PANOECONOMICUS, 2016, Vol. 63, Issue 2 (Special Issue), pp. 195-210
Received: 09 November 2015; Accepted: 07 March 2016.

UDC 338.124.2:339.7 (460)
DOI: 10.2298/PAN1602195M
Original scientific paper

Antonio Sanabria Martín

Department of Applied Economics I, Complutense University of Madrid, Spain

✉ antosana@ucm.es

Bibiana Medialdea García

Department of Applied Economics I, Complutense University of Madrid, Spain

✉ bibiana@ccee.ucm.es

A version of this paper, entitled "Recession Caused by Over-Indebtedness: Description and Specific Features of the Spanish Case", was presented at the 12th International Conference Developments in Economic Theory and Policy which took place in Bilbao, June 2015.

Lending Calling. Recession by Over-Indebtedness: Description and Specific Features of the Spanish Case

Summary: Following the approaches of Fisher, Koo, and in particular Minsky, this article describes recent developments in the Spanish economy. These authors' theories of financial fragility, and the extension of analysis of the recession to also include the expansionary period, are very useful when it comes to understanding the boom (1994-2008) and subsequent collapse of the Spanish economy. Both processes are part of the same phenomenon: the binomial relation between debt and the asset bubble, amplified by the use of external financing, and the subsequent process of slow deleveraging. Alongside said analytical elements, and considering Spain's membership in the Eurozone monetary union system, this characterisation of the euphoria and subsequent balance-sheet recession further identifies specific features of the Spanish economy that informed current outcomes.

Key words: Over-indebtedness, Recession, Deleveraging, Spain.

JEL: E6, F4, F5.

The financial and economic crisis that has affected the world's economies since 2008 has meanwhile raised questions about conventional economic approaches. First, because most of those using orthodox approaches (with very few exceptions such as Robert J. Shiller or Nouriel Roubini) proved incapable of foreseeing or preventing a crisis of even this magnitude; and second, because orthodoxy insists on misdiagnosing the very nature of the crisis, thus preventing the adoption of an appropriate strategy for addressing it. In this paper, we intend to overcome such shortcomings by providing an explanation of the crisis based on alternative theoretical references which, in our opinion, may offer a better diagnosis of the situation.

One of the most significant aspects of the current crisis, and one which has generated the most specialised literature, is the fact that the Eurozone has been the most severely affected region. Important issues on which no consensus exists within the discipline include: to what extent was the institutional design of the single currency area a cause of, or aggravating factor in, the crisis? Also, what specific role did the so-called peripheral countries of Europe play in this process? In this context, close study of the Spanish case carries special interest.

In short, the purpose of this article is to analyse the crisis (which we characterise as a recession caused by over-indebtedness) that has battered the Spanish econ-

omy for close to a decade. To do this, we begin in Section 1 by explaining our theoretical framework, based on an approach that we term *Kaleckian* regarding the role of demand in the cycle, also adopting the endogenous money approach. In particular, the approaches of Fisher, Minsky, and Koo have proven very useful. In addition to a general theoretical framework, our analysis further requires the consideration of more specific factors. In the second section, we look at those factors particular to the Spanish case. The article sets third an explanation of the process of over-indebtedness that gradually took shape in the Spanish economy, and that imploded into recession in 2008. Finally, we offer our conclusions.

1. Recession and Over-Indebtedness: Basic Elements of the Analysis

The current global economic situation invites us to reconsider certain theoretical contributions that have not enjoyed the greatest academic popularity. In particular, recent experiences of debt-based growth followed by financial crisis and recession, exacerbated by deleveraging, compel us update two basic theoretical approaches. The first relates to the inherently cyclical nature of capitalist economies and the decisive role of demand, and especially investment, in the cycle (John Maynard Keynes 1965; Michal Kalecki 1971). The second looks at the centrality of the financial dimension in macroeconomics, from a perspective known as the endogenous money approach, which assumes a close link between the credit-driven creation of money by the financial system and the demand for spending within an economy (Basil J. Moore 1988; Steve Keen 2011a; L. Randall Wray 2015). From this double theoretical starting point regarding the role of demand and finance in the economic cycle, this paper argues that the nature of the expansion phase, and particularly the conditions of over-indebtedness through which demand is financed, represent a key explanatory element in understanding the gestation and subsequent manifestation of the crisis in Spain.

Without adhering to them on all points, we base our analytical framework on contributions by Irving Fisher (1932, 1933) on *debt deflation*, as well as the subsequent and broader *financial fragility hypothesis* formulated by Hyman P. Minsky (1982). The *Minskyan* notion of financial fragility and our reinterpretation of the work of Fisher in terms of recession *as caused by* over-indebtedness are central theoretical features of this analysis.

Fisher's analysis of recession in the context of over-indebtedness is essential in defining the formula on which we base much of our explanation of the Spanish situation. However, we should make explicit that Fisher's view on the role of deflation within the recessive sequence strikes us as open to slight modification; in any case, it is not essential to our analysis. In keeping with other authors such as Martin H. Wolfson (1996), we believe that the mere fact that a deflationary spiral is not activated does not invalidate the fundamentals of Fisher's bold approach on the perverse over-indebtedness / recession binomial. The key to his work, as we understand it, appears in his explanation of the specific type of recession that can derive from a debt crisis. In short, there are three crucial analytical elements: (i) that an excessive debt burden impacts on both the financial position of the banks and the weakness of

demand from indebted agents - two key elements in explaining the crisis; (ii) that in a recession, the desperate task of cleaning up balance sheets (deleveraging) carried out simultaneously by the various private sector agents feeds decisively back into the recession; (iii) that while over-indebtedness exacerbates the recession, the recession itself restricts the ability to generate income and becomes an obstacle to the repayment of debt. Thus general over-indebtedness, problems within the financial system, and weak demand combine and underpin a particularly serious recessionary spiral.

