7]. However, the underlying lack of competitiveness of the Spanish economy led to a trade deficit again to consecutive and considerable trade deficits from 1920 to 1935 (see Figure 7).

[7] Gold reserves in 1913 were close to 700 million pesetas: just after WWI they reached 2,500 million pesetas (1920).

From the end of the WWI to the proclamation of the II Republic in 1931, the silver peseta depreciated by more than 100% in relation to gold standard currencies, with the only exception of 1925 and 1926 (see Figure 7). The very active expansionary fiscal policy conducted must be one of the factors explaining that depreciation. Within a relatively closed and very rigid economy, where administered prices and price-setting oligopolies were still the norm, the fiscal and trade imbalances of the Spanish growth model of the twenties had to lead to a larger depreciation of the peseta than in a more flexible economy.[8]

Monetary developments in the twenties: a conservative Bank of Spain

The role of the *Banco de España* as the Government banker was reinforced by the 1922 Cambó banking law. The Bank was obliged d to discount any amount of Treasury bonds presented by establishment banks and thus, indirectly to finance the Treasury. Hence from 1921 on, the Bank of Spain started to provide regular funds to registered banks with public bonds as collateral. Crucially, those banks, as long as they had bonds in their portfolios, could borrow unlimited amounts from the Bank of Spain. This new financial facility provided the banks a parallel channel to borrow at a lower rate than at the discount window (see Tortella and Palafox, 1983). Given that registered banks and industrial and construction companies were highly concentrated and interconnected, the new financial facility allowed the Government to favour large corporations by injecting bonds that the banks could easily discount and then invest in and lend to client corporations. Thus, the new financial regulations strengthened the links of an interventionist Government with large industry and big banks, and multiplied the effects of an active economic policy.

Since the law limited the amount of notes the Bank of Spain could issue at any given moment, periods of public profligacy were always followed by sharp corrections. The loose monetary and fiscal policy brought about by special circumstances were soon reined back. So the Spanish-American War was followed by the 1902-3 stabilisation of minister Villaverde; WWI inflation of neutral Spain was checked by the 1921 recession; and the deficits of dictator Primo de Rivera by an orthodox effort to balance the budget. The result was that despite a *de facto* fiduciary currency inflation never got totally out of hand.

The reaction function of the Bank of Spain

The financial policy of the Government reinforced its traditional links with the Bank of Spain and the credit needs of the Government in the end had an effect on money supply. This is confirmed by regressing money supply growth on changes in Government borrowing from the Bank of Spain, on changes in the volume of gold and silver reserves kept at the Bank of Spain, and changes on money supply growth in the previous years. With conventional regression analysis, we have identified the following determinants of money supply growth

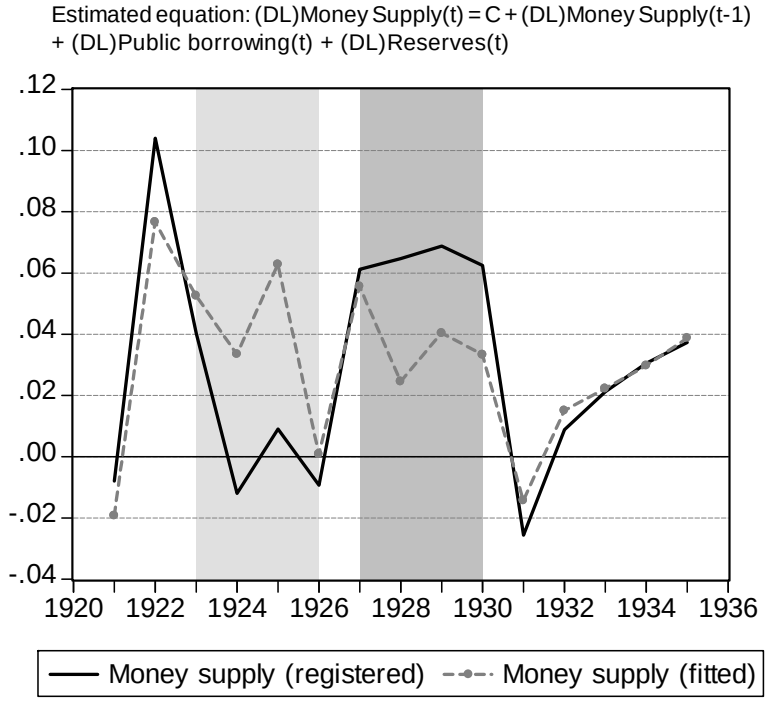
[8] Martín Aceña's (1984) goes a little too far when he says that the economic growth of the late ´twenties was the result of an unanticipated monetary expansion due to the quick depreciation of the currency, rather than the result of the fiscal policy of the Government (see page 173).

from 1920 to 1935: (1) the inertia component revealed by the correlation of money supply growth with that of the previous year; (2) changes in Government borrowing; and (3) changes in Bank of Spain reserves. All three are statistically significant (see Tables 3 and 4, annex). Regarding demand for credit by the Treasury, an increase in Bank of Spain loans to the Government is followed by an increase in money supply, though less than proportional.[9] As to variations in reserves, the weight of the coefficient reveals its major importance as a determinant of money growth. As a result, we have identified the following reaction function for the Bank of Spain from 1920 to 1935:

Money Supply (t) – Money Supply (t-1) = 0.47 [Money Supply (t-1) – Money Supply (t-2)] + 0.10 [Public Borrowing (t) – Public Borrowing (t-1)] + 0.46 [Reserves (t) – Reserves (t-1)]

(eq. 1)

