

Germán Bernácer's analysis of the Great Depression. Theory and practice (1932–1936)

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1.- Introduction

The Spanish economist Germán Bernácer (Alicante, Spain 1883–Playa de San Juan, Spain 1965) was an unusual case: a self-made economist who grasped the weaknesses of neoclassical theory to give a coherent and original account of economic fluctuations. He did so within an intellectual context in which the interest of Spanish economists on issues such as the business cycle was almost nonexistent. After decades of isolationism with regard to the leading schools like historicism and marginalism, the early 20th century was a period of modernization in Spanish economics thanks to the leading role played by A. Flores de Lemus.¹ Flores de Lemus, who was brought up in Germany, was by far the most influential economist in Spain as he was able to unite a large number of disciples scattered across many Spanish universities, mostly in faculties of law. Like Flores de Lemus, these disciples were strongly influenced by German neo-historicism and focused their research mainly on the problems of economic backwardness by suggesting reforms in many institutions, such as public finances. However, it was not until the 1930s that Spanish economists paid attention to the phenomenon of economic fluctuations, as will be indicated below.

¹ In fact, there were other two key-figures in the process of modernization of economics in Spain: J.M. Zumalacárregui and F. Bernis. The former was responsible for the introduction of marginalism, while the latter adopted an eclectic approach in which neo-historicism prevailed. Nevertheless, neither Zumalacárregui nor Bernis had nearly the influence Flores did in Spanish scholarly circles.

After graduating in commerce from the Escuela Superior de Comercio de Alicante (Spain), he took a position at the same institution where he taught Industrial Technology (Physics and Chemistry) at the early age of 18 years. There is no evidence about when he became interested in economics, but it is known that he won a scholarship from the Junta de Ampliación de Estudios, which funded young Spanish academics to gain experience abroad, and visited several foreign universities in 1911, where he took courses on economics. His first book, *Sociedad y felicidad* (1916) (*Society and Happiness*) attempted an early interpretation of the cyclical nature of capitalism. In 1922, the article “Teoría de las disponibilidades como interpretación de las crisis económicas y del problema social” (“Theory of Disposable Funds as an Interpretation of Economic Crises and the Social Problem”) developed some ideas first set out in *Sociedad y felicidad*, and provided the first formal account of his theory of economic fluctuations.

Further articles and a monograph on the theory of interest in 1925 helped complete and clarify the theory.² Being an outsider, Bernácer was disregarded by most Spanish scholars of the time, and he never held any Spanish university position as an economist. His fiery criticism of Flores de Lemus’s position in the debate about the Spain’s adoption of the gold standard in the late 1920s was well known, but even when Robertson published an article in *Economica* in the 1940s recognizing that Bernácer’s 1922 article might have influenced his time lag theory of the business cycle, he remained alien to the circles of Spanish economists (Robertson 1940). It was not until Henri Savall published a monograph on Bernácer’s contributions in the 1970s that he acquired some relevance in the circles of economists and historians of economic thought (Savall 1975). Since then, some scholars have focused on his contributions, but their impact has rarely reached

His writings contain few quotations, making it difficult to give an account of his intellectual sources. However, the bibliography in his 1925 book includes monographs on monetary issues by Böhm Bawerk, Cassel, Withers, Conant, Fisher and Loria, as well as Marshall and Seligman’s *Principles*, and others (Bernácer 1925).

beyond Spanish borders (Ruiz 1984). This historiography focused mainly on the possible influence on Keynes suggested by Robertson in 1940, and in some cases, credited the Spanish economist with advancing Keynes's ideas in the *General Theory* (Villacís 1993). In this respect, the most balanced account was given by Salvador Almenar. He pointed out the influence of some aspects of Georgism on Bernácer's first approach to economics and weighed up Bernácer's contributions, establishing the limits of the possible influence on Keynes (Almenar 1983, 2001). Finally, Bernácer was given an international dimension thanks to Boianovsky who made a conclusive statement of his originality, the relevance of Bernácer's theory of business cycles, and the possible influence of Bernácer on Robertson and indirectly on Keynes (Boianovsky et al. 2006). The historiography on Bernácer principally focuses on his works during the 1920s, which are his most original and creative. However, his theoretical writings during the 1930s, in which he updated and shaped his model to the formal rhetoric of the time and to enable to interpret the economic events of the Great Depression, have barely been analyzed (Almenar 2001; Ruiz 1984, 2001). Furthermore, the outstanding weekly chronicles that he drew up for the board of the Bank of Spain interpreting the economic, financial and monetary events of the 1930s have largely been absent from the historiography (Banco de España 1932–1936).

The early 1930s brought significant changes in the life of Germán Bernácer. On the one hand, the Great Depression became a perfect environment for testing his theory of economic fluctuations. On the other, in December 1931, he was appointed as one of the assistant directors of the recently created Research Department of the Bank of Spain, where he designed economic statistics and drafted the chronicles mentioned above (Martín Aceña 2000). This article leaves aside the debate on the anticipation of Robertson and Keynes' ideas and tries to shed light on Bernácer's contributions during this period, focusing on the new form taken by his theory of economic fluctuations and particularly

its application to the monetary and financial events of the 1930s, building up a rich analysis of the economic turbulence of the 1930s that is unique in Spain.

From a theoretical perspective, only L. V. Paret, an economist who, like Bernácer, came from outside scholarly circles, held a relatively original theory of economic cycles. According to him, capitalism was characterized by a continuous disruption of economic equilibrium as a result of underconsumption. On the other hand, the fluctuations in the volume of credit caused by the requirements of the gold standard propelled the international spread of the economic crises (Paret 1930). However, Paret barely analyzed isolated aspects of the economic crisis and did not monitor the economic and monetary events as Bernácer did. Scholarly economists, on the other hand, observed the economic crises as a distant phenomenon since Spain barely felt the distress of the depression. When they interpreted the global economic crisis they relied on accounts borrowed from foreign economists like Keynes, Fisher or Hayek. L. Olariaga, for example, was highly influenced by the Austrian approach to economic crises and in particular by Hayek and Mises. Others, like J. M. Zumalacárregui, adopted an eclectic approach to economic crisis without focusing on any particular factor or cause of the crisis. Empirical approaches were made by O. Fernández Baños and J. A. Vandellós, who shared a background in statistics. Other economists, such as M. de Torres, J. Vergara and R. Perpiñá, who carried out a structural analysis of the Spanish economy, emphasized the agricultural origins of the worldwide depression and its consequences on the Spanish economy through the agricultural products Spain exported abroad (Zabalza 2012: 335–343). In great contrast to all of them, Bernácer's systematic monitoring of the main financial and monetary events of the crisis during the 1932–1936 period relies on his original model of economic fluctuations. Furthermore, he gives a singular and original account of the Great

Depression, proposes radical reforms and shows certain pessimism about most of the policies suggested for overcoming the crisis, both orthodox and heterodox.