This focus on the perverse interplay between recession and over-indebtedness appears to have influenced Minsky's well-known and fruitful *Financial Instability Hypothesis* (Minsky 1982, 1986). Other more recent authors have also been influenced by Fisher's approach and have integrated it into a broader macroeconomic view (Mervyn King 1994; Wolfson 1996; Robert W. Dimand 1997; Shiller 2013). For Minsky's hypothesis of financial fragility, we recommend Keen (1995, 2011b).

Minsky asks whether a phenomenon like the Great Depression might be repeated (*Can it happen again?*), starting from the Keynesian idea that an affirmative answer requires the creation of an analytical approach capable of integrating recession as a non-exceptional possibility. In that work, Minsky addresses recession due to over-indebtedness from a broader perspective than that of Fisher, zooming out to include the expansionary phase of the cycle in his analysis. The innovative and most significant element for our analysis is that Minsky explains how, during the boom, the economy is actively developing the very financial fragility that will lead to the crisis: from a financially sound situation, the same conditions that define the growth context also generate a situation of "euphoria" that tends to overstate expectations about profits. Meanwhile, overstated forecasts of expected profits encourage investment to be financed at higher rates of leverage which, at some point, will be revealed as unpayable from those returns actually obtained from the investments made (Ponzi scheme). In this way, the normal evolution of the economy makes the financial position of the agents more fragile. The speculative dynamic and the formation of bubbles represents the climax of the sequence.

Finally, the accumulated systemic fragility becomes evident when an event, although not necessarily decisive in itself, manages to undermine the euphoric expectations that support growth. This change in perception around financial sustainability has an impact on the credit bubble and precipitates a change in the cycle. Both ideas (that the very conditions underlying expansion lead to financial fragility, as well as the emphasis on a change in expectations as determinative of the turning point in the cycle) are vital, as will be shown, to characterisation of the Spanish case.

We conclude this theoretical overview of recession due to over-indebtedness by briefly taking into account the work of Richard C. Koo (2011a, b). We are particularly interested in Koo because he stresses that a key characteristic of recessions due to over-indebtedness is that agents are forced to play a leading role in a process of deleveraging, and that reduces demand and thereby exacerbates the recession. This situation, known as a *balance-sheet recession*, is one where even in a context of very low interest rates, agents insist on reducing their spending as much as possible, in order to save and/or repay their debt (see Section 4.2). The repayment of debt, from this perspective, serves to deepen the recession. In short, in his *balance-sheet reces-*

sion approach, Koo highlights the counter-productive (recessive) impact of deleveraging in a situation such as the one described.

2. Spain-Specific Factors in the Exceptional Structure that Is Europe

The analytical elements explained in the previous section are necessary but alone insufficient to address our subject matter; other specific factors are also essential to a proper analysis of the Spanish case.

2.1 Member of a Monetary Union

First of all, the Spanish economy is part of the European Monetary Union (EMU). The uniqueness of the EMU resides in the fact that it is a monetary union involving sovereign states that issue their own public debt, but in a common currency.

Monetary integration is a result of two interrelated processes: a wider process of European integration already underway (Charles P. Kindleberger 2011, p. 613), and free movement of capital, finally adopted in June 1988 (Rawi Abdelal 2009, p. 69). So the monetary union was an attempt to solve the problem of Robert Mundell's impossible trinity, posed by the prior fixed-exchange rates system (the European Monetary System) and the subsequent German monetary dominance, as evidenced by European crisis in 1992 (Robert A. Mundell 1963; Abdelal 2009).

With common institutions such as the European Central Bank, problems of asymmetry and the degree of unilateralism are reduced, since Germany now shares votes with the other economies. However, this shared monetary policy poses an additional governance problem evident from the current crisis: the common monetary policy is shared by creditors and debtors alike.

2.2 Acute External Dependency

The Spanish growth dynamic has been structurally dependent on the external sector for at least two basic aspects: capital goods and finance.

The first of these is explained by the Spanish production model, where expansion cycles are particularly strong in imports, especially of intermediate goods, partly due to the dependence by the Spanish economy on imported raw materials and energy supplies; transnational intra-corporate trade and technological scarcities of Spanish industry are also explanatory factors. Another factor in Spain's external dependence is the production specialisation of its industry, some key sectors of which (such as automobile production) are part of transnational value chains (Josep Banyuls and Raúl Lorente 2008).

The second aspect of external dependence, of particular interest for our analysis, is financial in nature. In an open economy with free movement of capital, such as Spain's, domestic demand is not constrained by national savings, and financial needs can be met by recourse to external financing (Bibiana Medialdea García and Antonio Sanabria Martín 2012). The financial euphoria stage, in a context of extraordinarily easy international movement of capital, amplifies the expansion of credit predicted

by Minsky. The use of external borrowing, which (as we shall see) reached very high levels in the Spanish economy, thus permit a boost in demand to be financed with debt. At the same time, the massive inflow of capital contributes to an increase in the price of the assets of such investments (fuelling bubbles), which in turn increases the borrowing capacity and aggregate demand.

