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WHAT ARE THE BEST POLICIES TO REDUCE PUBLIC DEBT? A COMPARATIVE ANALYSIS OF FOUR CASE STUDIES

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Abstract

The financial crisis of 2008 constituted an asymmetrical external shock of tremendous proportions that gravely affected the Eurozone. In the face of a deep recession, the coordinated introduction of expansionist monetary and fiscal policies became imperative. However, the resulting extraordinary increase in public debt raised the alarm about a generalized sovereign debt crisis. Firstly, this thesis aims to assess in what extent and under what conditions have policies succeeded in guaranteeing a sustainable public debt trajectory. In addition, is discussed the relevance of complementary dimensions such as the structural reforms, the role of the counter-cyclical policies and potential impacts that size and composition have on successful adjustments. A comparative analysis of four case studies – Germany, Ireland, Portugal and Sweden – is conducted to evaluate the significance of each dimension in their respective public debt trajectories between 2000 and 2016. We find that, for this group of countries, the most determinant condition for a successful debt stabilization is a favourable growth dynamic followed by the Eurozone's membership. Furthermore, we find that the impacts of welfare state and labour market structural reforms on debt stabilization are quite limited. As for counter-cyclical policies, the adequate approach should comprise consolidations during a boom and expansions during a recession. Although, in the current context of the Eurozone the latter is substantially restricted. Finally, aspects related with the size and composition does not affect the outcome of adjustments directly but only indirectly through changes in economic growth.

Keywords: Public debt; Fiscal Consolidation; Structural Reforms; Counter-cyclical policies;

JEL Classifications:

P16 – Political Economy;

H63 – Debt; Debt Management;

Resumo

A crise financeira de 2008 constituiu um choque assimétrico de grandes dimensões que afetou severamente a Zona Euro. Perante uma recessão profunda, a introdução coordenada de políticas monetárias e fiscais expansionistas tornou-se indispensável. Contudo, a escalada de dívida pública que daí adveio fez crescer o receio de uma crise soberana generalizada. O principal objetivo desta Tese passa por avaliar em que extensão e sob que condições houve políticas bem-sucedidas na estabilização da dívida. Para além disso, é discutida a relevância de dimensões complementares como é o caso das reformas estruturais, o papel das políticas anti cíclicas e o potencial impacto da dimensão e composição no sucesso dos ajustamentos. Nesse sentido, é desenvolvida uma análise comparativa entre quatro casos de estudo – Alemanha, Irlanda, Portugal e Suécia – para avaliar a importância que cada dimensão teve nas respetivas trajetórias de dívida entre 2000 e 2016. Para este grupo de países concluímos que a condição mais determinante para uma estabilização bem-sucedida é uma dinâmica de crescimento favorável, seguida da afiliação na Zona Euro. Por outro lado, os impactos resultantes das reformas do estado social e do mercado de trabalho parecem ter sido bastante limitados. Em relação às políticas anti cíclicas, as políticas de consolidação devem ser aplicadas nos períodos de crescimento e as expansionistas nos períodos de recessão. No entanto, esta última opção encontra-se amplamente restringida no contexto atual da Zona Euro. Por fim, a dimensão e composição parece não ter influência direta no resulto dos ajustamentos, mas somente indireta por provocar alterações no crescimento económico.

Palavras-chave: Dívida pública; Consolidação orçamental; Reformas estruturais; Políticas anti cíclicas;

Classificação do JEL:

P16 – Economia Política;

H63 – Dívida; Gestão da Dívida;

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1. INTRODUCTION

In recent years, active concerns regarding public debt sustainability have been raised in the aftermath of the 2008 financial crisis. This particular event was triggered by a meltdown in the American subprime real-estate during the precedent year. As banks and other financial institutions balance sheets began to worsen, putting even the most emblematic ones at the verge of collapse, a generalized panic dominated the international financial markets and generated a sudden credit contraction. Soon, what started out as a crisis circumscribed at the financial level, would turn into a global Great Recession with severe consequences on economic, social and political grounds.

As expected, an event like this amplified a lengthy debate on the causes that brought us here and the most adequate response to the crisis. In a first instance, that response consisted on a robust public intervention of Keynesian nature through coordinated monetary and fiscal stimulus together with the rescue of some banks and other financial institutions, in order to mitigate the loss of confidence in the market (Konzelmann, 2014). Nonetheless, these actions contributed immensely to a rapid surge in public debt, particularly in the Eurozone. Consequently, the focus of the debate both on political and theoretical spectrum has changed from the private sector stability to the potential risks of unsustainable public debt and ideas of austerity based on neoclassical orthodoxy began to remerge (Skidelsky & Fraccaroli, 2017).

The eruption of the Greek sovereign debt crisis in 2010, sparking fears of contagion among its peers, motivated a shift in the Eurozone policy with the roll-back of the major stimulus measures and the introduction of harsh consolidation efforts. This time, it was the improvement of the fiscal balance that was regarded as the fundamental strategy to restore confidence in the private sector, to promote economic recovery and the Eurozone stability (Caldas, 2013).

Presently, several years forward, it is time for a reassessment. The main purpose of this thesis is to cast some light on what extent fiscal consolidations succeeded and, if they did, identify the necessary conditions to guarantee that positive outcome. Furthermore, the relevance of complementary policies such as the structural reforms, the role of the counter-cyclical policies as well as the potential impacts that size and composition have on successful adjustments will be discussed. With that in mind, a comparative analysis between four European countries over the last two decades will be undertaken.

The other parts of the thesis are structured in four sections. Section 2 focus on the literature review concerning the discussion on the theoretical underpinnings of austerity and alternative perspectives to overcome it. Section 3 firstly introduces the case studies, dimensions and indicators related to the research strategy and then it presents a thorough description of the case study analysis specifically for each dimension. Finally, Section 4 copes with the discussion and final conclusions.

2. LITERATURE REVIEW

The financial crisis of 2008 caused a striking and unexpected surge in sovereign debt, most remarkably in the members of the European monetary union. In that specific context, the idea of austerity began to re-emerge in the academic and political spectrum pointed by many as the reasonable approach to restore agent's confidence and economic growth. Just as the discussions surrounding it, the definition of austerity is not straightforward and exempt from controversy. For some authors like, Skidelsy & Fraccaroli (2017), it can be described merely as a public deficit reduction. Even though, according to Blyth (2013), it should be regarded as a "voluntary deflation" through the adjustment in wages, prices and public expenditure to improve competitiveness.

As a consequence, this particular event triggered the resurgence of a debate on the role of economic policies markedly influenced by macroeconomic considerations. In such manner, the present chapter (sections 2.1 and 2.2) will cover the dispute between the proponents of austerity policies, supporting fiscal consolidation and structural reforms as a fundamental strategy to achieve economic growth and stability, and some of the critiques in the literature emphasizing the contractionary effects of austerity, the relevance of anti-cyclical policies and the institutional aspects related with the functioning of markets and governance. The main purpose of this appraisal is to discuss the underpinnings, diagnosis and measures related to the current economic, social and political crisis with a special focus on public debt sustainability.

For both of these sections the same text structure will be followed. First, it will be depicted the different diagnosis available in the literature by the same challenges in the face of a sovereign debt crisis. Then, it will be introduced the theoretical framework and motives followed by a brief review of the approaches proposed.

2.1– The Theoretical Underpinnings of Austerity

In recent years, right after the financial crisis of 2008, the vast majority of governments followed both an expansionary monetary and fiscal policy, including the rescue of some banks and financial institutions, causing a significant increase in public debt. Nevertheless, in 2010, with the threat of default in Greece, the European leaders decided to change this strategy completely (Krugman, 2012). This sudden shift was supported by the academic literature stating that fiscal consolidation could be expansionary as it was discussed by authors like Alesina (2010) and, on the other hand, if public debt surpassed a given threshold the economy would stagnate as it was presented in the paper of Reinhart & Rogoff (2010). A further rationale in defence of austerity policies was the theory that sustained that the Eurozone crisis resulted from divergent competitiveness trends between core and peripheral members. For such proponents, including the European policymakers, competitiveness should be determined strictly taking into consideration evolution of wages with respect to productivity or, in other words, the unit labour costs (Bourgeot, 2013; Müller, Schulten, & Zuckerstätter, 2015).

Hence, the introduction of austerity packages comprising strategies of internal devaluation and neo-liberal structural reforms revived the debate, not only with Keynesian school, but also among authors who argue in their favour. Indeed, while authors like Alesina (2010) or Alesina & Ardagna (1998), presented strong evidence of expansionary fiscal consolidations even in the short run, others like Hellwig & Neumann (1987) or Almeida et al. (2011) claimed that fiscal consolidation may have negative impacts in the short-run due to the contraction of aggregate demand, although, in the long-run a lower government debt will improve expectations, increasing consumption, investment, exports and economic growth. To this extent, the last group of authors have merged the ideas of Keynesian and Neoclassical school, underlining the relation between a direct contractionary effect on demand with an indirect expansionary effect on expectations.

Despite the differences amongst austerity proponents, they tend to converge in the same diagnosis which can be summarized by the following statement of F. Hayek during the Great Depression of the 1930s: "…many of the troubles of the world at the present time are due to imprudent borrowing and spending on the part of public authorities" (Gregory et. al 1932).

In what concerns the theoretical framework and motives, austerity programmes are grounded on a supply-approach to the economy. Notably, following the idea that unemployment is strictly voluntary and it results from imperfections in the labour market created by the state and trade union intervention and, therefore, that there is no relation between the lack of effective demand and unemployment. Any strategy followed by the government to decrease unemployment bellow this natural level will increase either inflation or the unemployment in another specific branch of the economy (Friedman, 1977). In accordance with this perspective, the main factors responsible for the maintenance of a certain natural level of unemployment are the low skills and the excessive welfare benefits undermining the activation of the unemployed.

Finally, there are two renowned hypothesis that complete the theoretical framework and motives of austerity: Ricardian equivalence and expansionary fiscal consolidation.

The main assumptions behind the former are that consumers are forward looking, rational, making their consumption decisions internalizing the government budget constraint. Therefore, for a given pattern of government spending, it is indifferent to them which kind of financing method is used (taxes or debt-financed government spending) because it doesn't affect their decisions, as Ricardo (1821) had previously concluded. Following this reasoning, it can be argued, on one hand, that government spending doesn't change aggregate demand and, on the other, the competition between public and private investment will increase the interest rates, leading into a crowding out effect from the private sector (Konzelmann, 2014).

In regard to the expansionist fiscal consolidation, several studies were developed involving OECD countries, in which authors have drawn strong evidence of several expansionary fiscal consolidations even in the short run (Alesina, 2010; Alesina & Ardagna, 1998, 2010, 2013, Alesina & Perotti, 1995, 1997; Giavazzi & Pagano, 1990).

In their point of view, fiscal adjustments can have notable positive impacts both on the demand and the supply side. As pointed out by Alesina & Ardagna (1998, 2010), there are two channels that can affect economy on the demand side: wealth effects on consumption and credibility effects on interest rates.

With respect to the first channel, if households and firms perceive a strong and permanent commitment by the government to cut public spending, they will expect a reduction in future tax burden that will increase their lifetime disposable income. This idea of an increase in private consumption originated by a cut in public spending is contradictory with respect to the Keynesian view (Alesina & Ardagna, 1998, 2010). The same reasoning can be applied in the case of a tax increase sufficiently strong to convince the consumers that, in the future, the fiscal structure will drastically change and larger tax increases will not be necessary. As shown by Perotti (1999), this expansionary wealth effect on consumption is expected to be stronger during "bad times" in periods in which the levels of debt/GDP are high and/or rapidly growing.

As for the second channel, the chances to occur are, once again, when a strong and permanent debt reduction commitment is credible enough to assure a sustainable financing process through the reduction of interest rates (Alesina & Ardagna, 1998, 2010).

When it comes to the supply side issue, Alesina & Perotti (1997) stressed the eventual positive effects on competitiveness that can be rather modest at the individual level but quite relevant in unionized markets – the predominant type of market in the OECD countries. Moreover, the amplitude of this effect is dependent on the structure of labour markets or, in other words, in the capability that unions might have or not, to impose their wage demands in a way that would increase the unit labour costs (Alesina & Ardagna, 1998).

Throughout the literature, there are some additional compelling questions regarding expansionary fiscal consolidations. First of all, studies have been conducted to evaluate if a sustainable and long-lasting adjustment is directly linked to its composition. Several authors showed that this linkage actually exists, arguing that fiscal adjustments on the expenditure side composed by reductions in social security, public wages and employment benefits, are the ones with higher probability of success and are less like to produce recessions, when comparing to fiscal adjustments that rely essentially on tax increases (Alesina, 2010; Alesina & Ardagna, 2010; Alesina, Favero, & Giavazzi, 2015; Alesina & Perotti, 1995, 1997; Almeida, Castro, Félix, & Maria, 2011).

Secondly, it is important to verify which fiscal adjustments are contractionary and which are expansionary, though the answers in this case are much more debatable. On this matter, there are various open discussions on what are the most fundamental determinants such as, size and composition of the adjustment, initial debt level during the adjustment, currency devaluations or the structure of labour markets and others (Alesina & Ardagna, 1998).

Furthermore, supporters of austerity policies such as Alesina & Ardagna (2013) suggest the implementation of policies that are growth-friendly, for instance, labour and goods market liberalization through structural reforms, which can mitigate the minor downturns that might result from a fiscal adjustment.