These reforms and policies emerging from the economic model in the 1930s show little trace of Bernácer's political views and did not express any direct reference to contemporary Spanish politics, which was characterized by the coming of the Spanish Second Republic in April 1931 and the exiling of the king. The confrontation between the conservative defenders of the defeated monarchy and the supporters of the Second Republic shaped the period. The latter was a heterogeneous group composed of supporters of collectivism, socialists and the liberal reformists with whom Bernácer's political ideas seem to fit best. His radical social liberalism combined state interventionism at an institutional level with the free operation of the market in order to promote competitiveness, trying to gather together economic efficiency, economic freedom and social equality (Almenar 1983).

2.- The reformulation of Bernácer's theory of economic fluctuations in the 1930s.

The articles in *Economía Española*

Bernácer began to give a different formal face to the theory of economic fluctuations in a series of articles about the integration of Spain into the gold exchange standard published in *Revista Nacional de Economía* in 1929. However, the event that finally led him to update the model was the impact in Spain and Spanish academic circles of the publication of Keynes's *A Treatise on Money* (1930). Bernácer learned about the *Treatise* through an article published in the Catalan journal *Economía i Finances* and not by reading Keynes' work directly.³ The article undoubtedly impressed Bernácer, and he

³ There is no evidence that Bernácer would have read *A Treatise on Money* before the journal *Economía i Finances* published its summary. This is supported by the fact that Bernácer's response restricted itself to the limits established by this article, basically to the Second Fundamental Equation as an alternative formulation to Fisher's equation. This may be surprising, but it was part of Bernácer's intellectual

believed that Keynes was giving a different formal account of ideas he had been repeating since 1922. In response, he sent an article to *Economía i Finances* (“La teoría monetària de Mr. Keynes”), which questioned the originality of Keynes’ analysis in the *Treatise*, and surreptitiously claimed that the works in which he had himself formulated the same ideas had been completely ignored or at least not understood in Spain (Bernácer 1931). From our point of view, what is significant is that the publication of the *Treatise* was the incentive to formally rebuild the model of disposable funds in order to incorporate the influence of a more extensive number of variables on the price level.

Bernácer reformulated the theory of disposable funds through six articles published in *Economía Española*, the journal of the Spanish associations of employers.⁴ Read together these articles form a logical unit, as if they were part of a treatise. Indeed, a logical continuity is visible, as each article takes up the conclusions, definitions and concepts of the preceding article to finally developed a complete theory of economic cycles. Bernácer’s narrative is sometimes confusing and disorganized, as he employs different terms for the same concept (for example “unproductive fund,” “inactive fund,” and “reserve fund”; or “financial fund“ and “disposable fund”). However, it is worth interpreting and clarifying this, as the whole set of articles are the theoretical reference used by Bernácer to analyze the economic and financial events of the Great Depression in his reports to the general board of the Bank of Spain.

personality as a self-made economist who was fully convinced of the accuracy of his theory of economic fluctuations.

⁴ This monthly periodical was not an academic journal, but grew through the contributions of economists. The quality of the articles and the structure of the journal, which included book reviews drafted by economists and updated bibliographical repertoires, resulted in what was probably the main forum for economic debate in Spain in the 1930s, and the last step before the foundation of the first scholarly journals in Spain in the early and mid-1940s.

2.1.- The “synthetic equation of the market”

In “Análisis de la demanda y síntesis del mercado” (“Demand Analysis and Market Synthesis”) (Bernácer 1933), the first of the series of articles that Bernácer published in the journal *Economía Española*, he developed what he called the “*ecuación sintética del mercado*” (the synthetic equation of the market). He believed the equation was fundamental for understanding the rationale of the economic cycle, and it forms the basis and analytical reference for his interpretation of the economic events of the 1930s.

The starting point for the model is the relationship between production (P) – the value of production in monetary terms – and remunerations or payments (R) – the cost of production in monetary terms – which is considered a logical-mathematical identity and defines the aggregate equilibrium. R includes wages, taxes, capital amortization, the interest on capital, other payments made by producers, and profits. Profits, indeed, balance the equation. Bernácer also calls R the purchasing power (or demand power). This purchasing power in the hands of economic agents may (or may not) be converted into effective demand as a consequence of their decisions on saving or spending (Bernácer 1935: 4). In this respect, the time lag between the perception of these payments in monetary terms by the economic agents and the precise moment in which they become effective demand is crucial.⁵ The synthetic equation of the market is the relationship between the different elements comprising effective demand and effective supply (Bernácer 1933: 21).

⁵ This time lag is key to Bernácer’s model of economic fluctuations and is the basis on which he might have anticipated Robertson and Keynes’s theory of business cycles in the *A Treatise on Money* (1930). Bernácer developed the time lag concept as early as 1916 (Bernácer 1916; Boianovsky et al. 2001). Ruiz points out how in the 1930s Bernácer defined the equilibrium when effective demand equals effective supply, but does not explain the mechanism through which remunerations are converted into effective demand or otherwise (Ruiz 2011: 722).

$$\frac{D}{O} = \frac{R-A+S+F-C}{P-E-S+B} \quad (1)$$

Where D = Effective demand; O = Effective supply; A = Net hoarded reserves in the period; S = Increase or decline of real money; F = Net balances of fiat money; E = Net increment or decline of stocks; B= Trade balance; and C = Capital balance.

This ratio determines the price level in the period analyzed. As for Bernácer, the oscillation of price level is the first sign of economic fluctuations. Equation (1) therefore becomes instrumental in understanding the economic cycle. As well as in 1929, Bernácer strongly remarks on the differences with respect to the quantitative theory of money and its characteristic equation and points out how the latter may only predict the effects on the price level caused by money fluctuations (Almenar 1983; Bernácer 1929; Bernácer 1933; Ruiz 1984).