Figure 7. Registered vs. fitted money supply growth



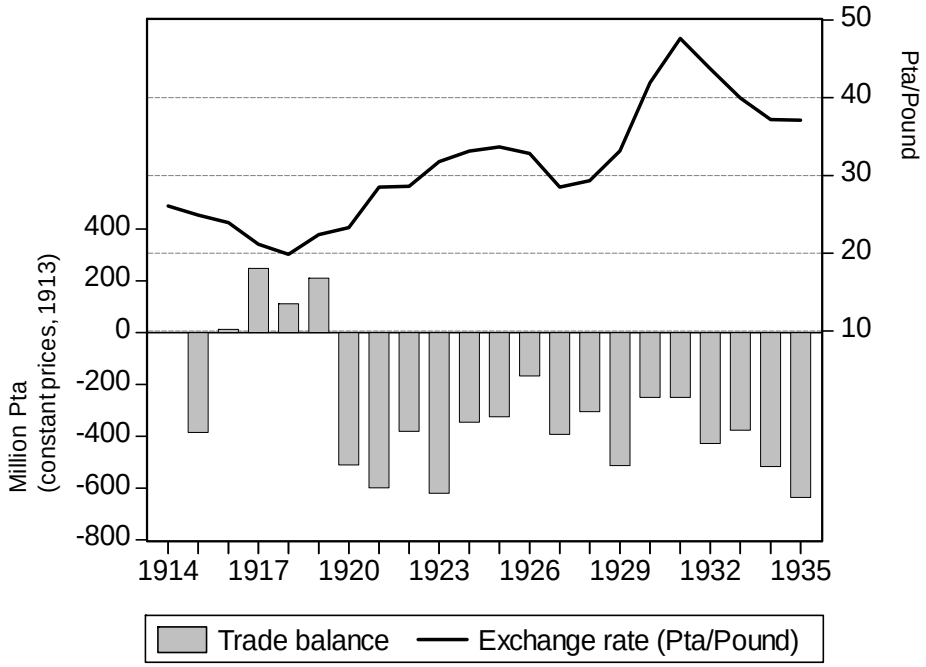
Source: Money supply data from Aceña and Pons (2005).
Notes: All variables in first differences of the logarithm (see table 3, Annex). Dark shaded area corresponds to the years (1928-1930) of excessive money growth in relation to the prescription of our estimated rule. And light shaded years (1923-26) correspond to a lesser money growth in relation to its prescriptions.

As shown in Figure 10, with the exception of the WWI years, money supply grew only modestly, and remained quite stable up to 1926 (and even below real

[9] Government borrowing from the Bank of Spain shows a positive but lower than 1 elasticity. Also, according to our results, a 1% increase of the reserves would be followed by a 0.5% money growth. These results should be interpreted with caution as the residual term might entail a systematic component not included in the estimated equation (see Table 3, Annex); which would imply the need to incorporate other variables in further research that could be useful to explain money growth. Our estimation is confirmed by running a standard *Granger causality test* (see Table 4, Annex), which shows that State borrowing from the Bank of Spain is a useful variable to explain money growth and not vice versa.

GDP growth in 1925 and 1926). However, from 1928 to 1930 money supply grew above real GDP. This, combined with the considerable depreciation of the peseta in the same period, resulted in a more expansionary monetary policy than before (see Figure 7 above): the effectiveness of the fiscal stimulus increased but the policy in the end proved unsustainable in a weak and artificially protected economy.

Figure 8: The floating peseta and the trade balance



Source: Pta/Sterling Exchange rate data from Fernández Baños (1930) as quoted by Tena (2005) and Spain's trade balance data from Tena (2005).

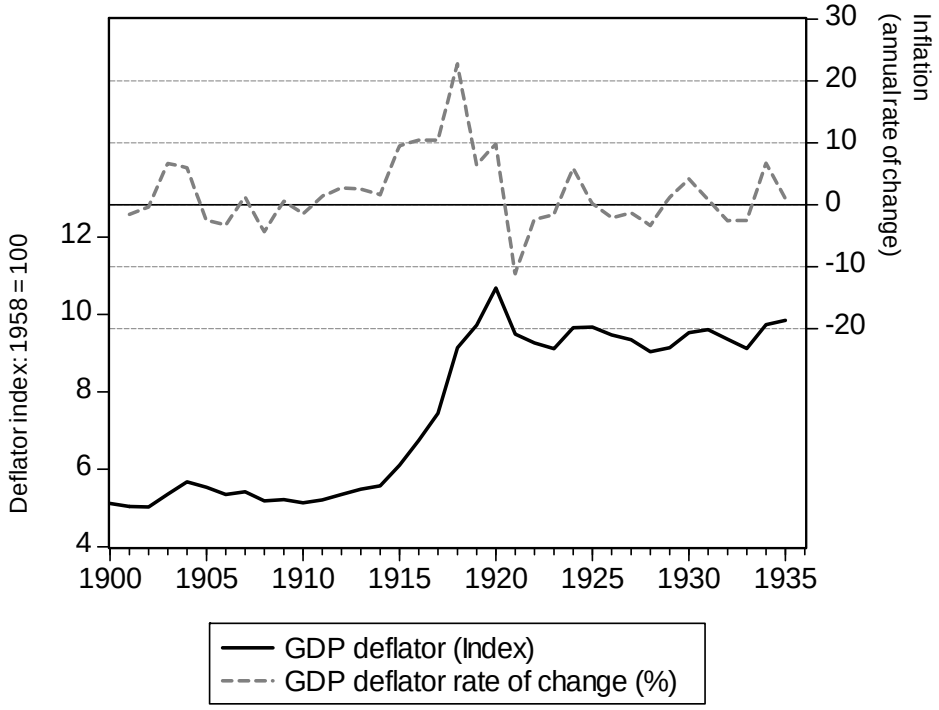
It may be surprising that the depreciation of the peseta did not fuel inflation. True, the massive inflow of reserves in the WWI years led to a large and temporary money supply growth, which resulted in two digit inflation from 1915 to 1918 (see Figure 9). But after the end of the war monetary policy went back to aiming at stability[10]: and between 1920 and 1935 money base and broad money supply grew at moderate annual rates (on average, 2% and 3.8%, respectively). Rather than inflation, what the depreciation of the currency did do was to keep the price level steady when other countries saw prices tumble into deflation.

In sum, even though open to accommodating the financial needs of the Treasury, the Bank of Spain conducted monetary policy on sound financial principles. It is as if it was obeying a *sustainable monetary rule*, since money growth was made to offset any changes in the reserves kept at the Bank. Given a variable exchange rate, this policy resulted in price stability on average, as mild inflations were offset by subsequent deflations. In fact, the GDP deflator

[10] As Martín Aceña's (1984) says, the Bank of Spain, with the aim of stabilising the currency, ran a deflationist policy in 1920 and 1921 similar to that conducted in other European countries.