The growing divergence between the investment and savings rates during the expansion stage results, in terms of national accounts, in the current account deficit. As Jorge Uxó, Jesús Paúl, and Eladio Febrero (2011, p. 573) argue, current imbalances are explained from the behavior of domestic demand. Thus extensive growth in productive investment, along with the growth in aggregate demand, becomes possible thanks to the increased use of external financing. So growth in the Spanish economy is counterbalanced by a growing deficit in the current account.

2.3 Banking Fragility

The link between domestic demand and external financing requires an intermediary to connect the two, and in the Spanish economy, this is mainly focused on retail banking.

During the expansion period, the presence of strong demand for loans (see Section 3.1) added to the huge liquidity in international financial markets that allowed banks to leverage liquidity; and this explains the rapid growth of Spanish banks, which saw their assets multiply by 3.5 between 1997 and 2007 (Analistas Financieros Internacionales (AFI) 2012, p. 233). Access to that huge flow of external liquidity, later reinforced by the arrival of the Euro and the appeal of eliminating currency risk, encouraged the expansion of the sector. This strong growth, boosted by the aforementioned leverage in liquidity, resulted in the skyrocketing debt of banks, as compared to the performance of other institutional sectors. Thus, in the first quarter 1999, total debt of financial institutions related to GDP was at 10.6%, compared to 51.6% and 36.8% for non-financial corporations and households, respectively. However, by the first quarter of 2009 that debt-to-GDP ratio had shot to 102.6% for financial institutions (and 133.9% and 84.0% for non-financial corporations and households, respectively; data from Bank of Spain[1]).

Banking expanded at the cost of creating substantial financial fragility, as predicted by the Minsky approach: the growth dynamic itself creates an overvaluation of expected earnings, while the risks are underestimated. We need to take into account that, given this combination of overvalued expectations and undervalued risk, the banks tend to increase their leverage in order to increase their profitability, intensifying their own financial fragility. Moreover, given that their main source of income is lending money, banking expansion has a clear impact on overall financial fragility as it provides increased funding to the other economic sectors. This is especially important in the case of Spanish real estate, not only for speculative reasons (as in Minsky's Ponzi phase) but also because it allowed banks to increase funding through the securitization of mortgage loans (*cédulas hipotecarias*).

[1] **Bank of Spain.** 2015. Financial Accounts, Chapter 2b.
http://www.bde.es/webbde/en/estadis/ccff/cfcap2.html (accessed May 13, 2015).

Three additional aspects served to aggravate even further, if possible, the risks of this increasing financial fragility of Spanish banks. One was their dependence on external finance, which made them more vulnerable to possible external shocks. As we will see later, more than half of the debt held by Spanish banks is sourced from abroad. Second, the high concentration of their business in the property sector meant that in 2006, according to data from the Bank of Spain, 60% of the credit to "other domestic sectors" was concentrated in loans to the real estate sector. And third, a strong interplay arose between bank risk and sovereign risk, explained by the combination of the following elements: the weight of government guarantees when issuing bank securities[2]; the impact of bank recapitalisations on public debt; and the large volume of public debt held by the banks. In turn, sovereign risk in the Eurozone, heightened by the threat of a break-up of the monetary union, resulted in greater penalisation of the banks by the market.

2.4 Fiscal Fragility

Another feature of the Spanish case lies on the fiscal side. Since joining the Eurozone as one of the founding members, the Spanish economy has remained within the limits set in the Stability and Growth Pact. In 2005, a budgetary surplus was even achieved for the first time in Spain's democracy. However, the arrival of the crisis sharply reversed this situation, leading to the greatest fiscal crisis in decades. In 2009, the budget deficit reached a record rate of 11.1% of GDP. The sudden deterioration of the public finances added a specific element that, as we shall see, aggravated the recession in Spain.

The crisis has had an impact on the fiscal situation more as a result of falling income than any increase in public spending. In effect, although the automatic stabilisers increase spending, especially due to rising unemployment, the public-spending-to-GDP ratio has always remained below the European average (Manuel Lago Peñas 2012, pp. 21-22). Meanwhile, the Spanish tax burden is substantially lower than the European average. In the period 2007-2014, tax burden was eight percent below the Eurozone average (37.1%, compared to 45.1% of GDP, according to the IMF). This was aggravated by the fact that the main means of raising revenue in Spain are taxes on employment.

2.5 Monetary Risk: Moving from a Strong to a Weak Currency

In the case of Spain, in addition to the aforementioned governance problem resulting from creditors and debtors sharing a currency, there is another complication: the possible reversal of the process of integration into the Euro. The negative impact of this possible event threatens to become even greater in those Eurozone economies that, like Spain's, accumulate a large stock of external debt.

Between 2002 and 2009, the external debt of the private sector multiplied by 4.5: from 468 billion to 2.1 trillion Euros. In the last year of the period, private exter-

[2] According to Eurostat data, in 2013 the total stock of government guarantees is 18.4 % of GDP, a ratio surpassed only by Austria (35%) and Ireland (32.1 %). These guarantees are used to regain access to wholesale financing.

nal debt accounted for 82.2% of total external debt. Meanwhile, the weight of public external debt as a proportion of total debt gained real importance only from the start of the crisis, as a result of the internal financing difficulties.