2.2.- The economic cycle. The theory of “disposable funds”

Once he had built up the synthetic equation of the market, he pointed out the origin of economic fluctuations which, as mentioned, consists of the “... interruptions the purchasing power may undergo before becoming effective demand” (Bernácer 1934: 1). Why does the original equilibrium between production and purchasing power not persist between effective demand and effective supply? According to Bernácer, purchasing power is reduced as a result of what Bernácer calls the “increase in floating disposable funds”, which are saved and not spent, but may be augmented by the addition of new purchasing power that does not come from production such as, for example, increased

money supply by the central bank. This process is dynamic, and the time lag mentioned above is crucial for understanding the effects on the effective demand.

Why do private individuals save? Just as Keynes did so effectively in the *General Theory*, Bernácer gave an alternative view to the classical theory of savings in two ways. On the one hand, he considers growing savings a severe problem in periods of depressions, which highly contrasts with the classical view that savings contribute to economic prosperity. On the other, he opposes the classical theory of savings (interest) that holds that the rate of interest is the price paid for forgoing current consumption. Bernácer does not link savings to interest. Conversely, savings depend upon the level of income (as Keynes said) and, even more, on the certainty of enjoying financial security in the future: it depends on consumers' capacity for deprivation. Thus, even in the case of a negative rate of interest, individuals would save (Bernácer 1934a: 4).

Savings take two forms: wealth accumulation by buying jewelry or precious metals; or more usually, money, whether in coins or fiduciary money (deposits or assets), which he calls "disposable funds." Disposable funds (also called "financial supply") are therefore not just money, but correspond with the amount the recipients of money do not spend. The term "disposable" underlines the liquidity of money and its universal acceptance. Before analyzing the final allocations of disposable funds, it is time to define two central concepts used by Bernácer: productive funds and unproductive funds, which Bernácer first coined in 1926 (Bernácer 1926: 10–11). Productive funds are the money circulating within the production-consumption cycle. These take two forms – remunerations and profits – and eventually result in new purchasing power. Therefore, the value of production during a period is the result of multiplying the size of the fund by its speed of reproduction (Bernácer 1935: 15). Unproductive funds, on the other hand, are the money that flows out of the productive circuit and is not applied to production for

now, whether it is hoarded or allocated in what he called “*valores de renta*” (income-yielding assets), that is, securities, land and industrial shares in the stock exchange market (Bernácer 1935: 6).⁶

The final allocation of the disposable funds, whether they end up in productive funds or not is crucial for determining periods of prosperity or crisis. In *La teoría del mercado financiero* (*The Theory of the Financial Market*), indeed, Bernácer analyzes the allocation of disposable funds by pointing out their four final destinations (Bernácer 1935: 1–5). The first allocation is the credit market through loans to the state, privates, merchants, or industry in the form of mortgages, discounted bills of exchange, and so on. The use made by the recipients of these loans is crucial for determining whether they form part of the productive or unproductive funds. If the state, for example, uses them for financing public works, then, the money rejoins the productive circuit and increases the productive funds. However, if the credit is hoarded, this results in A growing, and thereby reduces productive funds and eventually, the effective demand.

The second possible allocation of money are income-yielding assets markets. The money flowing into these markets is extracted from the productive circuit and increases A in Equation (1). We should look more extensively at Bernácer’s analysis of the land market (and stock exchange market) as here we find one of the critical concepts of Bernácer’s theory of the economic crisis. As Keynes did in the *General Theory* when he established an inverse relationship between the markets of money and bonds, Bernácer holds that there is an inverse relationship between the price of land properties and the rate

⁶ Bernácer makes a detailed analysis of the economic risks (he uses the Spanish term “*avatares*”) experienced by so-called purchasing power on the way to being converted into effective demand. In this vein, he analyses the final allocation of money in the productive or unproductive funds of a wide range of economic operations: investment, consumption, demand for products by wholesalers, open market operations by the central bank, demand for income-yielding assets, production, loans, change in demand patterns, international movements of capital and commodities, provisions for amortization and many others (Bernácer 1933: 2–20).

of return on land. As the rate of return of income-yielding assets markets must be equal to the rate of interest in the credit market, the rate of interest is determined outside the credit market by the yields of income-yielding assets and in particular the land rent (Bernácer 1935a: 24; Keynes 1936: 165–174).⁷ Naturally, a falling rate of interest would result in the migration of disposable funds from the credit market (in which disposable funds barely yield a return) to the stock exchange and, particularly, the land market. (Bernácer 1935: 25).⁸

The third final allocation of money is what he called the speculation market. This refers not to any specific market but to the money devoted to buying assets both on the land and stock exchange markets in order to gain income not from its rate of return but from the changing value of securities or lands. That typically happens in expectation of future price increases of these assets and therefore is compatible with a high rate of interest. This money does not take part in the productive funds (Bernácer 1935a).

The fourth final allocation are the productive funds. In this case, the disposable funds come back to the productive circuit through consumption or investment, which eventually results in growing purchasing power. The process thereby repeats on a larger scale.⁹

⁷According to Bernácer, the land produces “perpetual returns” or an “indefinite product” which contrasts with capital, and all other assets, which earn a finite income. Therefore, the owners of accumulated wealth will buy capital and not land if they are compensated with a “premium” which is how Bernácer interprets interest (Bernácer 1916: 139–140; 1925: 89–90). See Almenar (2001: 677–678) and Ruiz (2001: 704–710) for more on the weight of George in Bernácer’s thought, the aspects of his influence, and the differences between the two.

⁸ The determination of interests outside the circuits of the money and product markets is a characteristic of Bernácer’s theory of interest from the very beginning (Almenar 1983; Ruiz 1987: 21–27).

⁹ In this respect, he points out in 1935 how Keynes’s model in the *Treatise* does not capture the nature of the disequilibrium. According to Bernácer, when Keynes affirms that investment is bigger than savings or vice versa, the nature of disequilibrium is comparable to the disequilibrium caused by the changes in consumer preferences that shift the demand from one industry to other, but this does not result in unemployment or falling demand. The key point is, therefore, the final allocation of savings (Bernácer 1935a: 5).