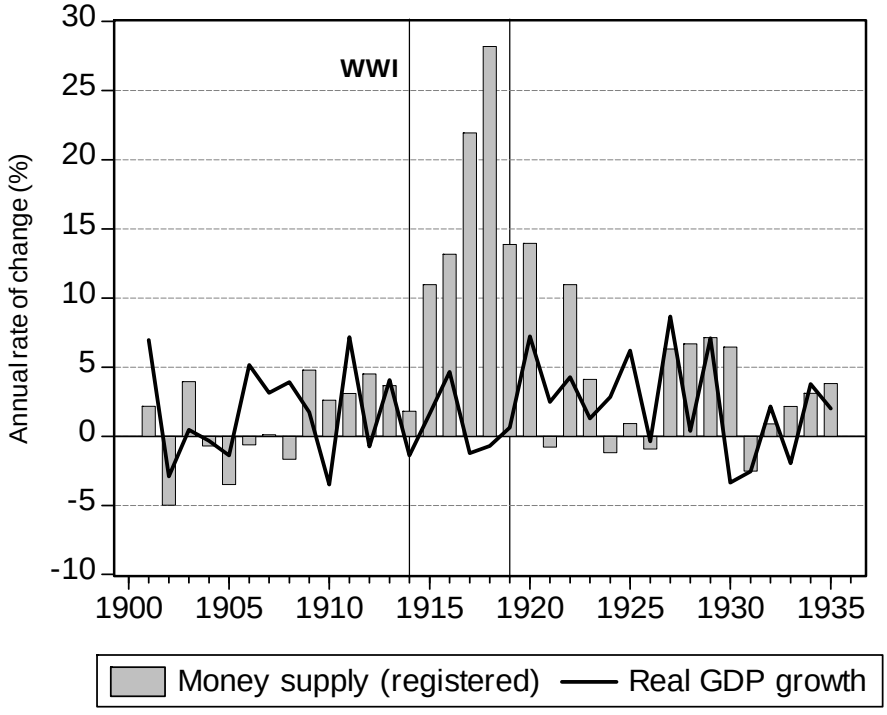
index in 1922 was almost at the same level as in 1935, which shows a contained domestic inflation trend during this period.

Figure 9: Prices and Inflation



Source: Deflator estimation from Prados (2003).

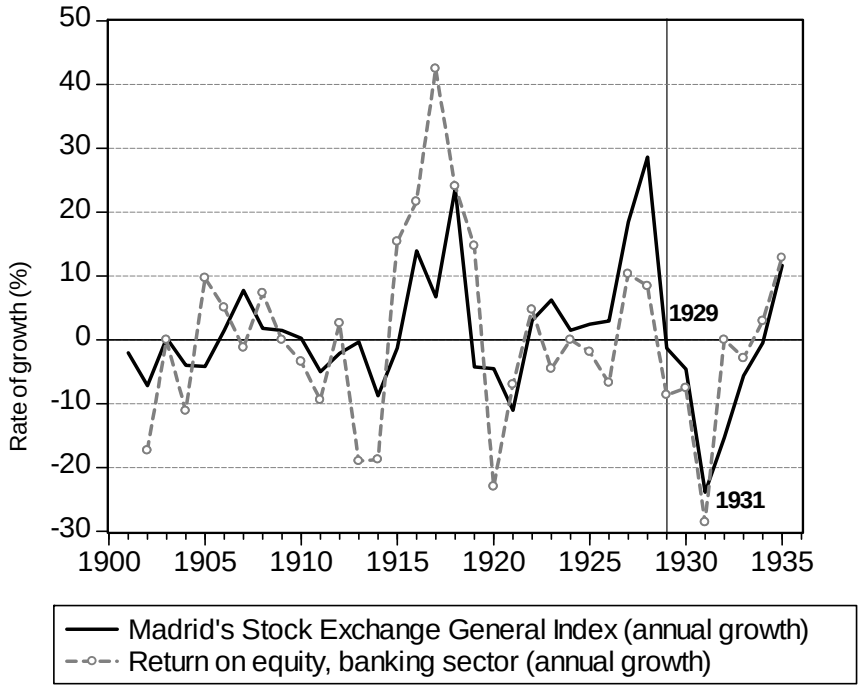
Figure 10: Broad money growth and real GDP growth



Source: Money supply data from Aceña and Pons (2005). And GDP growth calculations based on Prados (2003) estimation of Spanish GDP.

As for the financial sector, while the number of commercial banks increased in the ´twenties there was only one large bankruptcy in 1920 (Banco de Barcelona) and another one in 1931 (Banco de Cataluña). This is in sharp contrast with the large number of bank failures in the US and in other European countries. In terms of capital, credits or deposits, the operations of the commercial banks expanded significantly: from 1920 to 1930 bank balance sheets nearly doubled. The positive evolution of the Madrid's stock index also confirms this upward pattern in the financial markets (see Figure 10). The return on equity in the banking sector, however, was unspectacular except during WWI. As to the Stock Exchange, there was a sharp fall in 1929-31, much of it, we surmise, due to domestic causes. In any case, a 50% fall from peak to trough was much smaller than that in the US and the recovery soon came.

Figure 11: The financial sector



Source: Return on equity data from Tafunell (2000) as quoted by Tafunell (2005). Madrid's Index data from Hoyo (2001) as quoted by Tafunell (2005).

The Bank of Spain, a successful lender of last resort

The fall of Primo de Rivera in January 1930 and the end of the expansionary fiscal policy associated with his Governments created uncertainty in the large industrial and banking sectors. In fact, economic policy changed drastically in 1930 and Argüelles, the new Treasury Secretary, conducted a deliberately restrictive fiscal policy to cut public spending and stopped the growth of the Budget deficit and the debt. One of the main policy tasks the last Cabinets of the Monarchy set themselves was the stabilisation of the parity of the peseta in relation to gold standard currencies: a new economic program involving

significant public spending cuts[11]. Interest rates also increased (see Table 2, Annex).[12] This policy change was so abrupt that the resulting massive suspension of public investment led in 1930 to the first budget surplus in almost 30 years. The negative effects of that sudden fiscal contraction were immediately evident, especially in the construction sector, which had relied on the expansionary Government plans in the previous decade (see the sudden fall in the activity of those industries associated with construction and public works in Table 2). As shown in Figure 6 above, value added indices in this sector fell sharply for the first time in a decade, and so did profits. This more orthodox policy also threatened the traditional coalition of interests between businessmen and bankers.