In that respect, Varga & in't Veld (2014), weighed on the potential growth impact of different structural reforms in the EU such as: market competition and regulation, tax reform, unemployment benefit reform, human capital investment, R & D investment and other labour market reforms. The authors advocate that structural reforms can have a positive impact on growth and employment, with an increase of 6% of GDP in the Eurozone after ten years. In their view, the labour market reforms are the ones that guarantee the largest output effects followed by tax reforms and reforms that raise competition in product markets (Varga & in't Veld, 2014).

For the specific case of Portugal, Blanchard (2007) shed some light on what could be the measures of last resort in a country with such an adverse economic environment: "low growth, low productivity growth, high unemployment, large fiscal and current account deficits". In the author's opinion, Portugal should implement structural reforms that will grant considerable productivity gains, nevertheless, this strategy will only have meaningful results in the long-run. As a result, the author suggests an internal devaluation through the decrease in nominal wages in order to promote competitiveness. In order to mitigate the massive unemployment resulting from the adjustment an expansionist fiscal policy within the existing limitations should be pursued.

To sum up, the body of literature presented in this section argues that fiscal commitment is the most crucial instrument and it can be implemented by the policymakers either as a preventive measure or as a remedy for the crisis. Therefore, the solutions proposed include long-lasting cuts in public spending, tax increases, wage reduction through an internal devaluation or preferably through an exchange rate devaluation, markets deregulation and privatization of public enterprises in conjunction with growth-friendly structural reforms.

2.2– Overcoming Austerity: Alternative Perspectives to Explain Economic Imbalances

In what concerns the diagnosis and identification of problems, it was possible to discern three major analytical themes presented in the austerity's critique. At the intellectual level, in these authors' view, there was a clear disregard for pertinent dissenting theories in the literature, such as the OCA theory and, at the same time, the adoption of misleading conceptions, namely the assumptions on perfect adjustment in all markets or rational agents, based on the new classical paradigms. And lastly, there were also some insufficiencies at the institutional and political level that have been studied and discussed with particular prevalence during the past years.

With respect to the theoretical framework, both the counter-cyclical polices and the analysis carried out by those who support them were markedly influenced by the unconventional works of Keynes (1936), Minsky (1957) or Kalecki (1933). The existence of an inherent instability in capitalism due to uncertainty, expectations, speculation and animal spirits is one of the recurring themes shared in these works. For that reason, the state's intervention and regulation are crucial to maintain stability throughout the business cycle.

One of the most remarkable conceptions provided by the Keynesian theory is that effective demand is the key determinant in the economy and subsequently with a heavy influence on unemployment – which, according to Keynes (1936), should be categorized not only as voluntary but also as involuntary. Therefore, the government should increase public spending during a recession to reactivate all different types of resources, including human capital, to lessen the potential negative impacts on the economy. In his view, austerity should be implemented during a boom, instead, as a means to avoid a potential financial collapse or an unsustainable increase in inflation (Boyer, 2013; Konzelmann, 2014).

In a clear disagreement with the neoclassical school, Keynes (1936) also contended that full employment could only be reached through government intervention, since there is no self-balanced mechanism in the free markets to achieve it. Despite this broad consensus among these authors on the government's commitment, some dissonant views came up, especially on how to optimize the fiscal policy across the busyness-cycle. Some authors, such as Keynes (1936), asserted that the budget should be balanced throughout the cycle or, in other words, the deficits in a recession should be equivalent to the surpluses in a boom. Meanwhile, other authors including Kalecki (1943), advocated that to preserve full employment through the whole cycle, a permanent budget deficit is compulsory (Konzelmann, 2014).

Economics and the "real world"

The peculiar circumstances that the Eurozone is facing after the sovereign debt crisis is a concrete example of this interconnection of factors in the theoretical, institutional and political plans. In recent years, ample concerns about the stability and viability of the monetary union have been raised. As it was mentioned by some authors, this results from unsettled issues that date back to its formation (De Grauwe, 2013; Fingleton, Garretsen, & Martin, 2014; Krugman, 1993).

First of all, the creation of the European monetary union was mostly driven by political interests, without any regard for its subjacent economic aspects raised by theoretical perspectives. Particularly, the optimal currency areas (OCA)[1] developed from the work of Mundell (1961), imposes a set of necessary conditions to ensure a welfare improving monetary union for all members. There was a broad range of authors stating (some before the Eurozone formation) that the first two conditions of the OCA would be verified only by some and not by all its members. In addition, since it was still quite far from a budgetary union it could not be

[1] The conditions analysed in the OCA theory were the following (De Grauwe, 2013):

- "Countries or regions should not be subjected to divergent economic trends they find difficult to adjust to";
- "Countries or regions should have sufficient amount of flexibility in their labour and goods markets, including labour mobility";
- "The monetary union should be embedded in a budgetary union".

The first condition is rooted on the assumption that the monetary union should be largely homogeneous. On its turn, the second condition covers the main aspects that can affect the costs and intensity of meaningful adjustments such as an internal devaluation. And finally, the third condition was created to assure the transferring of income from members facing a good period to a member that was hit by a negative shock (De Grauwe, 2013; Fingleton, Garretsen, & Martin, 2014).

treated as an optimal currency area (Bayoumi, Eichengreen, & von Hagen, 1997; Bayoumi & Prasad, 1997; Boyer, 2013; De Grauwe, 2013).

As outlined in this brief discussion on the OCA theory as an example of a dissenting theory that was disregarded, the second analytical theme approaches some possible critiques on the conceptions in the theoretical framework of austerity policies.

Once again, considering the case of the Eurozone, during the period of its discussion and design the Keynesian school was losing relevance and, as a result, the euro's foundation is mostly embedded in the new classical macroeconomics paradigm of the RBC models and later the DSGE models. Their main assumptions include the perfect adjustment of all markets and that the business cycles are described as a pure Walrasian economy hit by exogenous shocks (Boyer, 2013).

Furthermore, Boyer (2013) alerts to the substantial disparity between the hypothesis presented in those models and the current characteristics of the euro. For instance, the assumption that money is neutral in the long term as it is exogenously created by central banks following a price stability policy, has consequently, no influence in the creation of bubbles. Although in fact, there is an endogenous money creation through bank credit, as it was possible to observe with the break of 2008 financial crisis, money is not neutral as Keynes (1936) and Minsky (1957) had predicted. Another misrepresentation is related with the hypothesis of a full employment equilibrium, where unemployment is purely voluntary considering that prices and wages are fully flexible. However, throughout history, massive and long term involuntary unemployment has been witnessed, especially after the crisis of 2008 (Boyer, 2013).

There are also some authors voicing a strong critique on the Ricardian equivalence, a new classical theory that is one of the main assumptions in the theoretical framework of austerity. To Boyer (2013), this assumption is not representative of the vast majority of the European economies, since it implies that policy makers are incapable of influencing activity levels. So, it has been recently replaced in new studies by a more precise premise of non-Ricardian households. On the other hand, the crowding-out effect was contradicted by the austerity policies enacted recently in the Eurozone which had only a negative impact on demand.

With regard to the possibility of an expansionary fiscal consolidation, there are several authors in the literature asserting that, indeed, there are fully demonstrated examples of economic expansion after a consolidation period but they occurred under a particular set of conditions. A decisive plea on this matter was made by Perotti (2011), in which he presented four country-cases that had already been studied by himself and Alberto Alesina. One of the main purposes of this paper was to analyse the specific conditions that existed during those successful cases of expansionary fiscal consolidations. He concluded that:

- Spending cuts were not as relevant as it was supposed before;
- For Ireland, Finland and Sweden exports were the main driver of initial growth;
- Those countries relied on own currency devaluations at the time;
- In the four cases analysed, there was a significant decrease of the interest rates from very high levels.

Another group of researchers, such as Guajardo et.al (2014), Yang, Fidrmuc & Ghosh (2015), and Kataryniuk & Vallés (2015), using different approaches to study recent consolidation episodes in OECD countries, found no evidence of expansionary fiscal consolidations even in the short term.

These major arguments support some scepticism about the applicability of austerity policy considering the current circumstances in the world's economy. Specifically, in the Eurozone countries where own currency depreciation is not an option, the interest rates are already too low to suffer a significant reduction and expansions through exports are not possible for every country (Jayadev & Konczal, 2010; Krugman, 2012; Perotti, 2011).

Institutions matter

On the political spectrum, there was a consensus that the European Institutions had the necessary instruments to secure an adequate and sustainable conduction of the monetary union, with a tendency of convergence between the northern and southern countries towards a stationary state. And, for that reason, there was no need to expand the level of political unification even in the presence of heterogeneity.

One of these instruments was labour market flexibilization, through the application of structural reforms as a standard procedure to deal with asymmetric shocks, since there was a strong belief that countries with higher labour flexibility were better prepared to support those movements (De Grauwe, 2013).

When it comes to structural reforms, those specially designed for the labour markets were the ones most frequently used by policy makers to manage the current crisis. On this matter, there is also a strong and distinct criticism in the literature. Some authors, such as Adascalitei & Morano (2016), through the study of 111 developing and developed countries between 2008 and 2014, advocate that reforms which tend to decrease the levels of labour market regulation can have negative impacts on employment, in the short-term, especially in developed countries but also in developing ones. Other authors, including Presidente (2015), after extensive examination of labour market reforms in the Eurozone between 1970 and 2003, asserted that they "had only a limited impact on the volatility of output, inflation and unemployment". This conclusion contradicts the theories suggesting that high and persistent unemployment is predominantly a repercussion of excessive regulation.

Another important instrument available is the Stability and Growth Pact, created to restrict government deficit at 3% and public debt below 60%, has been frequently breached in the pre-crisis period. In addition, it has been criticized due to the omission of other influent macroeconomic tendencies such as the competitiveness adjustments or excessive credit flows and the criteria should be adjustable to cyclical economic fluctuations (Baldwin et al., 2015; Boyer, 2013).

After financial crisis of 2008 it seemed quite clear that these generic instruments became ineffective in the presence of an asymmetric shock of that magnitude. Besides, it is important to mention that countries entering the Eurozone were not conveniently informed about the risks associated with the loss of three crucial policies of national reach: the control of exchange rates; monetary policy coincident with national needs; the capacity to issue debt in their own currency (Boyer, 2013; De Grauwe, 2013).

Moreover, the European political leaders hastily claimed that the sovereign debt crisis resulted from government's profligacy, particularly from southern countries. But, as it is possible to see in the following figures, during the pre-crisis period, public debt in the Eurozone was slightly decreasing while the private debt of households, corporations and banks increased substantially (Baldwin et al., 2015; De Grauwe, 2013).

Thus, with the exception of Greece, the debt problems in the Eurozone were created by private debt accumulation and not by the public sector and this misinterpretation surrounding the real roots of the crisis constitutes another institutional failure (see Figure 1 and Figure 2)

To the same extent, the countries most effected by the crisis were not those with highest debt-to-GDP ratios – once again with the exception of Greece - but those who were running larger current account deficits, resulting from capital flows between "core-nation banks" and "periphery-nation borrowers" in the Eurozone (Baldwin et al., 2015).

Figure 1 – Households and government liabilities in Eurozone during the period before the crisis.

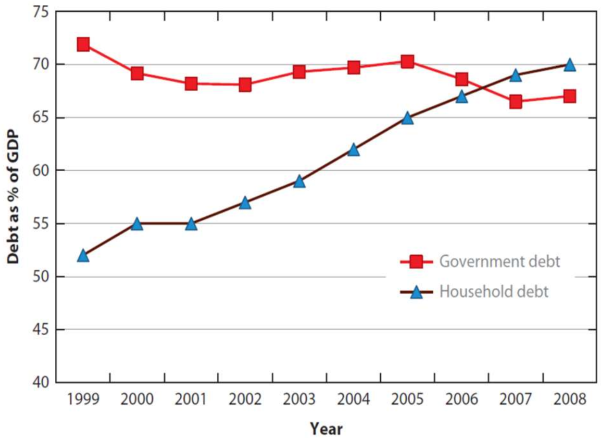
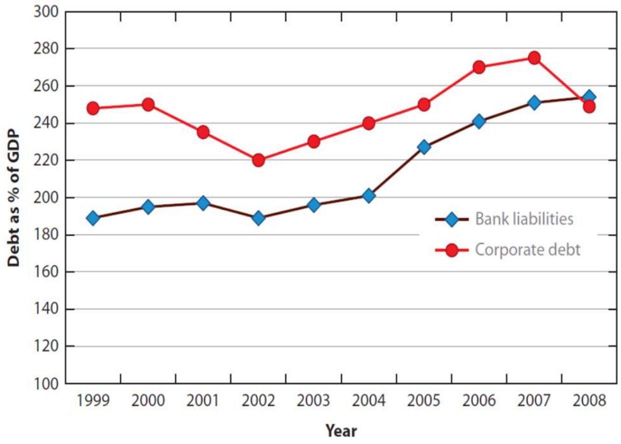


Figure 2 – Banks and corporate liabilities in Eurozone during the period before the crisis.



Source: European Commission, AMECO and CEPS (De Grauwe 2013, 9,10)

In sum, the academic literature presented here emphasizes the conviction that there's no strong evidence that the current crisis in the Eurozone was related with errors committed by governments, namely the Eurozone members that suffered the highest public increase after 2008 (peripheral countries). On the contrary, the main responsibility is to be taken by the European political leaders who "failed to make the correct diagnosis and continue to be ignorant about the fragility of the Eurozone" and because their response through austerity policies and structural reforms didn't have a positive outcome, on the contrary, this only deepened the recession (De Grauwe, 2013).