This very high weight of private external debt increased the cost of a hypothetical exit from the Euro, since this stock of debt would continue to be valued on the basis of what would then become a foreign currency (the Euro), against which the new local currency would be devalued sharply. As a result, the real burden of this external private debt would be multiplied. In addition, the positive effect of the devaluation would be at least partly offset by the increase in the cost of importing intermediate goods, which as we know are vital for the Spanish economy. Not only would access to international funding be more expensive, but it would be made more difficult by having what would likely be an unstable new currency, at least in the short term. This is the so-called "original sin" risk (Barry Eichengreen, Ricardo Hausmann, and Ugo Panizza 2002) which increases the need to earn foreign currency in order to be able to use foreign finance. Finally, we should point out the risk of bank-runs associated with the possible change of currency, and the mass withdrawal of deposits in the face of a consequent devaluation.

3. Over-Indebtedness and the Recession in Spain

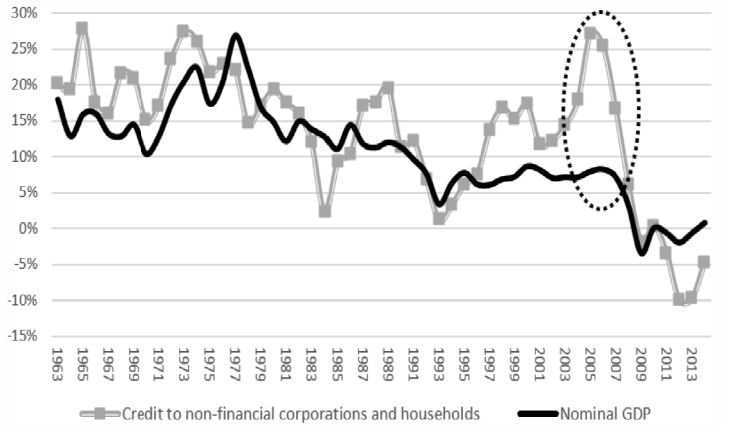
Between 1994 and 2008, the Spanish economy experienced its most intense and long-lasting cycle of uninterrupted growth in recent decades. However, this expansion stage led to the most severe and persistent post-war recession. Both processes, boom and bust, are in reality interconnected. In this section we consider them using the analytical framework described in Section 1 and the Spanish specificities analysed in Section 2.

3.1 A *Minskyan* Growth Cycle

The growth of the Spanish economy presents unmistakable elements of the speculative euphoria stage described by Minsky. In effect, in the context of financial liberalisation and mass access to credit, Spain aggravated its external financial dependence by developing a type of growth that can literally be considered as *debt-led* (Engelbert Stockhammer 2011; Eckhard Hein 2013) and which took the economy to an extreme degree of financial fragility.

The situation of over-indebtedness is evident to the extent that credit growth substantially exceeds the increase in nominal GDP in a sustained manner. We can examine this euphoria stage by comparing the development of the growth rate of nominal GDP and of credit to other domestic sectors (i.e. credit to the non-financial private sector: households and businesses). According to the data, the mismatch is very considerable. During the upturn, GDP oscillates in a stable manner around nominal growth rates of between 5% and 8%, while from 1997, credit growth year-on-year is always at double-digit rates, exceeding 20% per annum from June 2005. This decoupling indicates that during the expansion there is a growing amount of financing directed not at the production process, but at the purchase of existing assets as a result of profit expectations (speculative dynamic). As shown in the graph be-

low, the unprecedented feature of this expansion stage is not so much the increase in credit *per se*, which in any case reaches exceptionally high levels, but the magnitude of the aforementioned mismatch compared to nominal GDP growth.



Source: Compiled by the authors using data from Bank of Spain[3] and AMECO[4].

Figure 1 Growth and Credit to Other Domestic Sectors and Nominal GDP (% Year-on-Year Change), 1963-2014

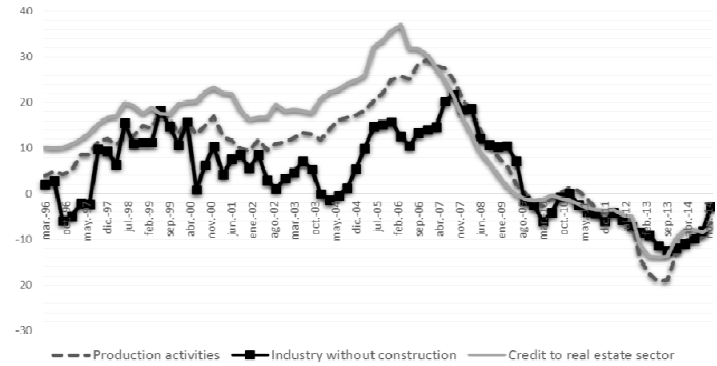
We obtain a complementary approach to the Spanish growth pattern based on over-indebtedness (characterised by Minsky) by looking at Keen's (2011a) approach to "demand for debt". According to this author, total demand is composed of nominal GDP plus the increase in monetary supply due to credit growth. Therefore, the difference between this total demand and the volume of GDP indicates what he calls the "demand for debt", financed by credit and not by income. According to our calculations, using data from the Bank of Spain, this demand for debt grew steadily from the second half of the 1990s, increasing from 11.3% of GDP in 1995 to 26% in 2000, before accelerating further, especially from 2003. Thus, in 2006 it reached a maximum of 56.9% of GDP. This credit hypertrophy reflects the effect of what Minsky considered a *Ponzi scheme*, with an increasing proportion of the debt being financed in a way which is unconnected to the generation of income. It is the expectation of profits from the trading of assets that supports the demand for credit. As explained in the theoretical section, this dynamic creates asset bubbles sustained by a highly elastic credit supply.