When the II Republic unexpectedly arrived in April 1931 (as Palafox (1980 a, b) stresses) political uncertainty, coming on top of the Budget cut and the deepening international financial crisis, caused a further deterioration of business sentiment. A run on liquidity resulted: both current and saving accounts showed a significant reduction and capital fled abroad. The amounts withdrawn from bank accounts in 1931 amounted to 20% of current accounts and 14% of longer term accounts. Moreover, these were not mere short run reactions, as the amount of capital placed in saving and current accounts did not return to their 1930 level until 1934 and 1935 respectively. Money supply contracted by -2.5% in 1931. A fall in the Spanish general price level ensued, resulting in a - 2.5% deflation over the following two years. Due to the significant reduction in their deposits, commercial banks cut their investments (- 9%) and credits (- 29%) in 1931, with the expected negative effects on businesses.

However, this 'credit crunch' and the accompanying monetary restriction induced a deflation that cannot be attributed to deliberate Bank of Spain policy; quite the contrary. Far from conducting a deflationary policy, the Bank of Spain had been increasing the monetary base since 1927, reaching 10% growth in 1931, the very same year of the credit contraction (see Table 3).

Table 3: Monetary base and money supply
% annual growth

	Monetary Base	Money Supply
1928	3.40	6.68
1929	1.72	7.13
1930	2.84	6.45
1931	**10.47**	**-2.53**
1932	-4.30	0.88
1933	-0.65	2.15
1934	-3.43	3.10
1935	5.63	3.80

Source: Data from Aceña and Pons (2005).

[11] According to Prados (2003), the Government cut public investment by 50% from 1929 to 1930.
[12] Bank deposits continued their expansion and so did money supply along the same trend of the previous three years. (See Table 3 below and Martín Aceña (1984) for a more detailed explanation of this episode).

Thus the Bank of Spain acted decisively as *lender of last resort* for the banks of its club by providing extraordinary funds to the members of the "Consejo Superior Bancario" – around 1.1 billion pesetas, (Martín Aceña, 1984). At the same time, the Government relaxed the Bank of Spain restriction to issue notes, which also helped increase the liquidity in the market. Accordingly, the higher level of interest rates in Spain in the late ´twenties, compared to those in the countries of reference (UK, US or France), should not be interpreted as the sign of a relatively more restrictive monetary policy: the interest rate spread can be explained by the risk premium associated with a non-gold standard currency as Spain had to finance successive public deficit abroad.

Carner's exchange rate policy: short but successful

Monetary and fiscal policy in the first year of the II Republic did not tally with the avowed aim of stabilising the peseta proclaimed by the new Chancellor Indalecio Prieto. As Martín Aceña (1984) remarks, a strong peseta would have been attainable only if both monetary and fiscal policies had been restrictive. However, monetary policy was focused on alleviating bank illiquidity; and the Government ran a public deficit again in 1931. Thus unwittingly Spain was spared a financial crisis and a prolonged contraction.

After the resignation of the helpless Socialist Finance Minister Prieto, the new Treasury Secretary under Prime Minister Azaña, Jaume Carner (1867-1934) was the only politician of that period to abandon the ideal of returning the currency to the gold standard at the 1868 parity and consciously allow the peseta to float during the worst time of the Great Depression. During his very short term of office (December 1931 – February 1933), monetary, fiscal and exchange policy were for once aligned and properly designed to protect Spain from the contagion of world-wide depression. The Bank of Spain had come to the rescue of banks with liquidity injections and with an expanded circulation of banknotes. The discount rate was slightly reduced in 1932. The peseta was allowed to depreciate against the franc and the dollar, the gold standard currencies. Carner considered a freely floating currency as a lifeboat in the heavy seas of the international financial crisis. Indeed, by that time the United Kingdom had left the gold standard. Carner's policies clearly acted as a stimulus for the sluggish Spanish economy (see Tapia, 1998).

However, Spanish Governments soon reverted to exchange rate stabilisation: from 1933 to 1935 the parity of the peseta was briefly fixed to the French franc, still on the gold standard. This led to an appreciation of the peseta regarding the currencies that had left the gold-standard, mainly the British pound and the US dollar (see Figure 7 above). However, new cuts in discount rates (a reduction of 100 basis points in two years), a money supply that either mirrored economic growth or rose above output (see Figure 9), and persistent public deficits soon offset the effects of the restrictive exchange rate policy.

4. The possible effects of world recession in Spain

Figure 5 above indicates that the world crisis did not cause a deep recession in Spain. The primary sector marched on regardless. Construction did fall steeply but we have argued that this was mainly due to a cut in the public works programme. Services and industry soon recovered from the relatively slight contraction of 1931.

It may be interesting to analyse the evolution of the economy from the point of view of the return on equity in different sectors of the economy (Table 4). For the consumption goods sector the return on equity was impervious to the recession. In fact, as Palafox (1980 a) remarks, from 1931 to 1933 one of the defining policies of the new Republic was a general rise in wages, which must have had a positive impact on consumption. Using data from Maluquer and Llonc (2005), this deliberate income policy resulted in a 15% increase in real wages in the primary sector between 1930 and 1933. By contrast, producers of capital goods suffered a sharp fall in profitability in the early thirties. Banking fared better though its performance was lacklustre, may be due to the noted retraction of investment linked with the change of political regime. In any case there seems to be no evidence of a general contraction in the business sector in the years of the Great Depression.

Table 4: Industry and banks. Return on Equity Ratio (ROE)

	Average across sectors	Consumption goods	Capital goods	Banks
1920	11.6	15.2	7.8	11.4
1921	9.5	11.1	8.6	10.6
1922	9.8	12.5	8.3	11.1
1923	9.7	12.7	6.4	10.6
1924	10.4	15.5	6.9	10.6
1925	9.8	10.6	7.0	10.4
1926	9.9	9.0	8.2	9.7
1927	9.0	9.3	9.9	10.7
1928	9.9	10.2	10.6	11.6
1929	10.4	10.6	9.4	10.6
1930	9.4	11.1	9.4	9.8
1931	7.0	11.0	5.5	7.0
1932	6.6	8.9	2.6	7.0
1933	5.9	8.6	-0.7	6.8
1934	6.0	8.9	-0.9	7.0
1935	6.0	13.3	5.1	7.9

Source: Return on equity data from Tafunell (2000) as quoted by Tafunell (2005).

There are no figures at all for unemployment before 1933 and not very reliable ones thereafter. Employment in the construction sector must have suffered a notable deterioration after the commented drastic economic policy change in 1930, but not the country generally. Even though unemployment increased from 1933 to 1936, as shown in Table 5, it did not do so on the catastrophic scale of

Britain, Germany or the United States. The difficulty to find work did increase as the months went by after the proclamation of the Republic and one must not forget that the labour market was disrupted by one or more Anarchist uprising per year, repeated strikes organised by the Socialist Union, and even a botched attempt at full scale revolution in 1934.