3. METHODOLOGY

3.1 – Data selection and Strategy

From what was exposed in the previous chapter, it was possible to acknowledge that some questions raised and assumptions made were clearly more debatable than others. For instance, the assumptions of money exogeneity, perfect adjustment in all markets and the voluntary unemployment of the neoclassical school have been consistently dismissed in the literature. While other pressing issues regarding the arguments, concerns and underpinnings on the conditions under which consolidations have succeeded, presented both by austerity supporters and authors defending alternative perspectives, are still open to discussion. For that reason, the present chapter will be systematized taking into consideration the following one main research question and three secondary ones:

- In what extent and under what conditions have policies succeeded in guaranteeing a sustainable public debt trajectory?
  - What is the role of structural reforms?
  - What is the role of counter-cyclical policies?
  - What is the role played by size and composition on a fiscal consolidation?

In this regard, the analysis will be centred on four case studies comprising the following European countries: Germany, Ireland, Portugal and Sweden. This includes a thorough description of the countries' distinct trajectories between 2000 and 2015-16. In light of the unusual severe consequences from such a traumatic event as the financial crisis of 2008, the study period will be subdivided in two spans of time, one before and other after the crisis. The use of individual case studies allows a more comprehensive examination of the countries involved in comparison with other prevailing methods, on account of contextual factors including country-specific changes in legislation which usually tend to be undervalued with respect to major economic variables generating inaccurate results.

These four countries were selected for three orders of reasons:

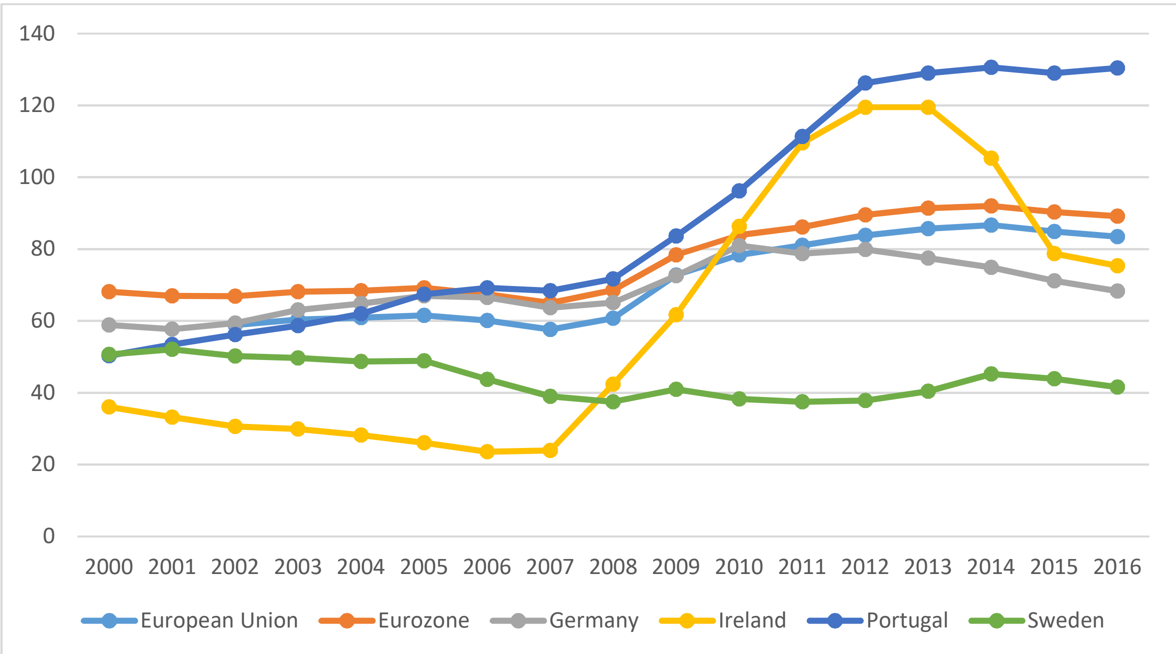
- They displayed different public debt trajectories between 2000 and 2015/16;
- They belong to different welfare and production regimes (Esping-Andersen, 1990; Hall & Soskice, 2001);
- Some countries belong to the Eurozone (Portugal, Ireland and Germany) and others not (Sweden).

As for the data on public debt depicted in Figure 3, Ireland and Sweden represent successful stories because they both reduced public debt ratios between 2000 and 2008, while Portugal and Germany have experienced a gradual increase in the same period. Although, the increase of debt is a common characteristic of capitalist economies, in Portugal and Germany the debt ratio has risen above the 60% of Maastricht limit. At a glance, it might be argued that the increase of debt is not a particular problem of Southern European peripheral countries. Therefore, the inclusion of Germany in this group is extremely important.

In the run-up of the 2007-2008 crisis, countries like Ireland and Portugal that were under structural adjustment programs, showed a quite shocking increase of current account deficits and public debt. However, in the case of Ireland, there has been an outstanding performance in debt reduction in the last years. Conversely, Germany seems to have managed better its debt trajectory despite the previous violation of the 60% Maastricht limit.

The same happened with Sweden, where the crisis does not seem to have produced any effect on public debt. Unlike the others, Sweden is not a member of the Eurozone and, consequently, it can rely on an external devaluation through its own currency, which is traditionally a much more effective and less harmful alternative than an internal devaluation, when in the presence of a surge in the current account deficit (Caldas, 2015; Krugman, 2012). Hence, the inclusion of Sweden to ascertain if the eurozone's membership is critical to explain de rise/decline of public debt ratios.

Figure 3 – Government Consolidated Gross Debt (% of GDP)



Source: Eurostat Database (2017).

As expected from Figure 3, countries in the Eurozone displayed an average public debt always higher than the average of the European union.

To complement the information Table 1 provides a brief summary of the tendencies here discussed.

Table 1 – Public debt trends during the period of observation.

Case Studies	Public Debt (% of GDP)	
	Pre-crisis Period (2000-2008)	**After-crisis Period (2008-16)**
Germany	slight increase followed by stabilization after 2005	significant decrease after 2010
Ireland*	significant decrease	substantial increase followed by a strong decrease after 2012
Portugal	slight increase followed by stabilization after 2005	substantial increase followed by stabilization after 2012
Sweden	significant decrease	roughly stabilized

*Ireland's felt the effects of the crisis 1 year before than its peers.

In the scope of the Varieties of Capitalism literature Sweden and Germany belong to the Coordinated Market Economies model, while Portugal belongs to the Mixed Market Economies model and Ireland to the Liberal Market Economies model (Hall & Soskice, 2001; Molina & Rhodes, 2007). As for the typology developed by Esping-Andersen, Sweden belongs to the Social-Democratic regime, Germany and Portugal to the Conservative regime, and Ireland to the liberal regime (Esping-Andersen, 1990).

3.1.1 – Dimensions

By comparing these four countries, the present study aims to identify the main drivers of different public debt trajectories. Three different dimensions will be analysed:

- The role of structural reforms (namely welfare and labour market reforms);
- The role of counter-cyclical policies;
- The size and composition of fiscal consolidations.

First and foremost, the research on the role of structural reforms will be fundamental part of this methodology's strategy. Throughout the literature, there are many open discussions on how these specific policies may affect significantly - both positively and negatively - the outcome of a fiscal consolidation or, on the contrary, if they presumably play a minor part. The prevailing idea is that pro-market structural reforms aimed at liberalization and flexibilization can be growth-friendly and, as a consequence, have a positive contribution in the consolidation of public debt, especially in the current context, where both fiscal and monetary macroeconomic tools are quite constrained in some countries. Other relevant questions discussed in the literature will be enclosed, such as, the content of these reforms, namely if their design should be country-specific or one-size-fits-all, and when is the right time to implement them along the business cycle (Aida, Serres, & Yashiro, 2016).

Considering the encompassing scope of this subject, the analysis will focus on welfare state and labour market policies since they are unarguably the sort of structural reforms that can most decisively influence economic growth, employment and public debt. Those include: market competition and regulation both on labour and product, active labour market policies, skills development and R&D investment, labour market participation, taxes and transfer systems (Aida et al., 2016).

Secondly, the role of the counter-cyclical policies will also be examined, a debate that was carefully depicted in the literature review. Here, in order to reach concrete results, a conventional approach will be conducted, using the change in the cyclically-adjusted primary balance (CAPB). In theory, this estimator provides an improved computation of the fiscal stance – since it removes some endogenous components on spending and revenues – and has been abundantly used in the past by studies on fiscal consolidation. Nonetheless, this method has been continuously criticised in particular with respect to endogeneity issues, namely the fluctuations that this variable might display due to non-policy factors influencing output (Carnot & Castro, 2015; Guajardo, Leigh, & Pescaroti, 2014). One typical example concerns the improvement of the CAPB due to a boom in the stock market. Indeed, an event like that, might potentially generate additional gains in capital, tax returns, private consumption and investment, which can lead to an underestimation of the contractionary effects during a fiscal consolidation (Guajardo et al., 2014).

An alternative method would be the narrative approach through the examination of historical documents, in order to determine changes in fiscal policy and check whether they were a direct response to economic developments or not (Carnot & Castro, 2015; Guajardo et al., 2014). Albeit, this approach has also some limitations notably from a practical point of view. For example, it depends heavily on the quality of the information collected and, quite often, there are inconsistency issues between the policies expressed in the budget documents and those actually implemented (Carnot & Castro, 2015).

To minimize these drawbacks, Carnot & Castro (2015) developed a mixed indicator combining elements from the narrative approach on the revenue side with the traditional approach on the expenditure side. That article will be used as a benchmark for the results here obtained using the CAPB.

Finally, the role of the size and composition of the fiscal consolidation will also be scrutinized, which is also a matter vastly debated in the literature. A careful examination of this dimension will allow us to determine if well succeeded and long lasting fiscal consolidations were largely supported by spending cuts or tax increases. This exercise will be based on the consolidation episodes registered by Guajardo et al. (2014) for the pre-crisis period and by Kataryniuk & Vallés (2015) for post-crisis period. Both of these studies were conducted using the narrative approach. The available information will be complemented by several documents with fiscal policy commitments.

3.1.2– Indicators

The main indicators that will be studied are the following:

- Data on public debt, GDP and interest rates:
    - Public debt and deficit in percentage of GDP (initial debt level during the adjustments);
    - Interest rates and risks premiums (10-year government bond yields);
    - GDP;
- Structural reforms:
    - Expenditure on social protection (OECD data on expenditure on social protection by different areas);
    - Labour market reforms (OECD data on labour market legislation);
- Counter-cyclical policies.
- Size and composition of the fiscal consolidation: expenditure decrease vs. tax increases;

Firstly, the data on public debt and deficit is an essential instrument, not only to evaluate which of fiscal consolidation episodes were well succeeded, but also to identify the initial level of public debt during the adjustments. In addition, considering that the ratio of public debt is a composite variable and it is strictly dependent on borrowing costs and on economic growth, the interest rates and GDP were also included.

With regard to structural reforms, data on social spending (% of GDP) was selected, which includes both public and private expenditure targeted at the most vulnerable groups of the society - such as low-income households, the elderly, disabled, etc. In this same subject, another important indicator is the social benefits to households (% of GDP), defined as the public social benefits either in cash or in kind. This means that when a benefit is transferred in cash households are allowed to use it with no restrictions, but when in kind the benefit transferred is confined to a given good or service that may include social protection, education and health. And finally, to complete the data on social expenditure, the evolution of pension spending (% of GDP) is examined, which includes cash transfers to people retired from the labour market.

It is important note that the study of the social protection policies should comprise not only indicators on general expenditure in percentage of GDP, but also indicators capable of assessing the generosity level of the social protection system and the deregulatory tendency on employment protection legislation. This is essential because the former is intimately connected with macroeconomic performance of a given country, while the latter allow us to have a measure on how the system works. This is exclusively policy related and doesn't depend directly on the economic cycles.

Thus, to complement the generic analysis of social expenditure, several comparative indicators were collected from the Comparable Welfare Entitlements Data within the ambit of the social protection policy. They have been aggregated from an extensive list of variables, essentially after post-war period, to produce generosity scores for social programs including unemployment, sickness and pensions, ranging from 0 to 100 where greater figures represent higher levels of generosity. In order to mitigate this restriction, other complementary information was collected from the European Commission labour market reforms database (LABREF database[2])

The employment protection legislation index comprises an extensive list of provisions and it might vary from 0 to 6, with a higher value corresponding to a stricter regulation of employment. Through the evaluation of the difficulties involving the usage of both regular and temporary contracts by the employers, this type of indexes is commonly used as support for policy making and as a first assessment on the degree of flexibility in the labour market among countries. Albeit, some authors including Myant & Brandhuber (2016), have been suggesting the use of these indexes with some reservations due to the numerous limitations in their processes of construction and estimation. For instance, there is a high degree of arbitrariness in

[2] https://webgate.ec.europa.eu/labref/public/index.cfm

the scores selection, there are relevant questions regarding either interpretation of country-specific laws and if they are adequately enforced, or questions regarding the omission of important issues – such as informal collective agreements – that can affect the employment stability but are not contemplated in the national employment legislation.

3.2– Case Study Analysis

This section will outline the process of transformation in which four distinct European countries – Germany, Ireland, Portugal and Sweden – were subjected to in the period between 2000 and 2016. Specifically, the analysis will be focused on what extent have policies succeeded in guaranteeing a sustainable public debt trajectory and, in affirmative case, what were the fundamental conditions for that to happen. This includes a through description for each country on the role played by the three dimensions selected and discussed in the literature: the role of structural reforms, the role of counter-cyclical policies and the size and composition of fiscal consolidations.

3.2.1– Germany

Dimension 1: The role of structural reforms

Despite the adversities faced after the unification of 1990 and at the early 2000s, with an anaemic economic growth and high unemployment, Germany managed to thrive and has emerged as one of most prominent economies in Europe. Recently, this position has been reinforced after the recent great recession, as German businesses, exports and employment flourished in contrast with the vast majority of its European neighbours.