The dynamic development of the model results, according to Bernácer, in a cyclical structure of the economy, which moves away from economic equilibrium. The determining factor behind the breaking of the economic equilibrium in the prosperity period is the "... attraction and repelling of disposable funds by the income-yielding assets market and subserviently by the speculative market" (Bernácer 1935: 25). According to Equation (1), this means A increases, giving way to a shortage of disposable funds in the credit and real investment markets that eventually results in falling demand. Once the demand falls, there is a need to reduce the stock of goods (E) by reducing prices. As sales are made at a lower price, the value of production – which is the origin of the purchasing power – is reduced, as are the remunerations (mainly the commercial and industrial profits) and, in consequence, the purchasing power. In this context, companies limiting costs will improve technical organization and dismiss workers, leading to industrial unemployment – a key feature of the depression – and, thus, to further reductions in remunerations (purchasing power), resulting in the typical downward spiral that characterizes crisis (Bernácer 1934a; 1935: 17). During the depression, the growing inflow of disposable funds to the financial market may reduce the rate of interest, which paves the way to the return to prosperity. However, the distrust caused by the crisis, which incentivizes hoarding and compels industry to demand higher margins with respect to the rate of interest, together with the size of the fall in demand, impedes the automatic return. The turning point, according to Bernácer, is usually the result of some "fortuitous event" that absorbs the purchasing power existing in the unproductive or reserve fund (A) and reintroduces it to the productive circuit (Bernácer 1934: 19). Such phenomena may be a war, a technical innovation, or even a public calamity.

2.3.- Economic policies, reform proposals and other practical statements for applied analysis in the articles in *Economía Española*

During the Great Depression, suggestions abounded about the possible policies or reforms for overcoming the economic slump. Bernácer made some specific proposals but also analyzed, using his model of economic fluctuations, the policies and the reforms debated in public opinion at a national and international level. Having an account of them is quite useful for understanding Bernácer's interpretation of the events of the Great Depression from 1932 to 1936.

The effectiveness of monetary policy in its different forms is a topic repeatedly analyzed along with the six articles in *Economía Española*. Altogether, Bernácer thinks that is not a useful policy for tackling deflation. Apparently, according to Equation (1), the increase in fiat money (F) results in growing effective demand, but the critical point is the final use given to the fiat money. That is to say: if the money ends up in A or outside the production circuit, the effective demand would not move up. This happens in the different modalities of expansive monetary policy. The open market operations do not guarantee the turning of the economic cycle to the prosperity phase. In Bernácer's model, an open market operation – the purchase of bonds by the government – is interpreted as a conversion of a fictitious asset into purchasing power. However, its consequences on the equilibrium of the market would depend on the use given to the money. If hoarded, the effects on the effective demand are non-existent. Even if the money purchases gold, but the gold is eventually hoarded, the effective demand will not be affected. If, on the other hand, the allocation is for the purchase of assets, it will depend on the final use given to the money by the sellers of these assets (Banco de España 1933: 12). There are, however, some uses of money that increase the purchasing power: consumption and production. As a rule, however, Bernácer considers it unusual that the increase in money

would result in growing personal expenses. Moreover, in times of depression, it seems challenging to invest it. The exception, however, is the public credit used for financing deficits or public works (Bernácer 1934: 12). The second modality of expansive monetary policy, which consists of reducing the rate of discount for decreasing the rate of interest, has similar effects, as the pessimistic expectations of industry demand a wider margin between the rate of return on investments and the rate of interest. In Bernácer's realm, however, the low rate of interest results in the disposable funds being channeled to the income-yielding assets market instead of being diverted to the credit market, worsening deflation and deepening the downturn.

As is well-known, during the 1930s, some economists closely connected to the ILO (International Labour Office) proposed reducing weekly working hours to 40 and promoting public works as effective policy measures for fighting against unemployment (Endres-Fleming 1999). Regarding the former, Bernácer pointed out that the growing costs of production (without growing prices) for producers would reduce profits, which would consequently reduce purchasing, effective demand, and eventually employment (Bernácer 1934: 18). The latter, on the other hand, enlarges the productive fund by introducing disposable funds into the productive circuit and increasing effective demand. Although Bernácer placed limits on the scale of public works, he was well aware of the advances in the theory of the investment multiplier made by Kahn and Keynes in the early 1930s. These limits arose from its consequences for public finances (Bernácer 1934: 15).¹⁰

From 1929 onwards, Bernácer was highly interested in the gold exchange standard. The articles in *Economía Española* extend the analysis to an open economy and pay particular attention to the production of gold, the movements of gold, their influence

¹⁰ The pressure put on public finances is a recurrent justification used by Bernácer for rejecting demand management policies (Almenar 1983; Boianovsky 2006, 2007; Ruiz 1984).

on the real side of the economy and the gold exchange standard itself. By applying the theory of disposable funds, Bernácer achieves two conclusions that are worth mentioning. The first is that the shortage of gold is not behind the economic crisis. The second is a sharp criticism of the gold exchange standard, as he gives priority to domestic price stability over the external equilibrium of the rate of exchange. He also points out how the pressure put on countries with a structural deficit in their trade balance resulted in demands to defend national production, which resulted in the spiral of protectionism that characterized the period (Bernácer 1935a, 1936).

The proposals for reform and the policies suggested by Bernácer for overcoming the economic depression are all conditioned by respect for "... the regime of the formation of capital based on individual self-initiative ... and on the incentive of self-interest, that is, on individual savings and their transformation into social savings through investment". Such reforms and policies aimed, in great coherence with the theory of disposable funds, at ensuring "... all purchasing power that emerges from production results in effective demand in the short run" (Bernácer 1935: 28).

Under these guidelines, Bernácer agreed with some critics of capitalism about the incapacity of the system to transform individual savings into social savings ("social savings" is his name for the individual savings invested in durable goods). In Bernácer's model, as seen, the mechanism of savings, and more specifically, the allocation of disposable funds, is the critical point in the generation of cyclical fluctuations. Therefore, the system must guarantee savings are invested in the productive circuit, whether that is in industrial investment or public works through an agency that is newly created, but based on existing financial institutions, that should channel the disposable funds towards public or private productive investments. The demand comes from private companies, but a public agency should take charge of the technical supervision (Bernácer 1934b: 22). In

addition to this, Bernácer proposes the radical measure of banning any transaction in the income-yielding assets markets and the speculative market. This measure would avoid savings being allocated in these markets, prevent the eventual increase of A, and result in a rate of interest determined by credit demand and supply. These measures appear to be preventive, but once the crisis breaks out, Bernácer is pessimistic, attributing the recovery, as mentioned, to exogenous factors beyond state control (Bernácer 1935: 24 – 28).