Table 5: Unemployment rate: International comparison

	United Kingdom	Germany	US	Spain
1927	6.8	8.8	4.1	-
1928	7.5	8.4	4.4	-
1929	7.3	13.1	3.2	-
1930	11.2	15.3	8.7	-
1931	15.1	23.3	15.8	-
1932	15.6	30.1	23.6	5.15 (*)
1933	14.1	26.3	24.9	7.14
1934	11.9	14.9	26.7	7.70
1935	11.0	11.6	20.01	7.77
1936	9.4	8.3	16.9	9.24 (*)

Sources: US data from Historical Statistics of the US (as quoted by Hernandez Andreu (1986), table 7-1; page 181). Germany and UK unemployment rates from Mitchell (2003). Own calculations of Spain unemployment rate, based on the working population for 1930 from Nicolau (2003) and registered unemployment from Balcells (1971, page 53).
Note: (*) Data available up to the end of June.

As to the foreign sector, Spanish exports suffered the consequences of world trade contraction but to a lesser extent than the rest of developed economies. As shown in Table 6, exports declined from 1931 onwards but the reduction of the exports did not reach the dramatic figures of the leading economies.

Table 6: Evolution of the rate of growth of exports (%, year on year): international comparison

	Spain	US	Germany	UK	France	Italy
1928	23.02	5.72	13.66	1.97	-5.60	-4.18
1929	-10.25	2.52	9.83	0.83	-3.77	1.58
1930	7.99	-26.68	-10.73	-21.81	-14.57	-20.46
1931	-15.98	-37.11	-20.26	-31.58	-28.95	-15.75
1932	-7.22	-33.73	-40.21	-6.41	-35.26	-33.29
1933	-3.23	4.51	-15.12	0.55	-6.25	-12.05
1934	3.43	27.50	-14.47	7.90	-3.38	-12.79
1935	-3.32	6.81	2.47	7.32	-13.19	0.27
1936	-	96.88	11.69	3.53	-0.40	4.20

Source: Spanish data from Tena (1992) as quoted by Tena (2005). Exports growth for the other countries are own calculations based on the League of Nations Statistical Yearbook Information (1936-37).

Our thesis can be tested with our estimation of the deviation from trend of the Spanish economy (the so-called 'output gap'). To go back to Figure 3: from the middle of the nineteen-twenties an active fiscal policy placed the economy above its long term trend – a deviation of more than 7% in 1929. That growth pattern was not sustainable, as can be seen in the large disequilibria of the late twenties. The budget and trade deficits resulted in excessive money growth and finally in a modicum of inflation in 1930. The new restrictive fiscal policy implemented in that year brought the economy sharply back to its long term path. Only in 1934 was there another short-lived spike in inflation. Anyhow, both the decline in GDP growth and the negative deviation from trend of the early 30s were smaller than those of the 1915 and 1919 recessions, and smaller than in most developed countries.

5. A comparison with the euro crisis

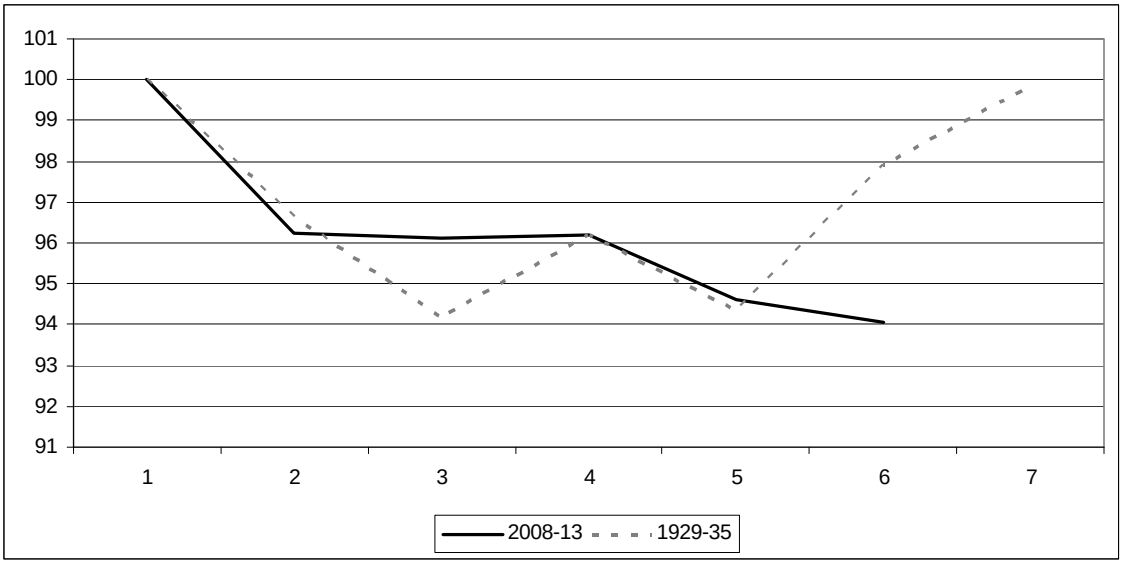
The comparison of the effect of the recent financial crisis (2008-2009) with the years of the Great Depression must be made with caution. While not intending to provide an exhaustive analysis on the differences between these two major crises, we highlight how much a different monetary regime may affect the length of a crisis, as well as the type of policies more suitable to overcome them, especially in a quite rigid economy such as the Spanish one both at that time and in our days.

The graphs below should not be taken to imply a mono-causal correlation between the recession and the two monetary regimes prevailing in the Spanish economy then and now. The milder reaction in the thirties must also have been due, as we have said, to the smaller weight of the foreign sector in the economy and thus to the lesser exposure to the international crisis.[13]

As to the fall of economic activity, Figure 12 shows that the decline in GDP has been similar in both episodes but in the 1930s aggregate production resumed pre-crisis GDP levels after 5 years (in 1935) whereas the GDP is still well below its 2008 peak. In fact it is only in 2014 that the Spanish economy started to grow again.[14] Regarding unemployment rates (Figure 13), there was exponential growth since 2008 and the current rate (around 25%) triples the pre-crisis rate of unemployment of around 8%. Unfortunately, the comparison with the rise in unemployment in the 1930s cannot be very accurate as there are no estimates of unemployment rates available until 1933. Anyhow, both the level and the increase in unemployment in the 1930s were lower than at the present time.