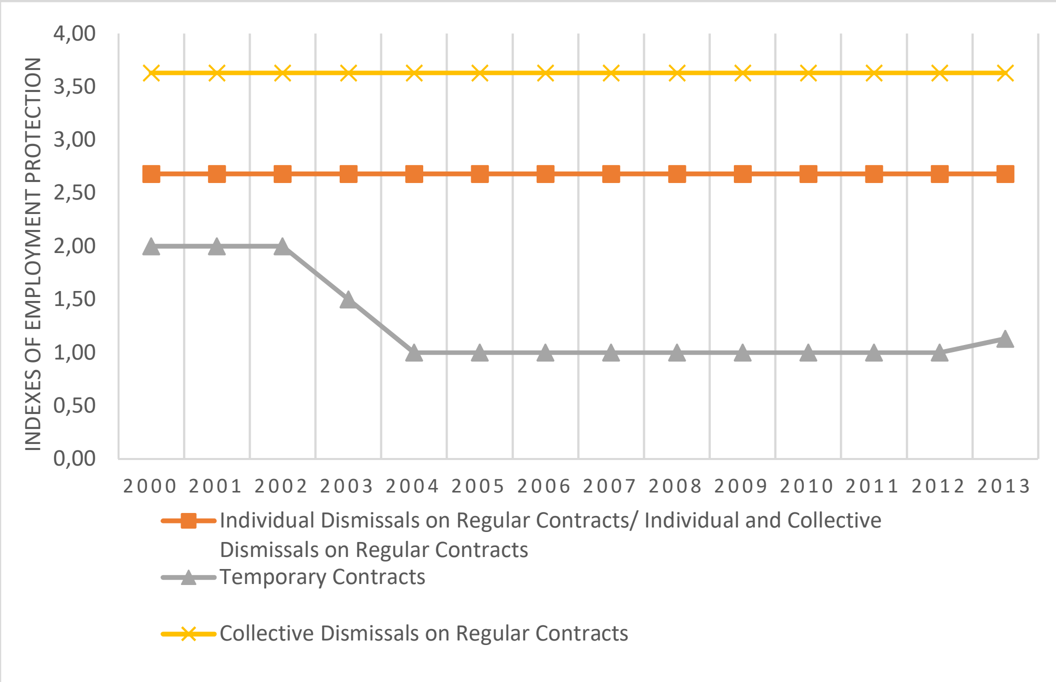
In accordance with some researchers, this profound transfiguration was a direct result of labour market and welfare reforms for further liberalization and flexibilization (Agenda 2010), namely, the so-called Hartz's reforms initiated in 2003, aiming to increase competitiveness regarding low-cost labour market regions and encouraging hiring (Hillebrand, 2015).

Overall the Hartz's recommendations together with the Agenda 2010 comprised the integration of different social welfare benefits into one single allowance, incentives for entrepreneurs to stimulate the creation of new businesses, cuts in unemployment benefits and stricter rules to force the unemployment into seeking and accepting work. These reforms also included measures to hasten the process of reintegration in the labour market (activation), promoting a shift from the standard long term contracts to temporary ones like partial contracts and mini-jobs (Eichhorst & Marx, 2011).

The packages of measures adopted displayed a predominant trend towards flexibilization of atypical contracts at the margin of the labour market, while leaving the regular contracts in the core virtually untouched due to political and/or institutional constraints. Thus, a new distribution of risks and the incentivization of atypical forms of jobs have increased dualization[3] both in wages and security (Eichhorst & Marx, 2011).

As it is possible to notice from the strictness of employment protection indexes (see Figure 4) Germany's protection on both collective and individual dismissal on regular contracts was quite high and remained unchanged between 2000 and 2013. On the other hand, the protection of temporary contracts was already much smaller and has decreased even more since 2004, right after the Hartz's reforms, which is revealing of a deepening tendency in dualization.

Figure 4 – Germany's Strictness of Employment Protection



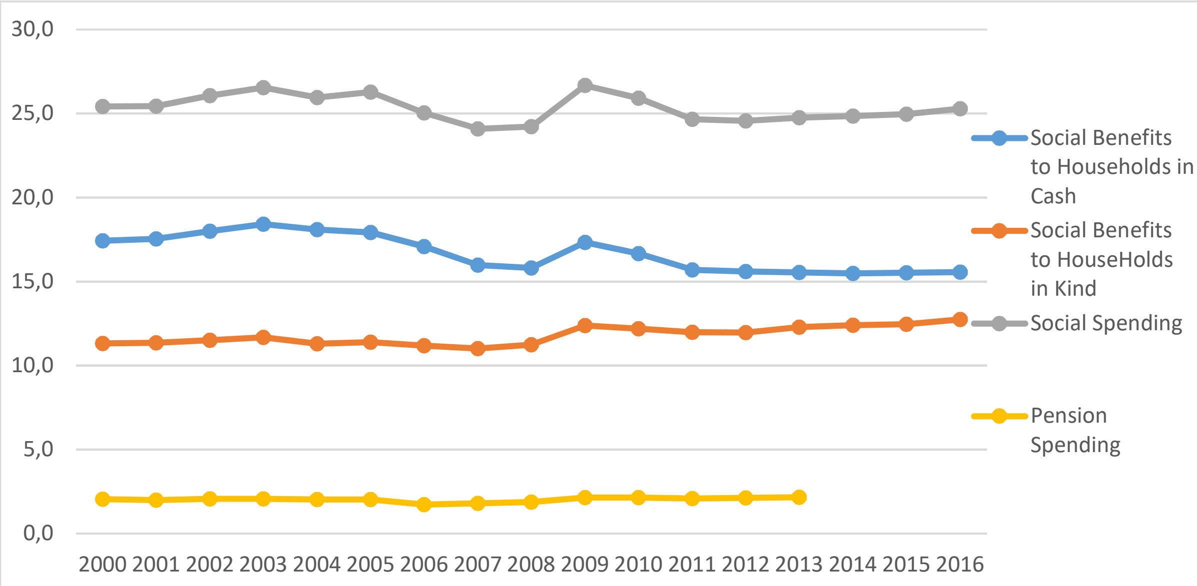
Source: OECD Database (2017), version 1.

Regarding the social protection policy (see Figure 5), the data on social spending (% of GDP) remained stable around 25% with some minor variations, especially during the periods of the Hartz's reforms and the great recession. This same pattern was displayed by the pension spending (% of GDP) but in this case the stabilization reached roughly 2%. When it comes to the benefits to households in cash (% of GDP) it was noticeable a decreasing behaviour once again after 2003, that was briefly interrupted by the beginning of the great recession between

[3] It can be defined, according to Rueda (2007), as the division in employment vulnerability between insiders and outsiders in a given labour market. Hence, it is frequently estimated by the difference between the indexes of protection for regular and temporary contracts.

2008 and 2009. On the other hand, the benefits to households in kind remained stable in the period before the crisis and, on the opposite, have been displaying a slightly increasing behaviour after the great recession.

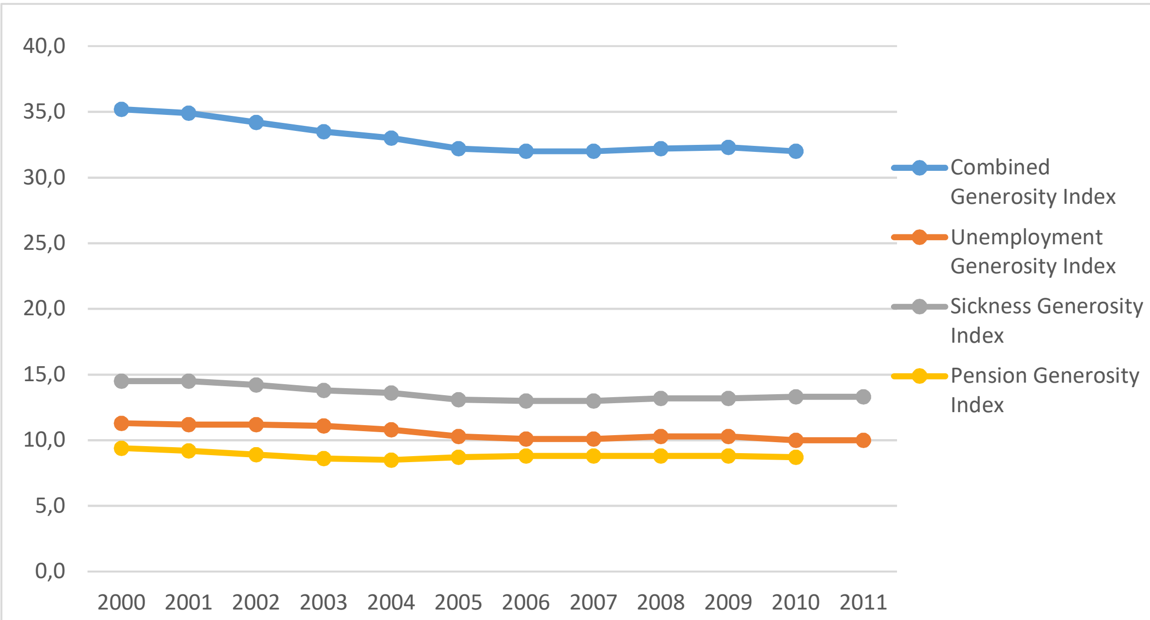
Figure 5 – Germany's Social Benefits Expenditure (% of GDP)



Source: OECD Database (2017).

Furthermore, Germany has been displaying a consistent decreasing trend in the generosity of its social protection system during the available period (see Figure 6). Indeed, all indexes from total, which result from the combination of the others, that is to say, unemployment, sickness and pension generosity have fallen during 2000 and 2010-11.

Figure 6 – Germany's Generosity Indexes



Source: CWED 2 Database (2017).

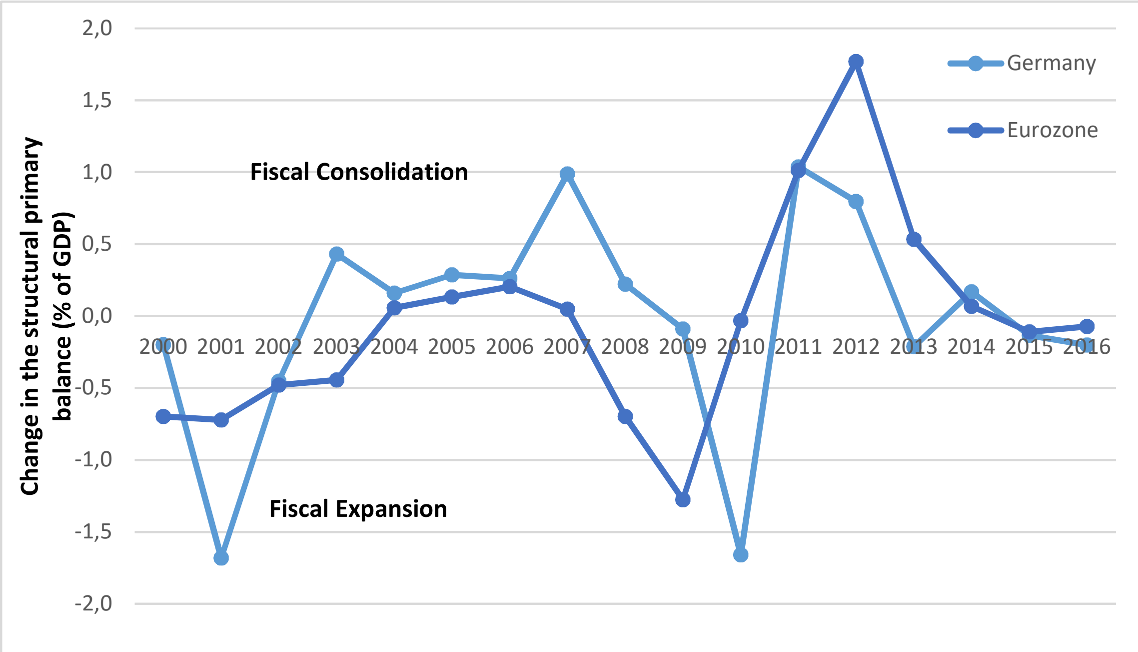
In summary, during the period before the crisis, the Hartz's recommendations together with the Agenda 2010 were responsible for a paradigm shift in German social policy. The labour market registered the same tendency of other European countries, with a realignment of priorities towards activation policies, while the transfer payments were reduced and a greater responsibility was imposed on the unemployed (Hackenberg, 2010). Despite this set of policies were deeply rooted on flexibilization, due too high political and institutional restrictions on regular contracts, only the atypical forms of work were subjected to the reforms. As a result, the protection of regular contracts remained one of the highest in the Eurozone while, for the temporary contracts, it substantially decreased contributing to a dualization soar. Moreover, it was possible to identify a decreasing trend both in social expenditure and generosity of social benefits. The former might have contributed positively to the public debt stabilization observed between 2005 and 2008, after the introduction of the Hartz reforms.

In the after-crisis period, in 2009 and 2010, measures to stimulate domestic aggregate demand and improve competitiveness were adopted, such as, the reduction of contributions to public health and unemployment insurance. In the face of the crisis, there was also an expansion of the social policy, with an increase in certain benefits, an extension of maximum duration and coverage to groups that were previously excluded. The data on social benefits reflects this quite accurately. There's a strong increase in expenditure and also in generosity but in a much lesser extent. Regardless of this new expansionist stance, the previous propensity towards short-time work remained unchanged with the application of larger entitlement periods for this kind of contracts (LABREF database). In 2010, most of these policies were reversed as austerity packages were introduced, including cuts in parenting and housing allowances, welfare cuts, and tighter restriction on the short-time work allowance (Böttcher & Deutsch, 2010). The data on public debt evolved accordingly, with a significant increase until 2010 where the highest peak of 86.3% was reached, followed by a reversion as soon as the effects of the economic recovery started to prevail.