4.-The Great Depression seen through Bernácer's model in the 1930s. The weekly reports to the General Board of the Bank of Spain (1932–1936)

The Research Department of the Bank of Spain, the Spanish central bank, was founded in December 1930 to give technical advice on financial and monetary issues to the bank's General Board. The board appointed the economist José Larraz as head of the department. However, one year later, in 1931, he definitively resigned from office. Seeing an excellent opportunity to work full time in economics, Germán Bernácer applied for the position. Finally, the board of the Bank appointed both Olegario Fernández Baños and Germán Bernácer as co-heads of the department (Martín Aceña 1983). The members of the department were responsible for drawing up a statistical series on many economic aspects of the Spanish economy, and specific reports or analyses of monetary and financial issues. Bernácer took charge of drawing up the weekly reports or chronicles that form the *Colección de Crónicas del Boletín semanal (Collection of Chronicles of the Weekly Newsletter)* in the Bank of Spain's archive, which referred primarily to the monetary and financial events of the Great Depression in the world economy (Banco de España 1932–1936). Together with other members of the department, he also drafted *Situación y perspectiva económica y financiera en España (Economic and Financial Situation and Perspective in Spain)* (Banco de España 1932–1936). The latter was an economic outlook

on the Spanish economy and the former the reports drawn up by the Research Department every week to advise the board of the Bank of Spain of the main economic, financial and monetary events of these turbulent years from January 1932 up to the dawn of the Spanish Civil War in July 1936 (Martín Aceña 2000).¹¹

These weekly reports for the board of the Bank of Spain are an outstanding work in the field of Spanish political economy in the 1930s and are unique and unrivaled in Spain during the Great Depression. In fact, what is most significant, and where they differ from other works in Spain, like Vandellós's reports for the Newsletter of the *Institut d'Investigacions Econòmiques* in Barcelona, for example, is the use of Bernácer's original theory of economic fluctuations to analyze the detailed information in the reports. This was very uncommon in a country like Spain, characterized by being a receiver of foreign economic thought that had made barely any original contributions to economic science in the field of theory. These reports on applied economic analysis have hardly been mentioned – and were never analyzed – in the historiography.

The weekly reports focused on the major financial and monetary events experienced by Western economies that Bernácer thought significant enough to be worth summarizing and interpreting. However, the analysis extended to many other economic events and policies considered relevant by Bernácer in the reports. The number of topics and episodes reported by Bernácer is so massive that it is not possible to give a complete account of them. We will therefore organize the section by gathering together different episodes according to the topic analyzed in order to show how Bernácer interpreted them by applying his model of economic fluctuations.

¹¹ The reports are not signed. Nevertheless, there is no doubt about its authorship. The literary style, the concepts, the analysis and, finally, the opinion of the head of the Bank of Spain's archive confirm it. These reports will be soon published by *Publicaciones de la Universidad de Alicante*. They amount to 198 reports, adding up to a total of more than 180,000 words.

The episodes of monetary policy management implemented to attempt to overcome the persistent deflation during the Great Depression are widespread in the weekly reports. These were open market operations, the management of the rate of discount, and the enlargement of the monetary base, which became the primary tools of the monetary policy at the time. All were intended to fight deflation, and Bernácer sharply criticized all of them.

Particular attention was given to open market operations. Some mentions were made in 1932, but it was not until early 1933 that Bernácer included a detailed analysis of the bond purchases by the US Federal Reserve. By then, the Open Market Operations Conference had approved a massive purchase of bonds which the Federal Reserve implemented between March and April 1932 and in August 1932 (Meltzer 2003: 357–374). Fears of inflation and possible abandonment of the gold exchange standard among Federal Reserve officials greatly contributed to putting an end to this policy. On the other hand, there were no visible results, and the unemployment figures showed a dramatic increase in the unemployment rate from 18.66% in February 1932 up to 25.02% in August 1932. Friedman and Schwartz consider that the policy of open market operations would have continued had the depression in the US been shortened (Friedman-Schwartz 1993, 9). Bernácer, however, makes a very different assessment of this policy. In February 1933, he considered open market operations to be inefficient for overcoming deflation and guaranteeing economic recovery. Most significant, however, was that he reached this conclusion after using his model of disposable funds (Banco de España 1933, February 2). In this vein, he points out how their eventual results depended upon the use given to the disposable funds generated by the growing money supply resulting from the bond purchases. However, Bernácer is not very optimistic on this, and he pointed out how the falling rate of interest resulting from the growth in money supply would incentivize the

funds being directed to the income-yielding assets markets. They will therefore end up outside the productive circuit without any significant impact on effective demand. As a rule, he considers it unlikely that, in times of depression, the increase in money would result in growing investment (Banco de España 1933, October 5; 1934, July 26).

Something similar may be said about the management of the rate of discount aimed at reducing the rate of interest. From the very beginning of Bernácer's reports, there are mentions of the falling rate of discount at which the American banks borrowed money or bought securities from the Federal Reserve (Banco de España, 1932 March 2; March 9). In a well-known case, after the Wall Street crash the New York Federal Reserve progressively reduced the rate of discount from 6% to 1.5% in response to the successive bank failures. The trend was interrupted in October 1931 when it raised the rate as a result of the gold outflow that followed the British abandonment of the gold exchange standard (Meltzer 2003: 332–348). The drift, however, was resumed, and by the end of 1933, the rate had stabilized at 2.5% (Fishback 2010). There is consensus about the insufficiency of the reduction of the nominal rate of discount as deflation compensated for the effects of the rate cuts, and the real rate rose during the period – one of the Federal Reserve's main failures during the period (Friedman-Schwarz 1993). However, Bernácer had a different and more pessimistic view on the discount rate cutting policy (Banco de España 1932, July 14).¹² The falling discount rate, according to him, can be a step towards the end of the crisis as the growing disposable funds increase the supply of money and eventually reduce the rate of interest, which had experienced a further fall as a consequence of the crisis. However, even when the interest rate is zero, the money will end up in the income-yielding assets markets as, according to Bernácer, the rate of return in the money market is low and the demand for credit for investment is almost non-existent in the

¹² Apart from America, Bernácer also commented on the Bank of France's policy of cutting the rate of discount (Banco de España 1935, January 3)

midst of an economic crisis. The final allocation of money in income-yielding assets is the consequence of the pessimistic economic perspectives in the industry that makes the demand for credit almost vanish (Banco de España 1932, July 14).