We can highlight at least two Spanish asset bubbles. First, in the value of the shares listed on the stock exchange. The IBEX-35 index more than doubled between 2002 and 2007 (multiplying by 2.5), and by the end of that period was five times higher than in 1995. In addition, the effective volume traded on the stock exchange

[3] **Bank of Spain.** 2015. Economic Indicators, 8.9. Lending by Credit Institutions and Credit Financial Intermediaries to Other Resident Sectors. Breakdown by End-Use. http://www.bde.es/webbde/en/estadis/infoest/indeco.html (accessed May 13, 2015).
[4] **Annual Macro-Economic Database (AMECO).** 2015. Gross Domestic Product, 6.1. http://ec.europa.eu/economy_finance/ameco/user/serie/SelectSerie.cfm (accessed May 13, 2015).

multiplied by 11.4 between 1996 and 2007. Also significant is the evolution of the ratio between the real and nominal value of shares: from a real / nominal ratio of 1.7 in 1996, to 10.5 in 2007 (source: National Statistics Institute - INE[5]).

However, the main asset bubble was undoubtedly in the property sector. From the mid-1990s, the possibility of obtaining capital gains through the purchase and sale of property shot up in parallel with the exorbitant increase in prices: between 1999 and 2005, the price per square metre of private housing increased by 117% (source: INE). According to the data from the European Mortgage Federation (EMF), the average house price increased by 115.2% over the period 1996-2007). The fact that the resident population aged between 20 and 49 (in principle the main component of housing demand) grew at a considerably lower rate in that period (by 27%, according to INE) suggests the existence of a speculative type of dynamic where the demand for housing as a property was subordinate to expectations of capital gains.



Source: Prepared by authors from Bank of Spain, Economic Indicators.

Figure 2 Evolution to Other Domestic Sectors by Destination (% Year-on-Year Change), March 1996-December 2014

Such prospects for gains encouraged overinvestment in the sector. Thus, the excessive relative weight that it already suffered was intensified over these years, this being in fact what encouraged its rapid growth: while the total investment rate rose from 21.5% to 30.7% of GDP between 1996 and 2007, figures corresponding to the construction sector, which was already at 14.7% at the start of the period, climbed to 21.9% of GDP in 2007. So, approximately seven (7.2) of the nine (9.1) percentage points by which the investment rate rose during the growth phase were concentrated in this sector. This property bias is also reflected in the use of credit and the concentration of banking activity in this sector. As already indicated, overexposure to property risk was an additional financial fragility factor in the Spanish banking sector. From 2006, total credit to real estate sector[6] accounted for over 60% of the credit to other domestic sectors, compared to 39.5% at the start of 1996 (source: Bank of

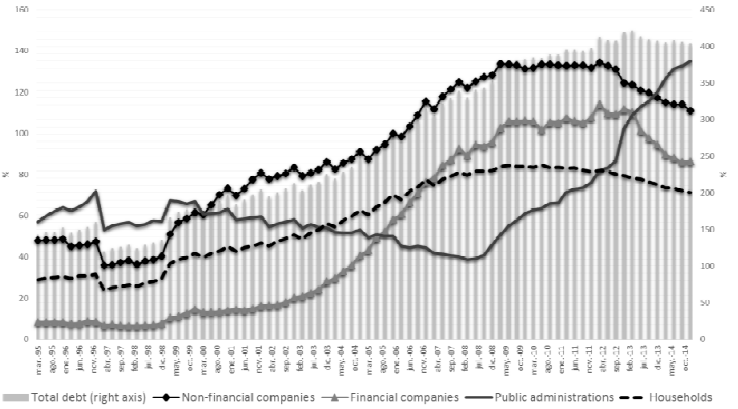
[5] **National Statistics Institute (INE).** 2015. Financial and Monetary Statistics, Stock Market. http://www.ine.es/en/inebmenu/mnu_financie_en.htm (accessed May 13, 2015).

[6] Construction, Property business, Acquisition and Rehabilitation of Housing. This estimate falls short since it excludes credit indirectly induced by the property sector.

Spain). Similarly, the most intense credit expansion took place in the property sector, in contrast to the modest growth in credit for industry, as can be seen from the following graph.

Having reviewed the overall dynamics, move on to focus on the process of over-indebtedness in order to observe the behaviour of each of the institutional sectors (debt figures calculated from financial statistics from the Bank of Spain).

It is essential to stress that from December 1995 to December 2007, the debt of non-financial companies and households multiplied by six (actually 6.0 and 6.2, respectively), while that of banks multiplied by more than 25 (25.8). Meanwhile, over the same period, nominal GDP multiplied by just 2.4. In short, the volume of private debt, and especially that of the banks, literally shot up in comparison to GDP (Sanabria Martín and Medialdea García 2014). Public debt saw very moderate growth until the outbreak of the crisis, hardly sufficient to explain the 4.7% increase in the total stock of debt. In fact, it sank from 62.2% to 42.2% of GDP. It is only with the recession that public debt began to grow exponentially.



Source: Compiled by the authors from Bank of Spain and INE.