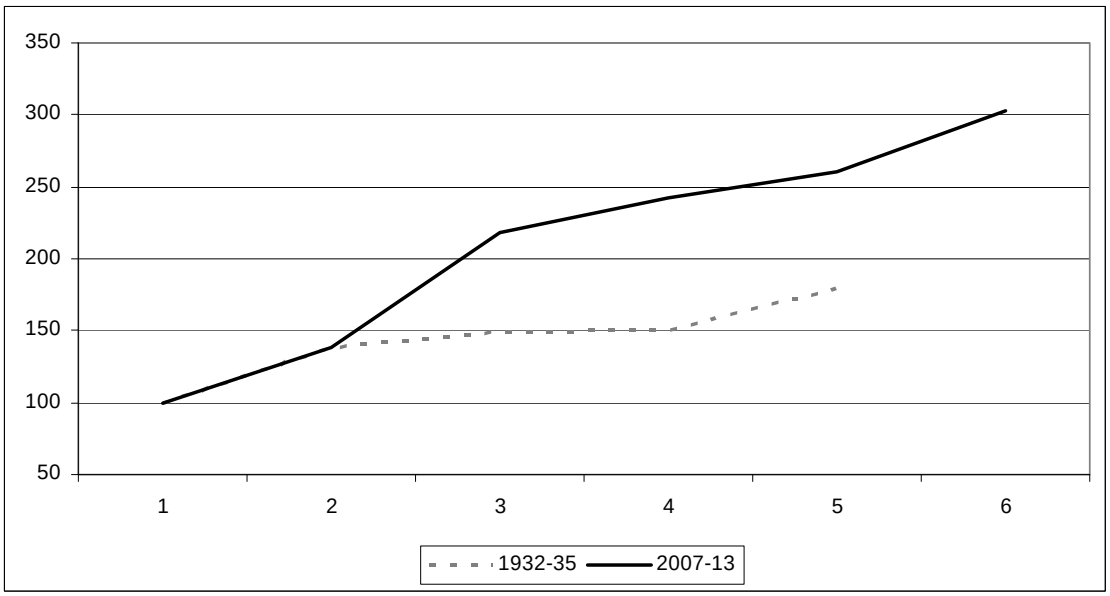
[13] In order to make the series comparable we have taken 1929 and 2007 as the base years. Thus, the vertical axis will show the value of the index and the horizontal axis the year since the base year, either 1929 in the case of the Great Depression or 2007 in the case of the recent financial crisis.
[14] The GDP started to grow again in the second quarter of 2014 (0.7%).

Figure 12: GDP levels (1929 = 100, 2008 = 100)



Source: *Own calculations from estimates of the GDP (value added) in 1930s from Prados (2003). GDP volumes at market prices 2007 – 2013 from Eurostat (accessed online).*

Figure 13: Unemployment rate (1932 = 100, 2007 = 100)

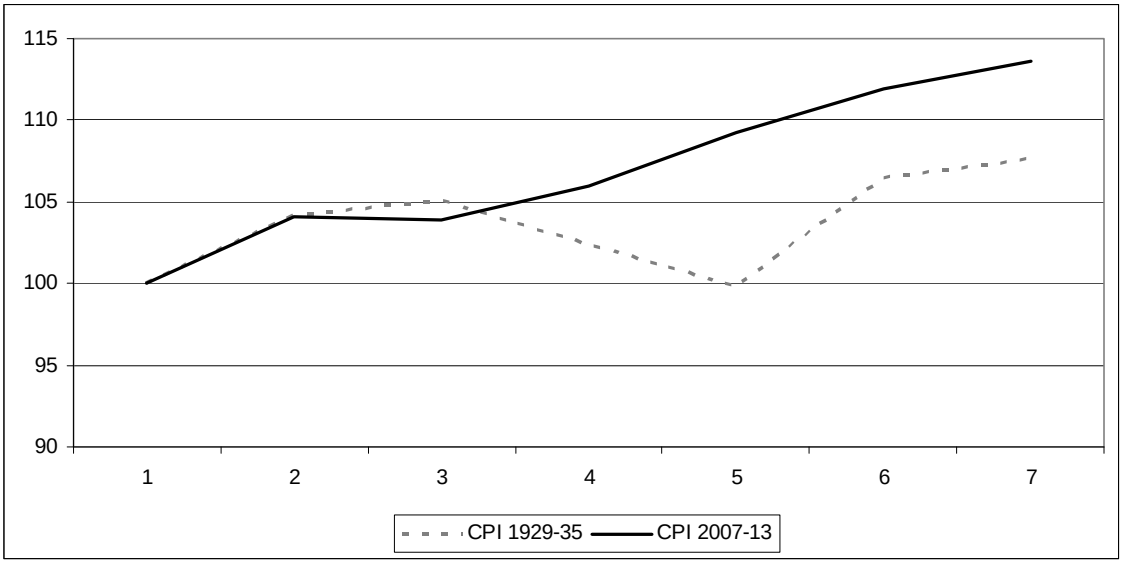


Source: No estimate of the unemployment rate prior to 1933 (see Table 5 above for further notes on the estimates since 1933). Rate of unemployment (2007 – 2013) from Eurostat (accessed online).

We may well find an explanation for the persistence of the current crisis by analysing the economic policy options available for a country having adopted an ´irrevocable´ exchange rate with the euro and consequently had lost its monetary sovereignty. Under this institutional setting, an economy in crisis can only rely on policies aimed at reducing its costs in order to increase its competitiveness in international markets: i.e. requires a fiscal contraction in the midst of a crisis as well as wage cuts.