Dimension 2: The role of counter-cyclical policies

Germany entered the new millennium with a roughly neutral fiscal policy (see Figure 7 and Figure 8). However, in the face of the early 2000s recession, it was noticeable a significant pro-cyclical fiscal expansion that lasted two years and resulted in a modest increase in public debt until 2003. Soon after, between 2003 until 2008, there was a long consolidation process, that began by being pro-cyclical and turned into counter-cyclical as the early 2000s recession faded out and the economy recovered. It seems that this counter-cyclical restrictive policy might have contributed to Germany's successful public debt stabilization between 2005 and 2008.

Figure 7 – Germany's Fiscal Stance

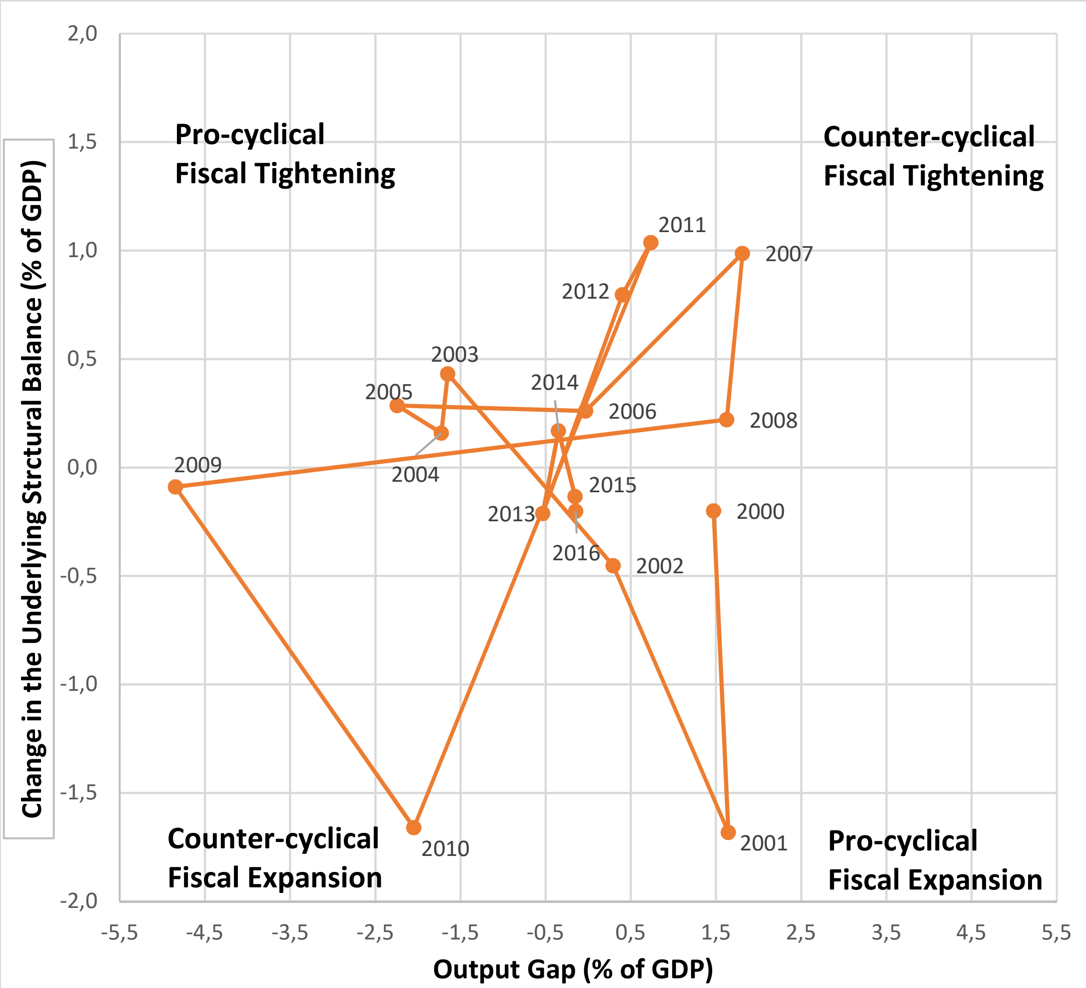


Source: OECD and author's calculations.

Subsequently, the 2009-10 period, reflects a counter-cyclical fiscal loosening as several stimulus measures supported the Eurozone policy makers were substantiated. With particular reference to an increase in public-sector investment by 20 bn €, the financial market stabilization acts, and a diversity of tax cuts to promote growth (Böttcher & Deutsch, 2010). In 2010, Germany witnesses a fiscal expansion of around 1.7% of GDP and the same magnitude of 2001 was reached. As a result, the economy moved away from a contraction of -5.6% in 2009, the highest of the countries here analysed, to a generous economic growth of 4.1% in 2010.

Later, there was a sudden shift from this counter-cyclical expansion to a strong counter-cyclical consolidation which lasted until 2013, in result of a comprehensive set of policies that euro area members enacted to manage the debt solvency problems. These included cuts in government expenditure of roughly 13.4 bn €, welfare cuts as well as a reduction in subsidies and tax hikes for companies (Böttcher & Deutsch, 2010). That induced a hefty reduction in economic growth, specifically to 0.5% in 2012 and 2013. At the same time public debt, that was subjected to strong increase between 2008 and 2010, stabilized and began its descending trajectory after 2010, two years earlier than Ireland and Portugal. From 2012 onwards, the fiscal stance in Germany has been mostly neutral.

Figure 8 – Germany's Fiscal Policy



Source: OECD (2017), AMECO (2017) and author's calculations.

Comparing the results obtained here using the CAPB and the mixed estimator presented by Carnot & Castro (2015), there are at least three points where the differences are substantial. In 2008 and 2009 it was noticeable that there was an overestimation of the CAPB while the opposite had occurred in 2010, as well as some deviations in the output gap. As a consequence, changes on the fiscal policy in 2008 and 2010 were detected. Instead of coming to be both a counter-cyclical fiscal tightening and a counter-cyclical fiscal expansion, they turned into a pro-cyclical fiscal expansion and a counter-cyclical fiscal tightening respectively, as demonstrated by Carnot & Castro (2015). This reinforces the problems previously discussed in Section 3 about the CAPB indicator.

According to Carnot & Castro (2015), Germany was not engaged in a boom and bust cycle with large revenues windfalls followed by large revenues shortfalls as it was the case of Ireland and Portugal. For that reason, it was expected that the German fiscal policy exhibited a lower variation of amplitude in comparison with the latter countries which was possible to confirm.

Dimension 3: The size and composition fiscal consolidations

In the period before the great recession, all the fiscal consolidation efforts were designed with the purpose of reducing the deficit below the 3% of GDP limit, established in the Fiscal Stability Program submitted in January 1999. This encompasses 5 consolidation episodes (see Table 2), as described by Guajardo et al. (2014), where it is possible to identify a clear preference in favour of spending cuts rather than tax hikes. These measures were quite effective in controlling public debt mainly in the two years prior to the crisis.

Table 2 – Germany's Consolidation Episodes

Country	Year	Consolidation (% of GDP)	Revenue (% of GDP)	Expenditure (% of GDP)
Germany	2000	0.70	-0.05	0.75
	2003	0.74	0.74	0.00
	2004	0.40	-0.70	1.10
	2006	0.50	0.00	0.50
	2007	0.90	0.50	0.40
	2011	0.60	0.10	0.50
	2012	0.60	0.20	0.40
	2013	0.40	0.00	0.40

Source: Guajardo et al., 2014; Kataryniuk & Vallés, 2015; Organization of Economic Co-operation and Development, 2011.

Nevertheless, after the great recession, the fiscal balance suffered a setback as stimulus measures, including the automatic stabilisers, which were indispensable to oppose the economic downturn, were carried out. Consequently, the deficit reached 3.2% in 2009 and 4.3% in 2010 and Germany was no longer complying with the agreement. In 2010, the government announced plans to implement a serious 4-year consolidation programme comprising the cessation of the stimulus, a substantial reduction on social security and unemployment benefits on the expenditure side, and the creation of new taxes, namely on nuclear fuel and banks to expand the revenue side (Organization for Economic Co-operation and Development, 2011). The conjunction of fiscal consolidation policies, the completion of financial sector's support, a good resilience in labour market and a positive economic environment were decisive to guarantee a deficit of 1% in 2011 (European Commission, 2012).

This time, the 3 episodes of fiscal consolidations detected by Kataryniuk and Vallés (2015) were structured with an even more pronounced tendency in favour of expenditure cuts rather than tax increases. The data on public debt suggests that the consolidation effort, mostly dominated by spending cuts, was also quite effective in the after-crisis period, since the debt has been consistently decreasing after 2010. This is in line with the prevalent view expressed in the literature that adjustments on the expenditure side can have higher probability of success.

Assuming the classification presented in Organization for Economic Co-operation and Development (2011), Germany belongs to the category 2, meaning that the government recognizes the existence of considerable deficits and public debt, therefore it was preventively announced a set of strategies for a medium-term consolidation.

3.2.2 – Ireland

Dimension 1: The role of structural reforms

Following a long period of stagnation, the Irish economy developed at an extraordinary rate. With the establishment of the single market in Europe during the 1990s, the country took advantage of its unique features to become an attraction pole for investment through the fixation of global companies.

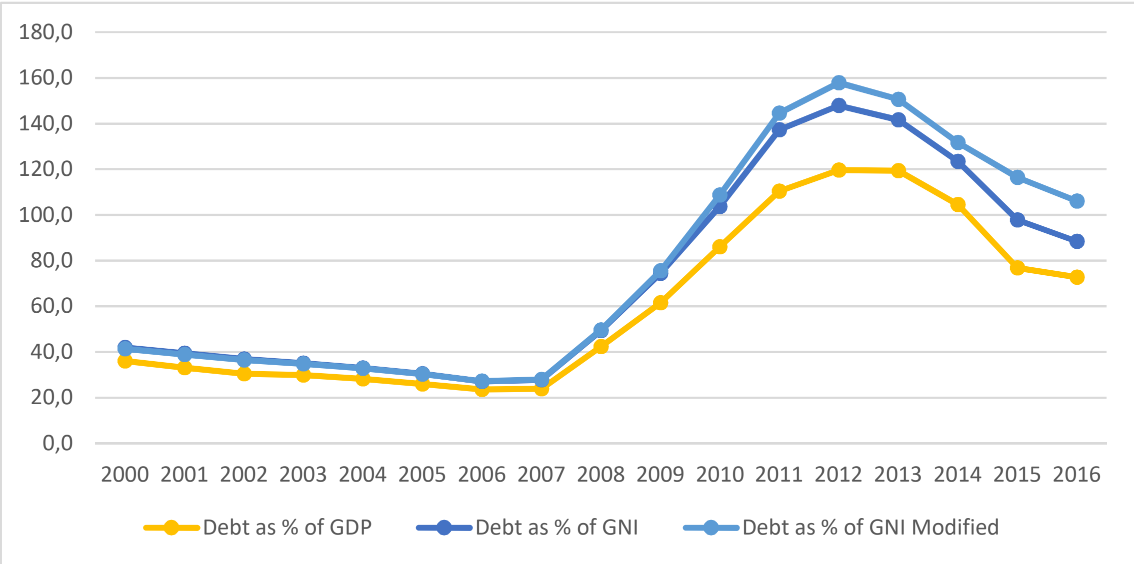
After the financial crisis, in a context of weak demand by its trading partners, a conjunction of poor performances on growth, financial sector, employment and public finances, forced Ireland into accepting a financial assistance programme from Troika, in the form of a memorandum of understanding, signed in December of 2010, and requiring a strict fiscal consolidation combined with structural reforms (Brazys & Regan, 2017). Although the Irish economy was already perceived as relative open and flexible due to past reforms achievements, there was a broad consensus in the literature that a set of policies in labour market activation, banking and finance, human capital, taxes and the removal of barriers in some sheltered sectors would enhance output and job creation (Bouis & Duval, 2011; Callaghan et al., 2014).

More recently, the same level of unanimity was reached on the recognition that Ireland’s outstanding recovery over the last 3 years, becoming the economy with the fastest pace in the European Union, was deeply connected with the preceding 5-year reforms. In fact, it is generally regarded as a textbook case of a successful readjustment episode based on neoliberal austerity and competitiveness improvement polices.

On the other hand, some authors including Brazys & Regan (2017), contend that the real reason behind this recent success is the tremendous increase of high-tech exports most strikingly after 2008. In their view, this propensity is a reflection of a “state-led enterprise policy” designed to establish a collaborative relationship with technological advanced companies mainly from the US, due to low corporate taxes and a flexible labour market. Thus, it was this “state-led development" and the subsequent "variation of foreign direct investment" that were the main determinants of Ireland's success and not the "free markets" principles.

Actually, in 2015, Irish exports achieved the highest figures in the Eurozone, around 101% of GDP, where 66% corresponded to exports outside and 35% inside the European monetary union (IBEC, 2015). In that same year and largely fooled by multinational transactions the Irish economy grew an unprecedent 26% in terms of GDP (see Annex A3). This motivated the creation of a new economic growth estimator by the Ireland's central statistics office named "modified Gross National Income (GNI)" that excludes the effects of globalization. As presented in Figure 9, when relative debt is determined using this new indicator the results are quite striking in comparison with the traditional GDP.