Figure 3 Evolution of Total Debt by Institutional Sector (% GDP), March 1995-December 2014

To the high degree of private sector leverage we must add another feature that exacerbated the financial fragility: a considerable part of the debt accumulated over these years was of foreign origin. According to our calculations, in 2008 external debt accounted for 27% of total debt. It is worth noting that more than half of this external debt was in the form of liabilities generated by the Spanish banks (54%), for whom external debt also accounted for more than half (55%) of their accumulated debt.

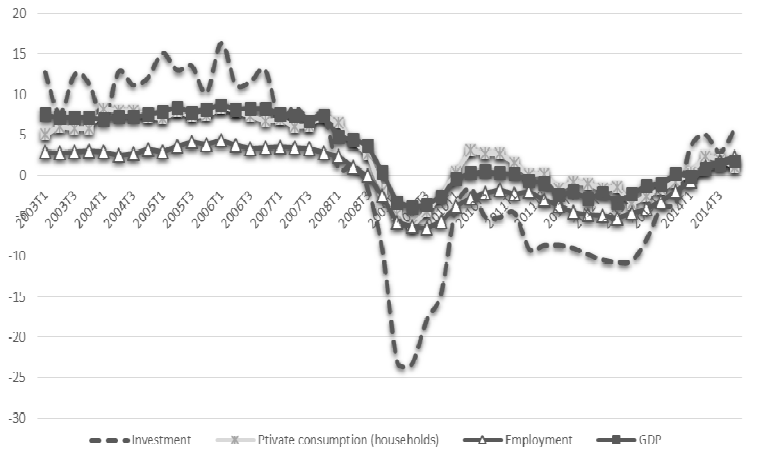
In short, what is important here is that this high level of private (and to a large extent external) over-indebtedness is sustained on the basis of overvalued expectations of future income and, along with them, a reduction in the perception of risk. However, once these expectations are seen as unrealistic, that debt is revealed to be unsustainable. It is, therefore, a case which corresponds paradigmatically to Min-

sky's hypothesis: financial fragility has been created and maximised during the expansion.

3.2 The Party's Over: Recession Due to Over-Indebtedness

The Mynskian financial euphoria that sustained the expansion cycle was disrupted when expectations started to wobble and gave way to justifiable doubts about the Spanish financial position. Although this change was not brought about by an isolated event, the bankruptcy of Lehman Brothers in 2008, which dried up international credit channels and left the Spanish economy without access to the external financing on which it depended, played a key role.

However, unlike other occasions in the past, this was not just a case of a *sudden stop*. The problem was more serious, and its manifestations multiple: GFCF began showing negative year-on-year growth rates in June 2008 (-0.7%); the number of unemployed and the unemployment rate began to increase in the second half of 2007. The number of unemployed increased by 2.2 % year-on-year in the third quarter of 2007, and by 6.7 % in the next quarter. Meanwhile, the 2008 unemployment rate rose to 11.2%. (Source: calculations from INE data); household consumption started to fall from the final quarter of 2008 (-1.9 % year-on-year); and in 2009 (for the first time since records began, in 1962), both nominal GDP and granted credit recorded negative growth rates. Finally, as shown in the graph below, the investment rate had already started to show increasingly small rises from 2006.



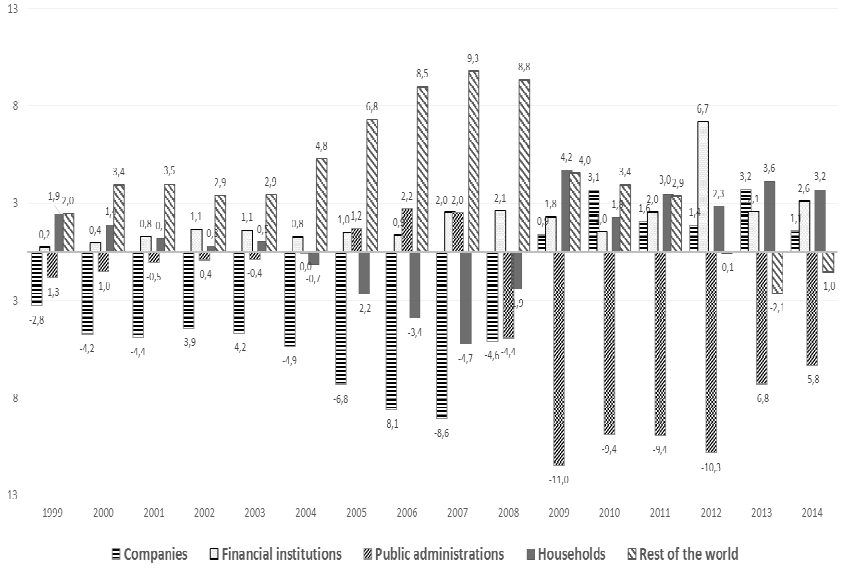
Source: Compiled using data from INE.

Figure 4 GDP, Domestic Private Demand and Employment (Annual Growth Rates, %)

We can conclude, therefore, that over just a few months, the recessionary spiral so well described by Fisher became fully operative in the Spanish economy. Besides the importance of some exogenous factors, such as the aforementioned Lehman Brothers bankruptcy or the increase in interest rates (by 0.25%, to 4.25%) in July 2008, and with recession already looming in the Eurozone, the main determining

factor was endogenous: the credit crunch of 2008 revealed a latent financial fragility which in the new context could not be refinanced. When the expansion of demand depends so heavily on private debt, a few small credit decreases are enough to provoke a recession. Investment in decline and problems related to financing, job losses, and the consequent fall in production and income, all in a context of the enormous accumulation of private debt, are the basic elements that created the new Spanish framework for recession from 2009. Just as Fisher's work predicted, the weakness in demand and the fragility of the financial sector, both caused by high leveraging, completed the resulting picture of a recession due to over-indebtedness.