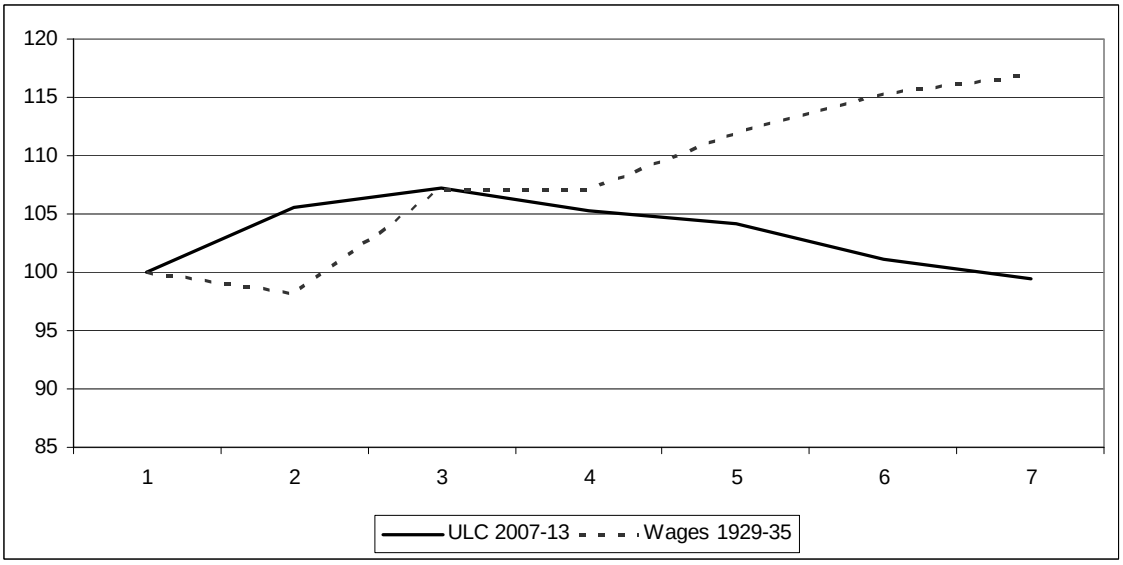
Nominal unit labour costs have declined in Spain since 2009 whereas in the Great Depression years (nominal) wages rose from 1930 on. However, the reduction in labour costs after 2009 (an accumulated 7- 8% fall in the last three years) seems still insufficient if compared to the extent of the devaluation of the peseta in the 1930s: from 1929 to 1932, the peseta depreciated against the pound sterling more than 60%. In consequence this sharp nominal adjustment of the parity of the currency avoided the need of deep cuts in other prices (in goods, services and wages). In contrast, in the recent crisis the euro appreciated against the US dollar (see Figure 16 below) in 2008, 2011 and 2013, making Spanish exports more expensive in international markets.

Figure 14: CPI (1929 = 100, 2008 = 100)



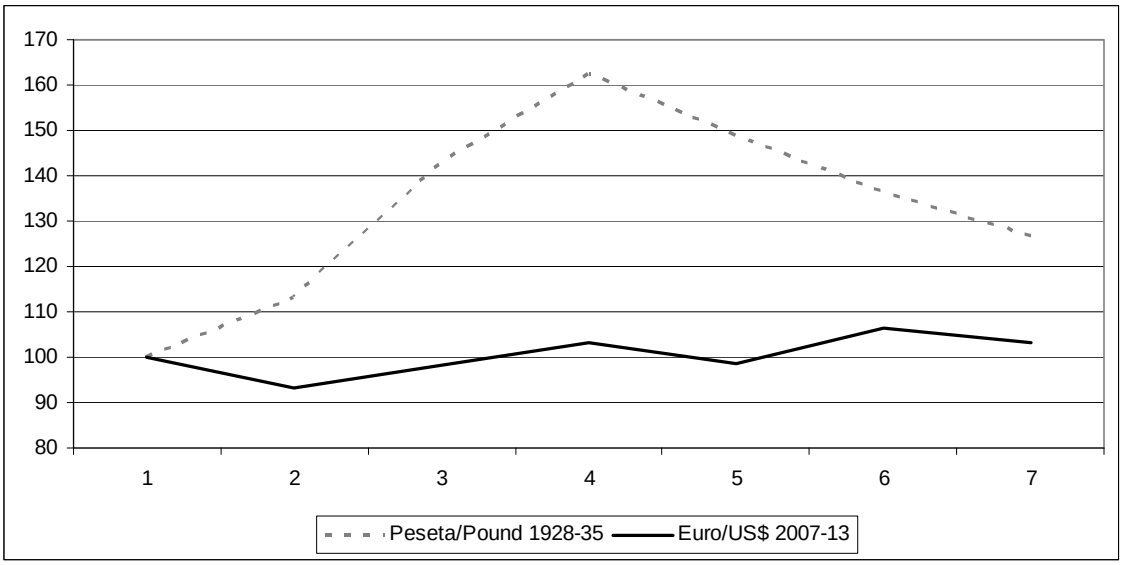
Source: HICP (2007-13) from Eurostat (accessed online). GDP deflator data (1929 – 1935) from Prados (2003).

Figure 15: Labour costs (1929 = 100, 2007 = 100)



Source: Nominal Unit Labour Costs from Eurostat (accessed online). Nominal wages in the 1930s are average wages in agriculture (male) from Maluquer de Motes and Llonch (2005).

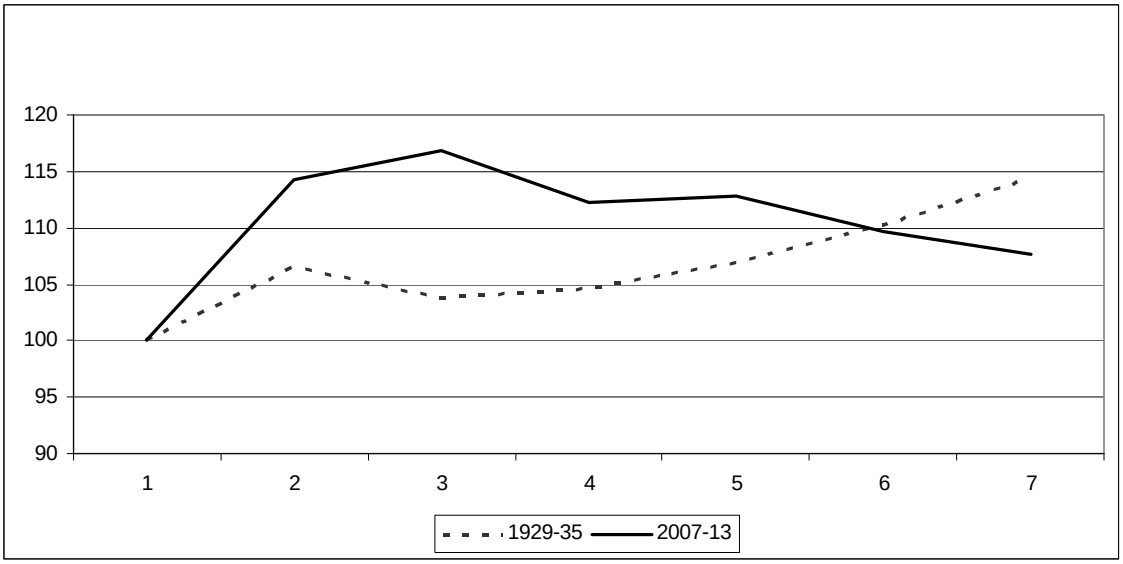
Figure 16: Exchange rate Peseta versus Pound Sterling (1929 = 100, 2007 = 100)



Source: Exchange rate Euro/US$ (Eurostat, accessed online). Exchange rate Peseta/Pound sterling from Fernández Baños (1930) as quoted by Tena (2005).