Bernácer also opposed the enlargement of the monetary base as a means of fighting deflation. He did so by analyzing two monetary episodes along with many reports from 1933 to 1936: the use of government securities as collateral for money issued and Roosevelt's policy on silver. The Emergency Banking Act and the Banking Act (also known as the Glass-Steagall Act) were enacted by the American Congress in the spring of 1933. Both enactments, the first of which took place under the Roosevelt administration, included well-known measures like the closure of all US banks, the introduction of deposit insurance and the separation of investment and commercial banking among many others. Less well-known, however, was the possibility of using "...all direct obligations of the United States" as collateral for Federal Reserve bank notes during the period of emergency, which Title IV of the Emergency Bank Act included (Preston 1933). Bernácer was well aware of the debates and discussion that preceded the enactments of the Emergency Act and pointed out its ineffectiveness as early as January 1933 (Banco de España 1933, January 26). Using the disposable funds model, he argued that the increase of the monetary base would not impact on the prices of products as the low rate of profit would channel resources towards hoarding or income-yielding assets, that is, the "unproductive fund" (Banco de España 1933, February 2). However, more attention was given to the American silver policy, which aimed at enlarging the monetary base of the economy and, eventually, to raising prices, which it succeeded in doing (Banco de España 1933, July 20). Bernácer first analyzed silver purchases in 1933, when the American Delegation to the London Economic and Monetary Conference suggested this policy (Friedman 1993: 483). The Americans argued that the silver purchases would help

the Asian economies that had adopted a silver standard to recover. Months later, indeed, under the of 1934, the Federal Reserve purchased large amounts of silver and issued silver certificates, and added them to the United States' monetary base (Meltzer 2003: 460).¹³ The silver policy was a recurrent topic tackled by Bernácer up to 1936, and he systematically argued that the purchases of silver had three goals. The first was to satisfy the demands of the silver producers' lobby that put pressure on the US Administration, as Friedman put it. The second was to meet the surpluses of the balance of payments without any significant increase in the rate of exchange of the dollar. The final goal was to achieve a growing surplus as a result of the differences between the official or legal price and the market prices of silver, and, naturally, to grow the monetary base (Banco de España 1935, May 2; May 9; July 1935; Friedman 1992). Bernácer's criticism of the silver purchases was again based on the final allocation of the money. In this vein, he points out how silver purchases will increase the effective demand directly. However, as silver – as a monetary base – becomes a financial good, the impact of the purchases will depend upon its final allocation. In times of depression and, naturally, in the context of low-interest rates as a consequence of an increased money supply, it may be used to purchase income-yielding assets or hoarded (Banco de España 1935, May 9; 1936, May 22).

Apart from the use of the disposable funds theory to give an account of the US silver policy, which is the primary goal of this section, it is worth remarking on Bernácer's excellent analysis of the negative consequences this policy would have on the Mexican and particularly the Chinese economy. This highly contrasted with the prediction of the Roosevelt Administration. Finally, Bernácer's concerns became reality in 1935 when China abandoned the silver standard, and the Mexican crisis broke out (Banco de España

¹³ The detailed description of the mechanism of silver purchases demonstrates how well Bernácer knew the operation of the Federal Reserve (Banco de España 1935, November 22)

1935, November 8, 15; Friedman-Schwartz 1993: 489–491). The significance of the silver policy in the early 1930s might have been unnoticed, but the fact is that silver producers received more funds than farmers did through the Agricultural Adjustment Act.¹⁴ Some economists warned in the 1930s about the effects of the silver purchases. However, it was not until the 1990s that Friedman attributed deflation and paving the way to the advent of communism in China to Roosevelt's silver purchase policy (Friedman 1992).

Apart from this, Bernácer points out the apparent limitations the gold exchange standard imposed on the introduction of silver as a new metal reserve. Introducing a bimetallic standard, according to Bernácer, could give rise to further instability as a consequence of volatile gold and silver prices (Banco de España 1934, May 10; 1934, June 7). Criticism of the quantitative theory of money and, in particular, the independence of monetary and real variables are indeed behind Bernácer's analysis of the silver policy:

... regarding monetary issues, the caution must be maximum. Superficial judgments that usually cause large disasters must be avoided ... The monetary mechanism cannot be managed without deeply affecting the intimate relationships of the national economy as it permeates the economic body just as the circulatory system permeates the human body (Banco de España, July 20, 1933).

The debate on the US silver policy in the reports gave way to the debate about the role of the gold shortage as a cause of the crisis. The shortage of gold was the subject of lively debate at the Gold Delegation Conference in Lausanne in 1932, and Bernácer agreed with the economists – the majority – that did not consider it to be the origin of the crisis. However, he disagreed with the attendees, all of whom supported the preservation

¹⁴ Meltzer points out how in 14 August 1935, the US Treasury purchased more silver than the entire production of the metal in the country (Meltzer 2003, 462n)

of the gold exchange standard (Banco de España 1932, June 16; Clavin-Vessels 2010, 192).¹⁵ The debate on the nature of the metal standard was used by Bernácer to introduce the critical issue of whether the money supply should be backed by a metal or not (fiat money), which is, according to him, the real debate (Banco de España 1935, February 7).

The reports pay continuous attention to the rate of exchange policies during the 1930s.¹⁶ The level of the rate of exchange must be adjusted to the relationship between domestic and foreign prices, wages, and incomes.¹⁷ If it is, the cost of the exportation products should not exceed their price (Banco de España 1932, March 16). An overvalued currency in this context eliminates the profit and makes the exportation of domestically produced goods difficult. In this respect, the main topics analyzed in the reports were: the Bank of England's policy, the limits of the domestic policies in the countries that had not abandoned the gold exchange standard (the so-called Gold Bloc), the attempts to stabilize the different currencies, the plans to restore the gold exchange standard at the London World Conference, and the US abandonment of dollar convertibility. According to him, divergences between the external and domestic level of the currencies characterizes the crisis (Banco de España 1932, December 1). In general, he opposed a fixed rate of exchange by arguing that the stability of domestic prices must prevail over the stability of the rate of exchange, which looks apparent in the light of his theory of economic fluctuations in which falling domestic prices are characteristic of a depression (Banco de

¹⁵ To demonstrate that the shortage of gold had not caused the crisis, Bernácer analyses the abandonment of the gold standard by South Africa, the world largest gold producer (Banco de España 1933, January 5).