To illustrate the impact of private over-indebtedness on the recession, it is useful to apply to the Spanish case Koo's approach (2011a, b) on *balance-sheet recession*. As he explains, the over-indebted private agents without access to credit prioritise maximising the repayment of their debts over consumer spending and investment, which further depresses aggregate demand. Replicating his methodology (Koo 2011b, pp. 26-27) using updated figures, the graph below shows the evolution of debt and the subsequent deleveraging in each economic sector from its financial balance with respect to GDP.



Source: Compiled by the authors from INE.

Figure 5 Capacity / Necessity of Financing for the Institutional Sectors (% GDP), 1999-2014

The Figures 3 and 5 show that the deleveraging process began in 2009 in the private non-financial sector and was particularly strong in households. The intensity and speed of this deleveraging were caused by the pressure of the increased financial cost of debt and, above all, by the loss of income due to the intense job losses that began to result in 2008 (Carlos Cuerpo et al. 2013, p. 27). The effort of households was more pronounced given their greater difficulty in obtaining liquidity by selling

assets (the principal being a basic necessity), to which one must add that offering housing as a mortgage security does not serve to cancel the loan (no payment in kind).

The financial sector, meanwhile, was the slowest to start its deleveraging and did not begin to reduce its debt in year-on-year terms until mid-2012; although from that point on, it did so very strongly (-24.2%), albeit with public aid.

Non-financial companies, meanwhile, began their ongoing deleveraging process from mid-2011. To accomplish this, they reduced their investment, as Koo foresaw; but also, and particularly since 2012, they have carried out lay-offs and wage cuts. In addition, the reduction in bank debt, from 940 to 560 billion Euros between 2008 and June 2014, was accompanied by greater borrowing over the same period by non-monetary financial institutions (35 to 110 billion Euros). As Ángel Berges and Sara Baliña (2015, p. 22) explain, the increase of 75 billion is explained almost entirely by the transfer of toxic real estate assets from the participating banks to SAREB (*Sociedad de Gestión de Activos procedentes de la Reestructuración Bancaria* - The Management Company for Assets Arising from the Banking Sector Reorganisation, SAREB, known as the "bad bank").

Meanwhile, it is now the public sector that suffers from significant negative financial balances, with a significant increase in public debt - from 39.4% in 2008 to 97.7% in 2014. These figures do not include borrowing between the different public bodies. If we add this, the total public debt as a proportion of GDP increases from 46% to 135% (source: calculations using data from Eurostat and the Bank of Spain). As explained, the growing need for financing was largely due to the collapse in government revenues and, to a lesser extent, to the recapitalisation of the banks. The total public aid to the Spanish financial sector in 2008-2013 generated an increase in the public-debt-to-GDP ratio in 2013 of 5.3% (Henri Maurer and Patrick Grussenmeyer 2015). In any case, the fiscal deterioration arising as a result of the recession, together with the perverse banking risk / sovereign risk relationship (see Section 3.3) activated the last latent financial fragility factor, which exacerbated the recession itself. Given that Spain is a member of the EMU, the banking crisis due to over-indebtedness also became a sovereign debt crisis, particularly in 2012. The high level of private foreign debt, along with the rapid increase in public debt, raised at that point the possibility of Spain's exit from the Euro. This led the yield on Spanish 10-year bonds in the secondary market to exceed 7% in June 2012, while the spread *vis-à-vis* German bond exceeded 600 basis points in July of that year, thereby threatening the sustainability of Spanish public debt, at least within the Eurozone (source: figures from the Bank of Spain). That same threat led to a large-scale withdrawal of foreign investors, with capital flight reaching a record figure of 296 billion Euros between June 2011 and 2012 (27% of GDP, according to IMF estimates), which deepened the credit crunch and with it the recession.

4. Conclusion

The analysis carried out on the expansion phase (1994-2008) and the subsequent ongoing recession shows that the Spanish economy has followed the pattern of speculative euphoria and financial fragility suggested by Minsky, as well as the *balance-*

sheet recession of Koo as an updated version of Fisher's writings on the Great Depression.

The importance of the adopted approach is that it allows the scope of our analysis to be widened to include the prior expansionary process in the study of the recession. As explained, the pattern of debt-driven growth in the private sector is vital to explaining the subsequent recession. Boom and bust are therefore closely interconnected, demanding that greater attention be paid to the conditions under which other, future growth cycles take place.

From the study presented, it can be concluded that in the Spanish case this growth cycle was not normal, and neither was the ensuing recession. Rather, it has been an economic situation that is especially difficult to deal with, given the difficult combination of the recession and the slow deleveraging process described. A correct diagnosis of the situation, focusing on the over-indebtedness accumulated during the euphoric years of the boom, allows us to tackle the effects of the recession in a more economically and socially effective way - on the basis of its causes. Consequently, it is necessary to consider the formulation of alternative policies that facilitate deleveraging and income generation. The ways in which the high indebtedness of the Spanish economy conditions theses alternative policies should be further investigated to complete the results obtained in this paper.

References

Abdelal, Rawi. 2009. *Capital Rules. The Construction of Global Finance*. Cambridge, MA: Harvard University Press.

Analistas Financieros Internacionales. 2012. *Guía del sistema financiero Español*. Madrid: Ediciones empresa global.