A final comment on money supply growth during both crises. As shown in section 3, in the absence of exchange rate commitments, the *Banco de España* could intervene actively and on time in 1931 to provide extraordinary lending to the banks and thus prevent the collapse of the Spanish financial system. This was followed by a rather stable and consistent rate of growth of money since 1931 onwards. On the contrary, since 2009 the growth of a broad monetary aggregate such as M3 has collapsed in Spain, with a cumulative fall of more than 8 percentage points in four years (see Figure 16 below). The contraction in the supply of money has been a key factor explaining the persistence of the current crisis (Congdon, 2014) and in particular in Spain (Cendejas et al. 2014), where the fall of money supply has been particularly sharp. Surprisingly this has happened despite the injection of 43 billion euros in the Spanish financial sector by Brussels.

Figure 17: Broad money (volumes; 1929 = 100, 2007 = 100)



Source: Contribution of Spain to M3 (2007 – 2013) from the Bank of Spain dataset (accessed online). Broad money growth in Spain in the 1930s from Martin Aceña and Pons (2005).

6. Conclusion

As shown in this essay, the recession of the thirties in Spain was neither of the same nature nor similar in depth as that of other developed countries. Spain's relative isolation from the world economy, along with a still important primary sector and a *de facto* floating currency, protected it from outright catastrophe. Whatever contraction there was can be attributed to fiscal stabilisation policy and to social tensions fanned by politics.

Even though exports and finance were affected by the contraction of international trade and credit, the greater part of Spanish activity was impervious to the Great Depression. In this quite isolated and oligopolistic economy, increases in public spending plans, especially from 1927 to 1929, and the exceptional wheat harvests of 1929, 1932 and 1934 led to moderate GDP growth in the midst of the deep international recession.

Finally, the active intervention of the Bank of Spain in the 1931 financial crisis avoided a massive collapse of the Spanish financial system and contributed to bringing the economy back on course. Acting as a lender of last resort, the Bank of Spain prevented the seizure of the payment system. It was able to do that despite the growing need to accommodate the demands for funds of the Treasury because it was free from the constraints of a fixed exchange rate. However the Bank of Spain moderated inflationary pressures by its prudent issue policy and its refusal to monetise its gold reserves: the Bank did not overstep the limits of prudence and conducted a monetary policy based on sound financial criteria. Surprisingly in such fraught times, both price inflation and national bankruptcy were avoided.

It is clear that in the short run a flexible exchange rate makes for a lesser loss of welfare when a country forced to adapt to a financial crisis. However, currency devaluation does not automatically force structural change in a country suffering from low productivity. Such structural changes only come if the devaluation is accompanied by changes in Budgetary and labour policy to avoid having to devalue again in a short time. By contrast, the internal devaluation demanded by a fixed exchanged rate forces structural reform, as we have seen has happened in Spain after the euro crisis. There is an added advantage to resisting devaluation and sticking by the exchange anchor: the currency does not lose purchasing power and maintains its long run stability.

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Statistical annex

Table 1. Rates of growth of public and private investment (year on year, %)

	Public Investment	Private Investment		Public Investment	Private Investment
1920	69.5	1.88	1928	46.78	15.05
1921	15.01	15.46	1929	3.71	16.01
1922	15.01	-1.07	**1930**	**- 46.74**	12.47
1923	-9.37	12.56	1931	7.77	-37.22
1924	42.77	16.17	1932	23.8	-23.12
1925	-18.81	1.25	1933	27.8	1.94
1926	-30.04	29.33	1934	4.22	-4.31
1927	124.77	-6.6	1935	-21.91	18.24

Source: Data from Prados (2003).

Table 2. Bank of Spain official interest rates

	Discount rate	Guaranteed rate on public bonds		Discount rate	Guaranteed rate on public bonds
1920	6	4.5	1928	5.5	4.5
1921	6	4.5	1929	5.5	4.5
1922	5.5	4.5	1930	6	5
1923	5	4.5	1931	6.5	5
1924	5	4.5	1932	6	5
1925	5	4.5	1933	6	5
1926	5	4.5	1934	5.5	4.5
1927	5	4.5	1935	5	4

Source: Data from Martin Aceña and Pons (2005).

Table 3. Ordinary least squares estimation results

Estimated equation: (DL)Money Supply(t) = C + (DL)Money Supply(t-1) + (DL)Public borrowing(t) + (DL)Reserves(t)

Sample: (1920 – 1935)

Variable	Coefficient	t-Statistic
Constant	0.01	1.42
(DL)Money Supply(t-1)	**0.47**	2.46
(DL)Public Borrowing(t)	**0.10**	4.29
(DL) Reserves(t)	**0.46**	2.76
R-squared	0.65	

Note: All variables in first differences (D) of the logarithm (L). All variables are significant at a 5% significance level, except the constant. Reserves include silver and gold kept at the Bank of Spain.
Source: Underlying data of money supply from Martín Aceña (1985), public borrowing from IEF (1976) as quoted by Comín and Diaz (2005). As to reserves, data comes from the League of Nations Statistical Yearbooks for (1927-1935) and silver stocks between 1920 and 1926 from the Royal Commission for re-establishing the Gold Standard (1929, p. 34).

Table 4. Granger causality test results

Sample: 1900 - 1936. Lags: 2

Null Hypothesis:	F-Statistic	Probability
(DL)Money Supply does not Granger Cause (DL)Public Borrowing	0.03	0.96
(DL)Public Borrowing does not Granger Cause (DL) Money Supply	**4.19**	**0.02**

Source: Underlying data of money supply from Martín Aceña and Pons (2005), public borrowing from IEF (1976) as quoted by Comín and Diaz (2005).