¹⁶ On this, Bernácer conveys a clear view that relies upon his criticism of the quantitative theory of money and Say's Law. The former is criticized by focusing on the neutral effects of the instability of the domestic prices as mentioned in epigraph 2. In fact, as well as Keynes did in the *Tract*, he attributed to inflation and deflation negative consequences on the distribution of income. Say's Law, on the other hand, is refuted by applying the theory of disposable funds. In this case, Bernácer remarks on how creating purchasing power does not mean creating demand (Banco de España 1935, July 26; Keynes 1923).

¹⁷ The system of equilibrium of the different currencies is, says Bernácer, the result of the operation of three elements: balance of trade, balance of capital and domestic value of the currency (Banco de España 1933, September 21).

España 1933, June 22). In this respect, he supports the floating system of the rate of exchange, which he considered far much more efficient in crisis periods than devaluations (Banco de España 1935, March 21; March 28).

He did not support the management of the rate of exchange. Nevertheless, he admired how the Bank of England managed the value of the currency, as well as the positive mentality of English public opinion about the level of the rate of exchange which he attributes to the high level of economic education in the country. In great contrast with other countries, public opinion accepted a low pound without any problem (Banco de España 1932, March 16; 1932, October 27). The reports praised the operation of the Exchange Equalisation Account (EEA) in Britain for managing the pound, considering that the fund was aiming to achieve stability of the domestic price level (Banco de España 1933, May 11). However, they also pointed out the difficulties of the “money doctors” managing the unpredictable factors the fund faces, which demand “divinatory feats” (Banco de España 1935, March 14).

In great contrast, however, the reports highly criticized some aspects of the Emergency Banking Act (1933), which gave President Roosevelt the ability to control the international and domestic gold movements. Bernácer said that it would have been easier to devalue the dollar (Banco de España 1933, March 16; 1933, April 27) and, indeed, he correctly predicted the dollar’s devaluation (Banco de España 1933, August 3). In general, he does not have a high opinion of Roosevelt’s policies on the rate of exchange, calling him the “financial dictator”. This policy, Bernácer said, aimed primarily to trigger inflation (Banco de España 1934, January 28). However, the inflationary policy does not guarantee the creation of new effective demand, as the money may be hoarded or accumulated in income-yielding assets, that is, in unproductive funds.

Bernácer attributed these differences in the management of the exchange rate to the psychological differences between the Americans (aggressive and impulsive) and the British (cautious), but behind this lay the fact that Bernácer disapproved of Roosevelt's interventionism. Many examples of this disapproval appear in the weekly reports, like the criticism of the attempt to increase agricultural prices by the Reconstruction Finance Corporation (Banco de España 1932, August 11), or of the policies that promoted trade unions and eliminated anti-trust legislation (Banco de España 1934, July 19). These policies were judged either to be ineffective or even worse, to have the potential to bring about a spiral of interventionism: "... when the many evils of regulation are uncovered, one tries to amend them through new regulations", which recalls the views on interventionism Hayek expressed years later in *The Road to Serfdom* (Banco de España 1933, September 13). Bernácer recognized some effectiveness in the short run of the public works policies (but not the 40-hour working week policy) and public jobs (as they increase the effective demand by putting resources in the productive fund). However, their strong effects are dampened by their consequences on public finances, and by the high cost of paying for socializing the economy (Banco de España 1935, January 17).

The economic troubles of the countries in the so-called Gold Bloc, particularly France, are also widely analyzed. Once he had rejected the quantitative theory of money to which his "synthetic equation of money" was opposed, it is apparent that the gold exchange standard did not make sense. The cost of keeping the currency pegged to gold, according to him, is an adjustment of domestic prices and costs which would result in a permanent state of economic crisis (unemployment, trend towards deflation, industrial distress, falling wages and growing balance of trade and public deficits) and political instability (Banco de España 1934, July 5). France had accumulated vast amounts of gold by then, but according to the disposable funds theory, these amounts are not integrated

into the productive fund as, advancing what economic historians have pointed out, this happens because the gold inflows were sterilized (Eichengreen 1986). Things were worsened by the disequilibrium in the public finances that resulted in the rising interest rate for financing the public debt. In this context, Bernácer predicted in many reports that the only way of solving such a problem was by devaluing the currency (Banco de España 1934, April 19; July 7; October 4; 1935, January 24; May 8). If not, as there is no other alternative policy, protectionism follows.¹⁸ However, the main obstacle would be to convince public opinion about the need to depreciate the currency after creating a faith in monetary intangibility in people's minds. The promises of the leftist coalition to increase public spending if they won the elections would worsen things and thus the only question to answer was when France would devalue (Banco de España 1936, May 8).¹⁹ Similar statements were common in the reports about the members of the Gold Bloc, such as the Netherlands, Belgium, Italy, Poland, and many others (Banco de España 1934, November 22).²⁰ The reports pay particular attention to Germany and its monetary experiments (the system of scrips, for example, which tried to isolate the external and domestic values of the currency from each other) (Banco de España 1933, September 28). Overall, with some nuances, Bernácer's statement of the economic outlook of these countries is not very different from what he said about France. However, he added that the different economic

¹⁸ This is where Bernácer prioritizes eliminating protectionism over monetary stabilization. However, he doubts that one country on a unilateral basis may renounce protectionism (Banco de España 1935, June 21).

¹⁹ The reports monitored the French crisis in great detail and demonstrate how deep Bernácer's knowledge was of the operation of the gold exchange standard, the Bank of France and the politics and public opinion in France (Mouré 2002).

²⁰ The Geneva and Brussels conferences (Banco de España 1934, October 4; October 25), the continuous attacks suffered by the currencies of the Gold Bloc countries – Switzerland, the Netherlands, the Republic of Czechoslovakia and Poland – (Banco de España 1935, April 1; May 23; August 2; August 9; November 22; 1936, April 24) or the successive devaluations, whether successful like that of the Belgian Franc or failed like those of the Italian lira or the Argentinian peso (Banco de España, 1934, December 6; 1935, September 20).

nature and the resulting different structure of their trade balances made the survival of the Gold Bloc impossible. When the dramatic devaluations came up, and some countries abandoned the gold exchange standard definitively, he considered that his prophecy had come true (Banco de España 1935, November 21).