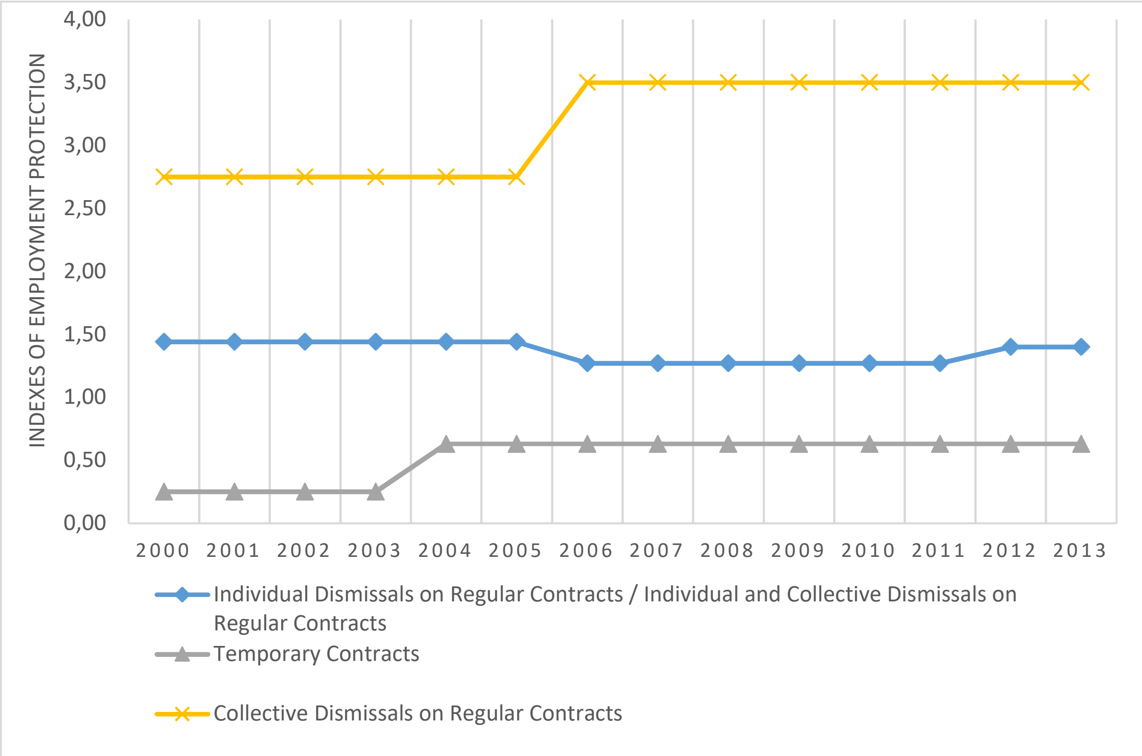
Figure 9 – Ireland's Consolidated Gross Debt



Source: CSO Database (2017) and Author's calculations.

As it is possible to notice from the strictness of employment protection indexes (see Figure 10), Ireland's protection on regular contracts is quite low and they didn't vary significantly during the analysis period between 2000 and 2013, with the exception of collective dismissals for which the index of protection was high and increased even more from 2005 onwards. Regarding the protection of temporary contracts, the index suffered a noticeable increase after 2003 though it remained at low levels. Thus, it was possible to register a dualization tendency in the Irish labour market but, in this case, only between regular contracts under collective agreements and temporary contracts.

Figure 10 – Ireland's Strictness of Employment Protection

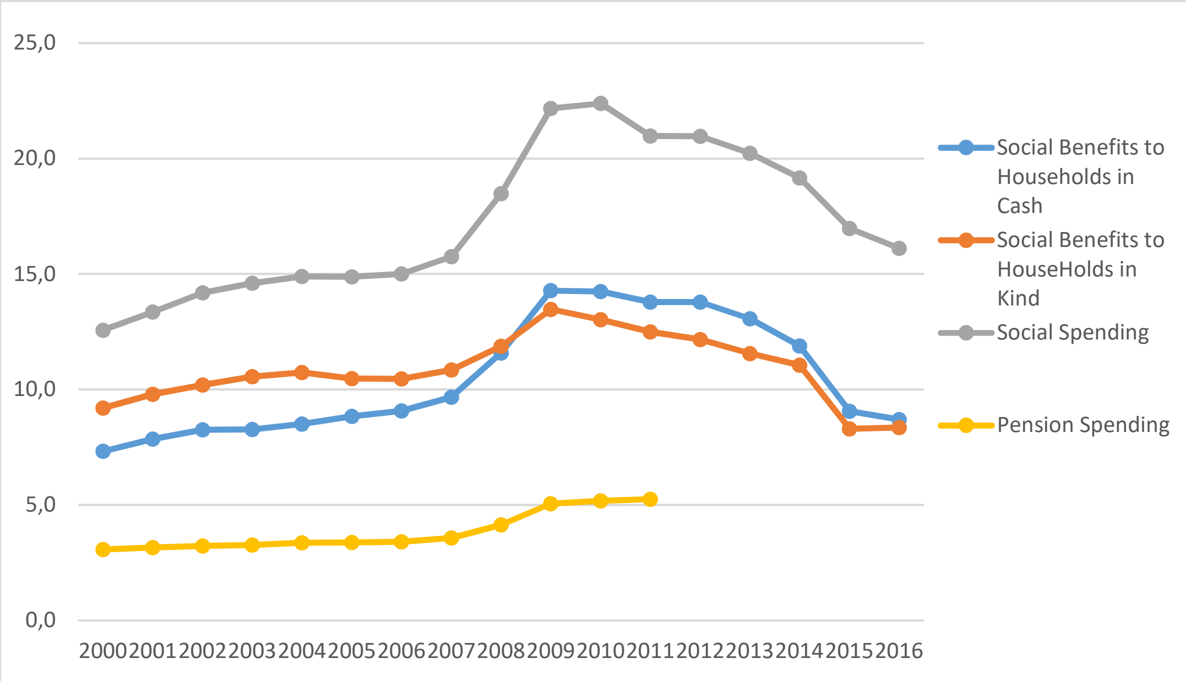


Source: OECD Database (2017), version 1.

With respect to the social protection policy (see Figure 11), the data on social spending (% of GDP) suffered a strong increase from 12.6 to 22.4% between 2000 and 2010, followed by a pronounced decrease afterwards, as the Irish economy initiated its recovery from the great recession. As for pension spending (% of GDP), it increased slow but steadily during the available period between 2000 and 2011. The data on benefits to households (% of GDP) both in cash and in kind revealed a similar behaviour of the social spending, with a considerable increase between 2000 and 2009 followed by a strong decrease from that year onwards. The only difference between the types of transfers to households was that, in the period before the crisis, there was a more predominant use of in kind transfers while, in the after-crisis period, the use of in cash was preferable.

This is consistent with the idea of an expansion of social protection policies, during the pre-crisis years, that was introduced without jeopardizing the low-tax model, and which was followed by a period of deep readjustment during the Troika's intervention, rooted on the belief that "a more targeted system of social protection will assist in achieving a growth friendly fiscal consolidation and address long-term unemployment" (Dukelow, 2014). Therefore, during the period of study, the Ireland's social protection system never really moved away from its neo-liberal economic model.

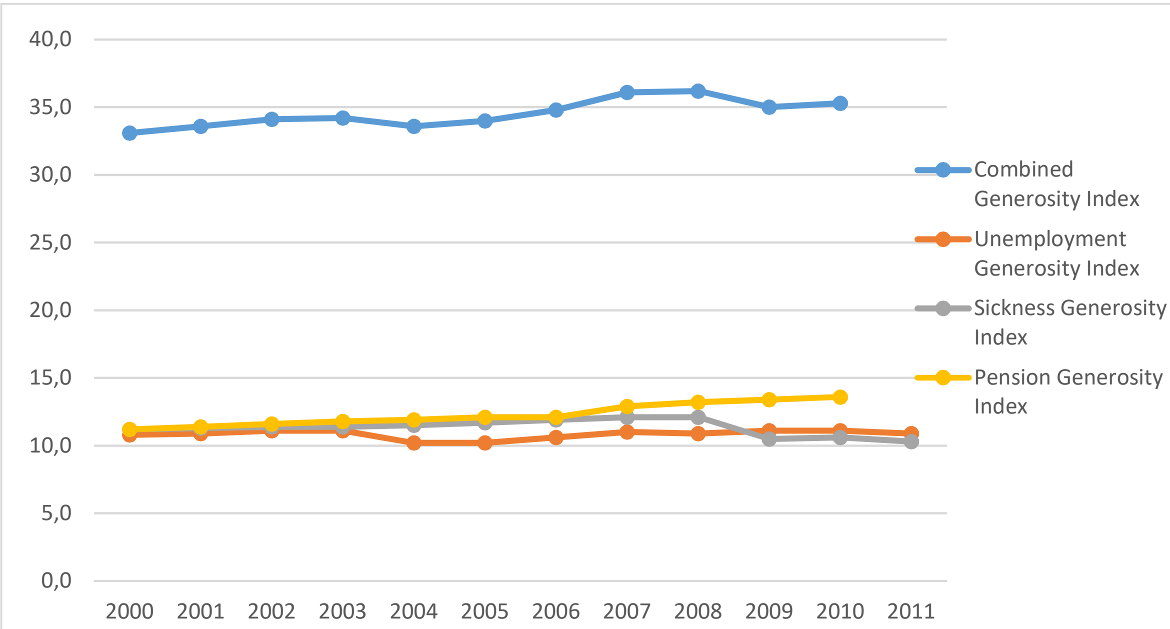
Figure 11 – Ireland's Social Benefits (% of GDP)



Source: OECD Database (2017).

Moreover, in clear contrast with the decreasing trend observed in the generosity on the German social protection system, Ireland's indexes for combined, unemployment, and pension generosity exhibited an improving tendency between 2000 and 2010-11 (see Figure 12). With the only exception being the sickness generosity index, which suffered a palpable decrease after 2008.

Figure 12 – Ireland's Generosity Indexes



Source: CWED 2 Database (2017).

In summary, during the period before the crisis, it was possible to witness a raise in the protection of collective dismissals for regular contracts and, despite a minor increase in the protection of temporary contracts, the levels of dualization intensified but in a lesser extent than in Germany. Notably, on collective dismissals, during this same period, the remuneration per week was increased, as well as the weekly ceiling compensation and a stricter mechanism was created to oversight dismissals. On temporary contracts, there was also the fixation of a maximum number of renewals (LABREF database). As previously mentioned, the Irish social protection registered an expansionary policy without abandoning, however, its neo-liberal low-tax model. Measures such as the introduction of an early childcare supplement, the increase in the upper-limit on parent family payment and the establishment of activation offers for older people, are some examples that validate this tendency (LABREF database). Contrary to expectations, the public debt as % of GNI modified (as well as debt-to-GDP ratio) registered an uninterrupted decrease between 2000 and 2007. According to Whelan (2013), Ireland's remarkable economic growth during this period (see Annex A3) generated sufficient tax revenues that, even with a decrease in tax rates and a raise in public spending, allowed the country to achieve an extremely healthy fiscal position.

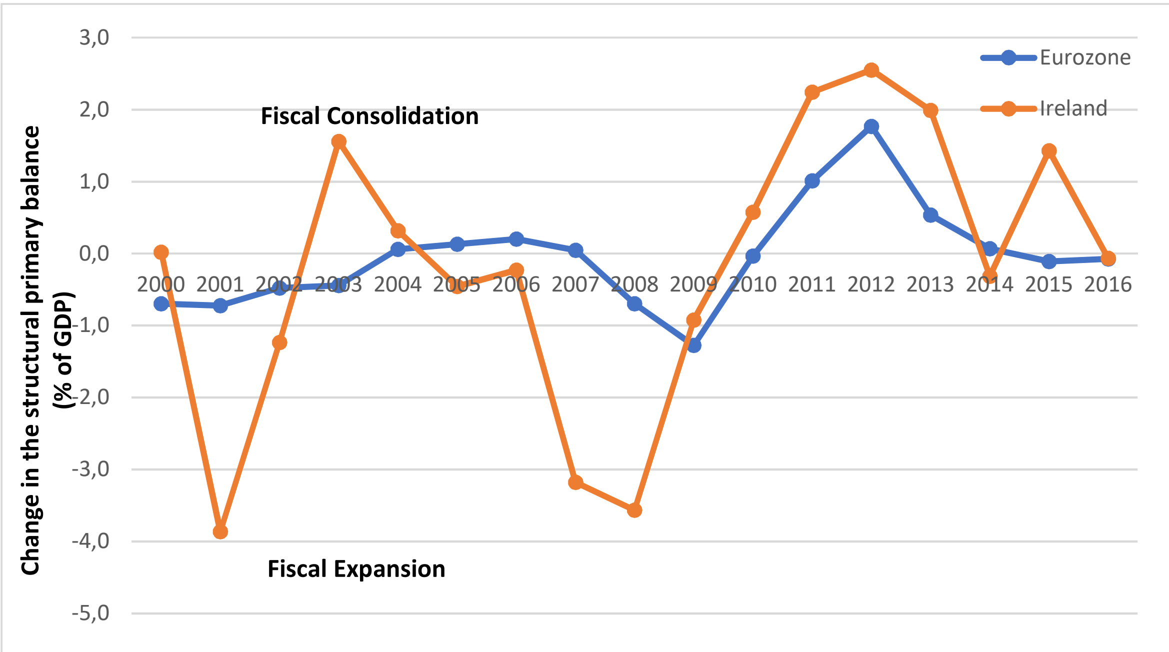
In after-crisis period, the employment protection remained roughly unchanged. Otherwise, as the memorandum of understanding was initiated in 2010, the social protection policy that had been expansionist in the past was subject to a drastic adjustment. These new policies of austerity nature included the withdrawn of the early childcare supplement, the reduction of unemployment benefit, as well as the one-parenting and child benefits, stricter penalty measures to induce beneficiaries into seek and accept job vacancies and reduction of jobseeker's benefit duration (LABREF database). As a result, after the implementation of such policies, it was possible to identify a substantial decrease in social benefits spending and a slight decrease of the combined generosity index. Finally, it is important to mention that these same reforms had also similarity to Germany in a conspicuous priority on activation polices. During this same period, Ireland experienced the most outstanding surge in public debt within the countries analysed which, taking into account the modified GNI estimator, reached a peak of 157.5% in 2012. In recent years, as demand on its trading partners started to pick up, a good economic performance sustained by an export-led growth model has contributed to a gradual fall in public debt to 106.0% in 2016.