Banyuls, Josep, and Raúl Lorente. 2008. "La industria del automóvil en España: reorganización de la cadena de valor y gestión laboral." http://pendientedemigracion.ucm.es/info/ec/ecocri/eus/Lorente_Banyuls.pdf.

Berges, Ángel, and Sara Baliña. 2015. "El mapa de la deuda en España: ¿quién debe a quién?" *Cuadernos de información económica*, 244: 23-32.

Cuerpo, Carlos, Inês Drumond, Julia Lendvai, Peter Pontuch, and Rafal Raciborski. 2013. "Indebtedness, Deleveraging Dynamics and Macroeconomic Adjustment." European Commission Economic Paper 447.

Dimand, Robert W. 1997. "Irving Fisher and Modern Macroeconomics." *American Economy Review*, 87(2): 442-444.

Eichengreen, Barry, Ricardo Hausmann, and Ugo Panizza. 2002. "Original Sin: The Pain, the Misery and the Road to Redemption." http://www.financialpolicy.org/financedev/hausmann2002.pdf.

Fisher, Irving. 1932. *Booms and Depressions: Some First Principles*. New York: Adelphi Company Publishers.

Fisher, Irving. 1933. "The Debt-Deflation Theory of Great Depressions." *Econometrica*, 1(4): 337-357.

Hein, Eckhard. 2013. "Finance-Dominated Capitalism, Re-Distribution and the Financial and Economic Crises: A European Perspective." In *Post-Keynesian Views of the Crisis and Its Remedies*, ed. Óscar Dejuán, Eladio Febrero, and Jorge Uxó, 15-45. New York: Routledge.

Kalecki, Michał. 1971. *Selected Essays on the Dynamics of the Capitalist Economy 1933-1970*. London: Cambridge University Press.

Keen, Steve. 1995. "Finance and Economic Breakdown: Modeling Minsky's Financial Instability Hypothesis." *Journal of Post Keynesian Economics*, 17(4): 607-635.

Keen, Steve. 2011a. *Debunking Economics - Revised and Expanded Edition: The Naked Emperor Dethroned*. London: Zed Books.

Keen, Steve. 2011b. "A Monetary Minsky Model of the Great Moderation and the Great Recession." *Journal of Economic Behavior & Organization*, 86(C): 221-235.

Keynes, John Maynard. 1965. *Teoría general de la ocupación, el interés y el dinero*. México: Fondo de cultura económica, (Orig. pub. 1936).

Kindleberger, Charles P. 2011. *Historia financiera de Europa*. Barcelona: Crítica, (Orig. pub. 1984).

King, Mervyn. 1994. "Presidential Address: Debt Deflation: Theory and Evidence." *European Economic Review*, 38(3-4): 419-445.

Koo, Richard C. 2011a. "The World in Balance Sheet Recession: Causes, Cure, and Politics." *Real-World Economics Review*, 58: 19-37.

Koo, Richard C. 2011b. "Apuntes de la crisis global. El mundo en una recesión de balances." *Ensayos económicos*, 63: 7-39.

Lago Peñas, Manuel. 2012. "El gasto público: un falso culpable." http://www.1mayo.org/nova/files/1018/Informe46.pdf.

Maurer, Henri, and Patrick Grussenmeyer. 2015. "Financial Assistance Measures in the Euro Area from 2008 to 2013: Statistical Framework and Fiscal Impact." European Central Bank Statistics Paper 7.

Medialdea García, Bibiana, and Antonio Sanabria Martín. 2012. "La financiarización de la economía mundial: hacia una caracterización." *Revista de economía mundial*, 33: 195-227.

Minsky, Hyman P. 1982. *Can "It" Happen Again? Essays on Instability and Finance*. New York: Columbia University Press.

Minsky, Hyman P. 1986. *Stabilizing an Unstable Economy*. London: Yale University Press.

Moore, Basil J. 1988. "The Endogenous Money Supply." *Journal of Post Keynesian Economics*, 10(3): 372-385.

Mundell, Robert A. 1963. "Capital Mobility and Stabilization Policy under Fixed and Flexible Exchange Rates." *The Canadian Journal of Economics and Political Science*, 29(4): 475-485.

Sanabria Martín, Antonio, and Bibiana Medialdea García. 2014. "La crisis de la deuda en España: elementos básicos y alternativas." In *Análisis y perspectivas 2014. Precariedad y cohesión social*, ed. Fundación Foessa, 63-70. Madrid: Cáritas.

Shiller, Robert J. 2013. "Irving Fisher, Debt Deflation, and Crisis." *Journal of the History of Economic Thought*, 35(2): 179-183.

Stockhammer, Engelbert. 2011. "Peripheral Europe's Debt and German Wages: The Role of Wage Policy in the Euro Area." *International Journal of Public Policy*, 7(1/2/3): 83-96.

Uxó, Jorge, Jesús Paúl, and Eladio Febrero. 2011. "Current Account Imbalances in the Monetary Union and the Great Recession: Causes and Policies." *Panoeconomicus*, 58(Special Issue): 571-592.

Wolfson, Martin H. 1996. "Irving Fisher's Debt Deflation Theory: Its Relevance to Current Conditions." *Cambridge Journal of Economics*, 20(3): 315-333.

Wray, L. Randall. 2015. *Teoría monetaria moderna: manual de macroeconomía sobre los sistemas monetarios soberanos*. Berlin: Lola Books.