Behind Bernácer's analysis of the Great Depression is the claim that economic factors and not political ones caused economic distress. Furthermore, he interpreted political and military conflicts, such as the Abyssinian occupation, French parliamentary instability and the advent of German Nazism as the result of economic distress (Banco de España 1935, July 12). However, he does not think that a debate on economic organization is useful in this context, as the very problem is the irrational way of facing up to the economic crisis, and particularly the refusal of the governments to devalue their respective currencies:

All countries, regardless of their political regime, are victims of the economic fatality that hurts all alike. All of them have tried to defeat it, but rather than using rational policies; they implement emergency measures based on an immediate and simple practical empiricism (Banco de España 1934, April 19).

There are many examples of these measures in the reports: experiments with government-managed currencies (Banco de España 1933, March 16); the anti-hoarding policy of the Hoover administration (Banco de España 1932, February 17); the French public loan issued on the London bond market (Banco de España 1933, May 4); contingents and other protectionist measures for tackling the deficit of the balance of payments (Banco de España 1935, January 3); control of price policies (Banco de España 1936, July 3); arbitrary devaluations based on Cassel's monetary theory (Banco de

España 1935, February 14);²¹ the phenomenon of the dissociation of intervened currencies – the so-called tourism-Lira (Banco de España 1936, March 27); the populists' control of the markets in Italy and Germany (Banco de España 1936, March 13), and many others. Bernácer analyzes them all from the perspective of the theory of disposable funds. In this vein, he also continually criticized many topics which had taken root in public opinion by merely applying his model of disposable funds. Such is the case of the responsibility of bankers in the origin of the economic crisis (Banco de España 1934, March 15), the speculative conspiracies to provoke the downfall of a given currency – the British pound in particular – (Banco de España 1935, March 7, June 15) or the paradox between high prices of assets in the stock exchange market and falling prices in the product markets (Banco de España 1932, March 9).

4.- Final remarks

Bernácer's original contribution and analyses of the economic fluctuations is an outstanding achievement in the context of the sparse theoretical contributions of Spanish economists during the 1920s and 1930s. At the time of the reports analyzed here, Bernácer became co-head of the Research Department at the Bank of Spain, and one of his main tasks was to monitor the economic outlook at global level. He did so by applying his model of business cycles or theory of disposable funds, which he had updated in the six articles published in the journal *Economía Española*.

Such a model provided an account of the economic crisis which highly contrasted with other contemporary interpretations of the economic cycle. The criticism of some of these accounts, which pops up frequently throughout the six articles in *Economía Española* may help us to contextualize Bernácer's theory of disposable funds within the

²¹ In 1928 he had criticized Cassel's theory of purchasing power parity to explain the exchange rate level of the different currencies (Bernácer 1928: 365)

main theories of business cycles at the time. On the one hand, according to Bernácer, the crisis did not originate in the technical advances that reduce prices and cause overproduction. On the other, under-consumption, in contrast to his first writings, is not behind the economic crisis, as the low level of consumption is the result, according to his model of disposable funds, not the origin of the economic crisis (Bernácer 1934: 1–2). Speculative movements are harmful as they take disposable funds out of the productive circuit, but they did not cause the economic crisis (Bernácer 1934: 12). Neither are monetary causes behind the crisis as we have above demonstrated. In this vein, the crisis is not the result of the shortage of gold either (Bernácer 1934: 19).

Conversely, his interpretation has parallels with Robertson's time lag theory of the business cycle and the central role played by hoarded money (Boianovsky et al. 2006). Furthermore, some authors held that Bernácer had advanced the cash-in-advance theory developed in the 1960s and 1970s (Ruiz 1984). However, neither the weekly reports nor the six articles in *Economía Española* mention Robertson's account of the economic cycle. Keynes, on the other hand, is widely mentioned and positively assessed as the unitary differences between investment and savings that caused the change level of prices changes in the Second Fundamental Equation of the *Treatise* are comparable, according to Bernácer, with the operation of the disposable funds. However, in many cases, he remarks on how his model has broader scope (Bernácer 1935a: 5). In any case, Bernácer was part of the "brave army of heretics" that criticized the orthodox views of the quantitative theory of money and its practical consequences.

The model was formally updated by Bernácer to be much ductile and manageable for application to the analysis of the monetary and financial events of the 1930s. However, only a few major modifications have been made with respect to his previous works, and the main concepts and interrelationships between the economic variables remain as they

were in the writings in the 1920s. However, the new formulation of the model that Bernácer undertakes in the six articles in *Economía Española* enlightens us on many aspects which were not so evident in his previous works. Bernácer uses them for interpreting the monetary and financial events of the Great Depression in the outstanding weekly reports to the board of the Bank of Spain. These reports demonstrate how Bernácer grasped the weaknesses of the monetary unions in periods of crisis as a result of the difficulties making adjustments to prices and wages; the risks of allocating too much money (disposable funds in Bernácer's words) to the financial markets and in general outside of what he called the productive circuits; and the mechanism and operation of the economic crisis and its connection with political and social events. All this reveals that at this point Bernácer had understood the nature of capitalism, the recurrence of economic crisis and the very mechanisms of the economy as few economists then and now have done.

However, he conveyed an outright pessimism about macroeconomic management and particularly about the possibilities of monetary policy which, naturally, left him, regarding economic policy, outside the trend of demand management policies that followed Keynes's *General Theory* (Almenar 2001; Boianovsky et al. 2006; Boianovsky 2007; Ruiz 1984). Moreover, this pessimism looks like being extended to the possible implementation of the radical reforms and policies that he had proposed in the articles in *Economía Española*. The reports indeed make no mention of the policy of suppressing the transactions in the income-yielding assets markets and the suggestion of creating a public institution to manage credit towards the "productive fund."

Bernácer's reports did not go beyond the limits of the inner circle of the board of the Bank of Spain. In this respect, there are indications that his comments were taken as

a reference point and widely debated within the board. Despite the reports focused on international economic and monetary events, they indirectly referred to domestic issues. For example, when Bernácer criticized the Gold Bloc and the exchange rate policy of the French franc, he was indirectly referring to the debates in Spain at the time, as the Spanish currency was in 1933 pegged to the French franc and therefore indirectly to the gold standard. Something similar occurred with the policy of cheap money. Bernácer's view on these issues, which was shared by other members of the Research Department helped to state the Bank of Spain's point of view. However, the management of the exchange rate and the interest rate was not by then in the hands of the bank but in those of the Public Finances Department and the Treasury. Therefore, the view of the economists in the Bank of Spain was not enacted in actual policies (Martín Aceña 2000: 70–74).

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