Dimension 2: The role of counter-cyclical policies

Ireland's response to the early 2000s recession was identical to Germany still the pro-cyclical fiscal stance of the former reached a much higher scale, approximately -4% of GDP (see Figure 13 and Figure 14). Although, during 2003 and 2004 there was a brief period of consolidation, followed by a broadly neutral fiscal stance until 2006. Regardless of these episodes of expansions and consolidations public debt was sustainably reduced between 2000 and 2007.

After that, between 2007 and 2009, there was a strong expansionist period supported by the Eurozone police makers, which in Ireland started one year earlier than its peers due to an extensive public intervention on its crumbling financial system. At the beginning this policy showed a tendency to be pro-cyclical but in 2009 the policy was clearly counter-cyclical. During the peak of the expansion, in 2008, it was achieved a maximum of around -3.6% of GDP. Consequently, the economy moved away from a contraction of -4.6% in 2009 to a palpable economic growth of 2.0% in 2010.

Figure 13 – Ireland's Fiscal Stance

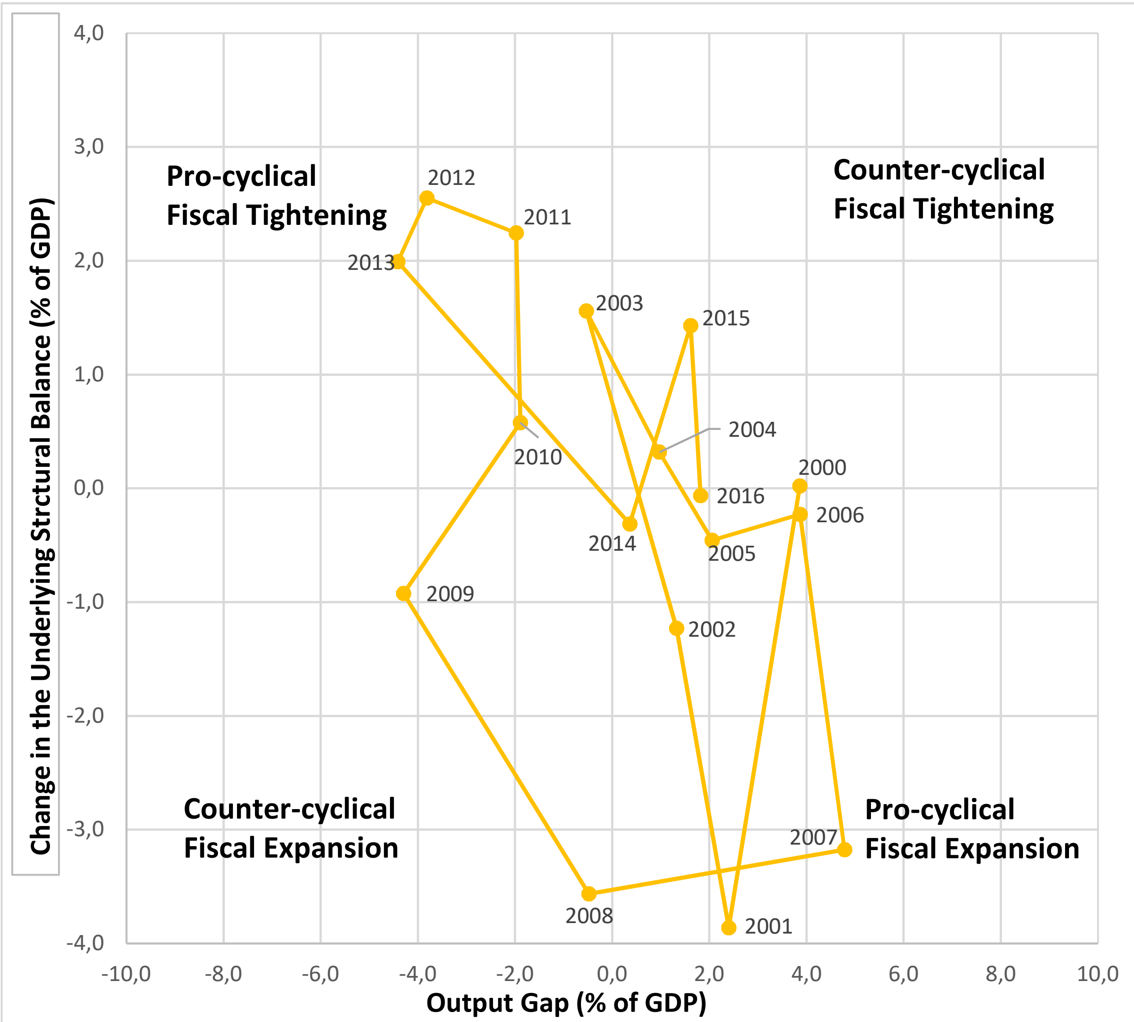


Source: OECD and author's calculations.

Later, between 2010 and 2014, with the beginning of the Troika's financial assistance program there was a promptly policy shift resulting in a substantial pro-cyclical fiscal tightening, which reached a maximum of 2.5% of GDP in 2012. From that year onwards, there has been another consolidation but this time with a counter-cyclical behavior, between 2014 and 2016, but not to the same extent as the previous episode. Finally, in 2016, the Ireland's fiscal stance was again roughly neutral. The after-crisis period was marked by a hasty public debt increase where a maximum of a 157.8% of modified GNI was reached in 2012, followed by a considerable reduction afterwards.

Once again, comparing the results obtained with the mixed indicator developed by Carnot & Castro (2015), there were significant differences both in the CAPB and output gap, confirming the limitations concerning the inclusion of nonpolicy factors previously discussed in Section 3. In points such as 2009, 2010 and 2011 the was inaccurately underestimated and, as Guajardo et al. (2014) stresses, this is connected with the fall in asset prices right after the great recession. As a consequence, there were detected changes on the fiscal policy in 2009 and 2011 that instead of being a counter-cyclical fiscal expansion and a pro-cyclical fiscal tightening they should be treated, according to Carnot & Castro (2015) as a pro-cyclical fiscal tightening and a counter-cyclical fiscal tightening respectively.

Figure 14 – Ireland's Fiscal Policy



Source: OECD, AMECO and author's calculations.

Moreover, as described by Whelan (2013), at the end of 2008 the Irish government recognized that, in the face of a speedy public debt growth, there was not enough room for discretionary fiscal stimulus. For that reason, a series of consecutive consolidations were launched from 2009 to 2016 as the studies of Guajardo et al. (2014) and Kataryniuk & Vallés (2015) demonstrated, based on historical records.

In general, it was possible to notice a much higher amplitude in Ireland's fiscal stance with respect to Germany. This might be related with the idea expressed by Carnot & Castro (2015) that Ireland was engaged in a boom and bust cycle. As a consequence, during the period of study, the country had to rely on more robust fiscal policies in response to business cycles.

Dimension 3: The size and composition fiscal consolidations

In the period before the great recession, due to its favourable position there were no consolidation episodes registered (see Table 3) in the study developed by Guajardo et al. (2014). However, after the great recession, in 2009, the government decided to carry out a fiscal consolidation of 4.74% of GDP, in result of a combination of a severe deterioration in public finances – caused by the collapse of housing and finance markets and an inevitable unemployment soar – with a rather modest revenue base (Whelan, 2013). This effort was complemented with a consolidation of 1% of GDP in 2010 but debt stabilization was not achieved and a financial assistance programme became imperative (Kataryniuk & Vallés, 2015).

Table 3 – Ireland's Consolidation Episodes

Country	Year	Consolidation (% of GDP)	Revenue (% of GDP)	Expenditure (% of GDP)
Ireland	2009	4.74	2.35	2.39
	2010	1.00	0.20	0.80
	2011	3.26	0.86	2.40
	2012	2.00	0.80	1.20
	2013	2.00	0.80	1.20
	2014	1.30	0.60	0.70
	2015	4.74	2.35	2.39
	2016	1.00	0.20	0.80

Source: Guajardo et al., 2014; Kataryniuk & Vallés, 2015; Organization of Economic Co-operation and Development, 2011

After that, there was a 3-year episode of fiscal consolidation between 2010 and 2013 (see Table 4), as described by Kataryniuk & Vallés (2015), yet this time the measures were implemented under the umbrella of troika, following the guidelines of the Memorandum of Understanding. Those include considerable cuts in unemployment and welfare benefits, public administration on the expenditure side, in conjunction with efforts to broaden the tax base on the revenue side, for instance, by reducing the percentage of workers paying no tax (Organization for Economic Co-operation and Development, 2011). And finally, another episode was detected in 2014 after the "clean exist" from the programme.

In regard to the size of the adjustments, it was possible to verify that the largest fiscal efforts were developed in 2009 and 2015, followed by 2011 which was the first year of troika's intervention. When it comes to composition, it was noticeable that there was a clear tendency in favour of expenditure cuts rather than tax increases, with the exception of 2009 and 2015 consolidations where the measures implemented were somewhat balanced.

This is consistent with the premise defended by Dukelow (2014) of a political ambition to preserve a competitive low tax regime in Ireland. In this author's view, both before and after Troika's intervention, the same approach was followed. Indeed, a comprehensive tax increase was contemplated in the memorandum of understanding, expressly on consumption, income, capital and inheritance but there was no reference to any alteration in the Ireland's 12.5% corporate tax rate, one of the lowest in the EU.

The data on public debt as % of modified GNI suggests that, in spite of an unprecedent debt increase between 2007 and 2012, the consolidation strategy mostly dominated by spending cuts was effective in achieving stabilization in recent years.

Assuming the classification presented in Organization for Economic Co-operation and Development (2011), Ireland belongs to the category 1, meaning that the country's public finances and growth were so severely deteriorated that the government had to engage on harsh consolidation policies due to sovereign debt market pressure.

3.2.1– Portugal

Dimension 1: The role of structural reforms

The turn of the millennium brought a wide range of new challenges to the Portuguese economy, in particular, a series of adverse external shocks including a heavy competitive pressure from China and EU recent members in conjunction with adverse fluctuations of exchange rates and oil prices. As a result, during the period between 2000 and 2007, the country found itself in an extremely difficult position with feeble growth, high unemployment originated by a crumbling manufacturing sector, low investment, increasing levels of both public and private debt and current account deficits (Caldas, 2012; Mamede, 2015).

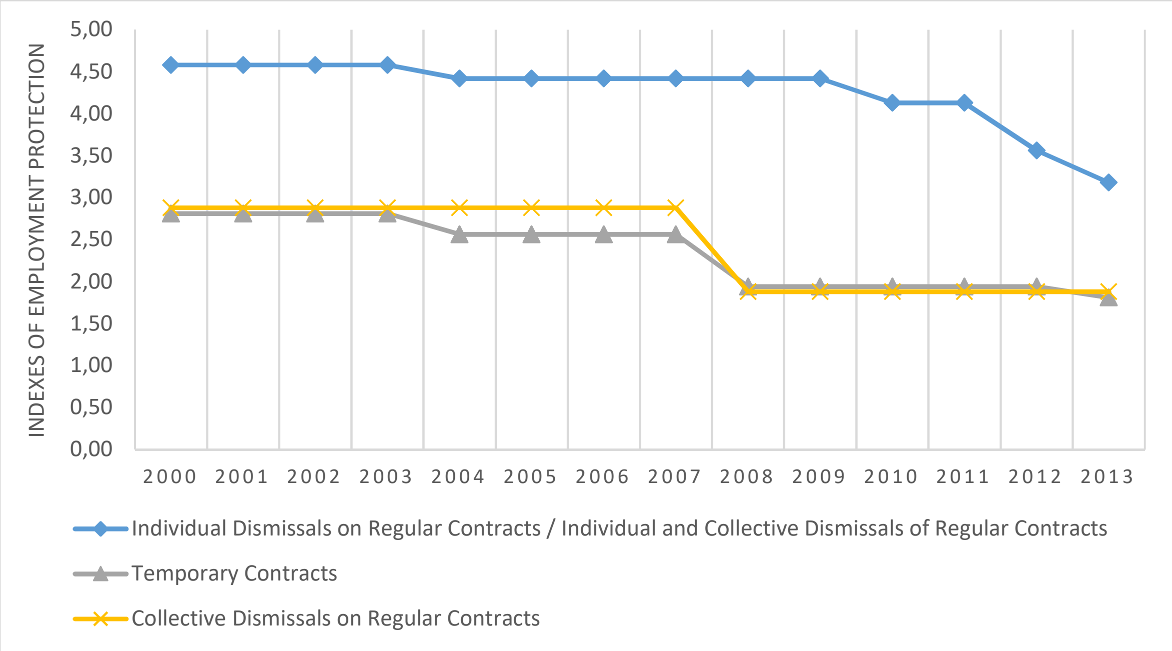
In the after-crisis period, Portugal's borrowing costs became unsustainable due in part to a market contagion that started with Greece. Therefore, the request for financial assistance programme from Troika in April of 2011 was predictable. Again, this arrangement required a combination of strict fiscal consolidation measures and structural reforms, among those there was a special concern for labour market reforms such as, employment protection legislation, unemployment benefits, working time, wage setting and activation policies (Organization for Economic Co-operation and Development, 2017).

One of the decisive purposes enlisted in the structural adjustments was a notable reduction in wages and other costs related with labour – which can be described as an internal devaluation – to promote competition and strengthen the current account position. And even if, the supporters of this strategy, expected some harmful recessive effects caused by a fall in domestic demand, they argued that this inevitable setback would be entirely compensated by the positive effects resulting from an improvement in current account deficits (Caldas, 2015).

However, the aftermath analysis tells us a different story. During the period after the implementation of the austerity programmes in 2010, it was possible to register a strong recessionary environment in the Portuguese economy. In particular, as GDP shrunk 6% and the nominal wages fell 8% between 2010 and 2014, there has been an unprecedent raise in public debt (initiated in 2008), a constant transgression of the deficit target, a devastating surge in unemployment and working conditions deterioration (Caldas, 2012, 2015).

From the analysis of the strictness of employment protection (see Figure 15), it was possible to notice that the labour reforms carried out between 2011 and 2014 produced a strong decrease in the indexes for both collective and individual dismissals on regular contracts. Despite this convergence of regular contracts indexes with the EU average, the protection of temporary contracts also suffered a significant reduction and consequently, the gap between the two was not conveniently removed and, therefore, labour market duality still exists. Before these reforms the level of restriction was one of the highest in the EU but, as Theodoropoulou (2014) pointed out, it should be regarded as a crucial instrument to guarantee some level of social protection in a presence of an ineffective welfare state. Furthermore, the author devalued the implications of great restrictions in the labour market presenting Germany as an example of a quite competitive country that has been consistently displaying good economic performances, despite having one of the highest indexes of contract protection in the EU for regular contracts.

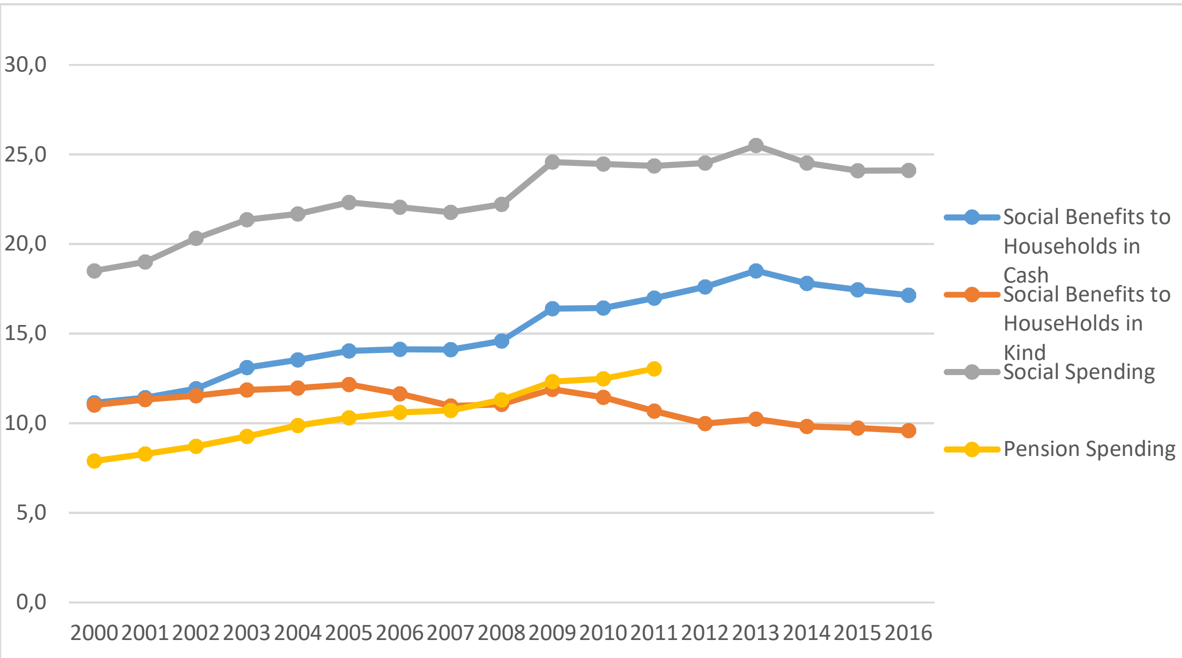
Figure 15 – Portugal's Strictness of Employment Protection



Source: OECD Database (2017), version 1.

Regarding the social protection policy (see Figure 16), the data on social spending (% of GDP) displayed a sizeable increase from 18.8 to 24.6% between 2000 and 2009, followed by an overall stagnation in after-crisis period with the exception of 2013.

Figure 16 – Portugal's Social Benefits

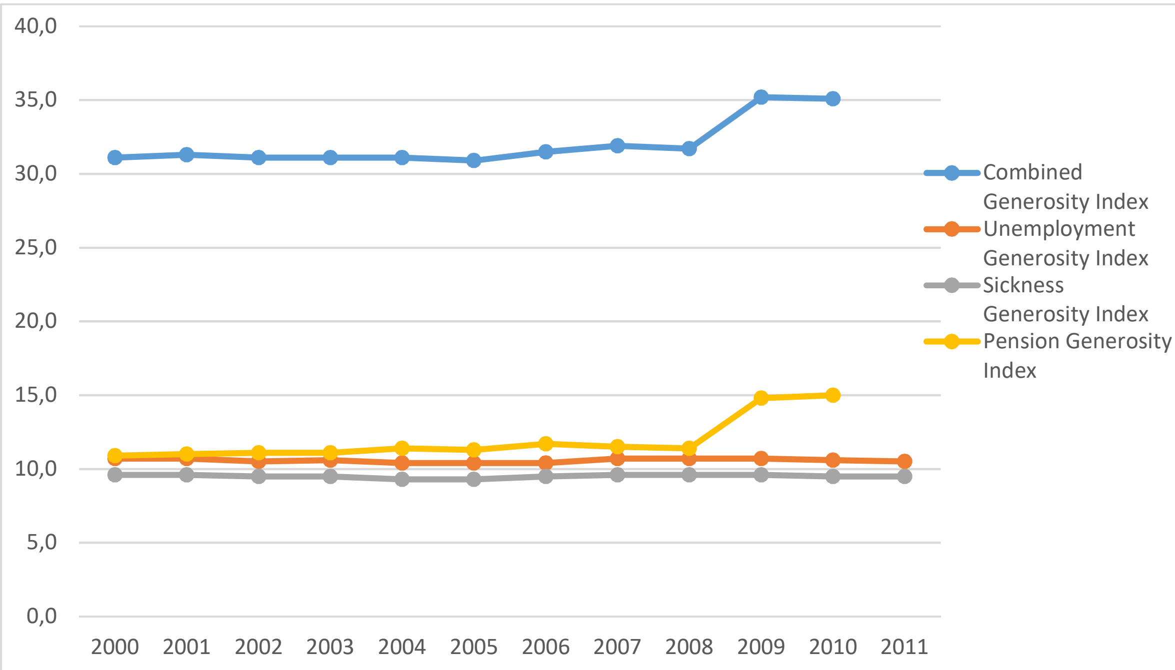


Source: OECD Database (2017).

The same trend was detected on social benefits to households in cash (% of GDP), but here the increment lasted until 2013 and has been decreasing slightly ever since. On the other hand, during the period of study, the social benefits to households in kind have been predominantly decreasing, which is revealing of substitution effect between these two types of social transfers. Here, the transfers in cash was always the prevailing strategy in comparison with the transfers in kind. As for pension spending (% of GDP), this variable suffered a remarkable increase from 7.9 to 13.0% between 2000 and 2011.Overall, there was an expansionary policy in social protection, in the pre-crisis period, comparable to what was previously witnessed in Ireland.

Moreover, through the analysis of the generosity indexes (Figure 17) it was possible to identify a substantial improvement on both combined and pension generosity indexes after 2008. The evolution of the former allowed Portugal to converge with the other countries analysed. In the case of the later the increment in generosity was even larger than those same countries and in line with the raise in pension spending (% of GDP). Conversely, the sickness and unemployment generosity indexes were already one of the lowest and remained unchanged during the available period.

Figure 17 – Portugal's Generosity Indexes



Source: CWED 2 Database (2017).

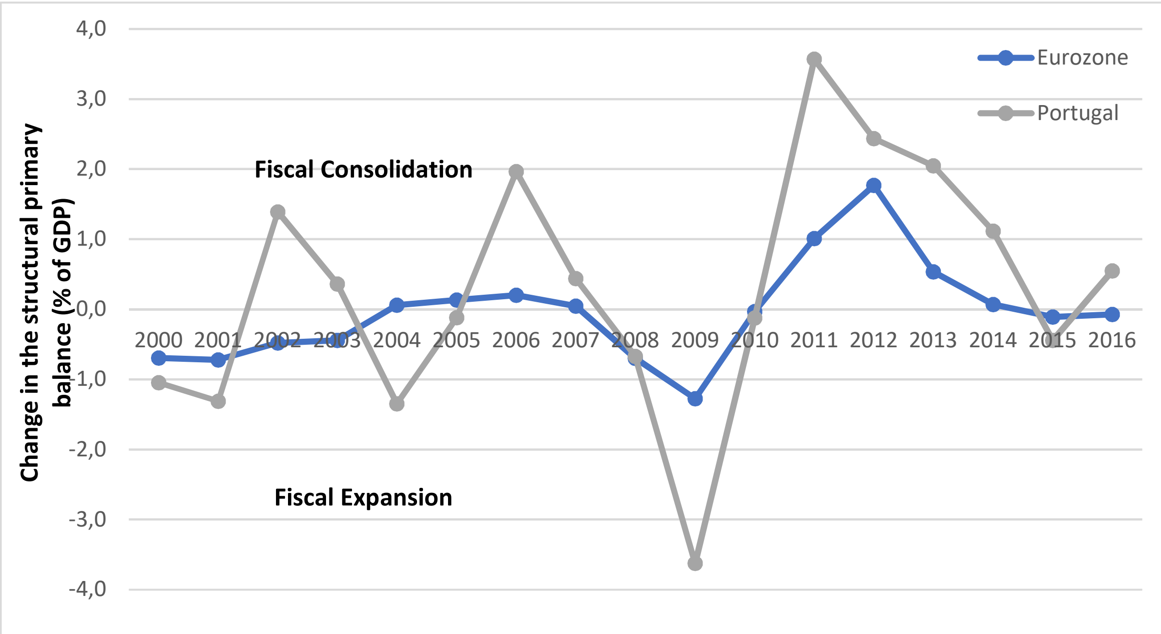
In summary, during the period before the crisis, in what concerns the Portuguese labour market the protection of collective dismissals on regular contracts and temporary contracts were the main targets of the flexibilization. The use of these temporary contracts was incentivized through the extension of their maximum duration to 6 years in 2003, followed by an additional extension in 2007 (LABREF database). Consequently, the index of protection for temporary contracts remarkably declined in both of these occasions, which intensified dualization. On social protection, it was registered a steady increase in social spending, social benefits to households in cash and in pension spending. This was a result of expansionist measures, such as, an increase in the benefit guaranteed by the social insertion income for larger households, a rise in tax credit for each dependent child and in the education tax credit (LABREF database). Despite the introduction of these policies and several other revisions, for instance, on unemployment benefits, the generosity indexes remained stable during this period. Otherwise, public debt as % of GDP exhibited a persistent increment from 50.3 to 71.7% between 2000 and 2008 but with a stabilizing tendency in the later years.

In after-crisis period, markedly during the troika's intervention, there was an impressive reformist impetus aimed at the flexibilization of labour market. According to Caldas (2012), those included the loosening of existing rules on dismissals particularly on regular contracts, the cutting back of national holidays, paid leave days and overtime payments, as well as the wage bargaining decentralization and easier access for companies to short time working scheme. These policies had influence in the hefty reduction of employment protection for individual and in the proliferation of precarious work (one fifth of the workers in dependent employment) with particular incidence in the youth generation (Marques & Valente, 2014; Organization for Economic Co-operation and Development, 2017). On social protection, in 2009 and 2010, when stimulating the economy was the main concern, a vast number of expansionist measures were introduced including the raise on family support in the first and second lower brackets of income, the increase in education-related social support to low income families and the extension of access conditions of social benefit for unemployed (LABREF database). This was translated to a significant increase of social benefits to households in cash. However, during the Troika's intervention most of these policies were reverted with, for instance, the curtailing of child benefits and the introduction of more frequent assessments, the reduction of unemployment benefits, its maximum duration and stricter rules to induce beneficiaries into seek and accept job vacancies, as well as the establishment of 6% tax on unemployment benefits and greater focus on activation policies (LABREF database). Despite these two different approaches during the after-crisis period, the social spending remained mostly stagnated after 2009. With respect to the development of public debt, it was notorious a considerable surge but still at a slower rate than Ireland (when considering the modified GNI) that endured until 2012. After that, the public debt showed a tendency towards stabilization.

Dimension 2: The role of counter-cyclical policies

At the break of the new millennium, Portugal was already in a pro-cyclical fiscal expansion of small proportions (around -1.3% of GDP) but, in 2002, as the economy deteriorated in result of the early 2000s recession that expansion turned counter-cyclical (see Figure 18 and Figure 19). After that, during 2002 and 2003, there was a short period of consolidation which began by being pro-cyclical but ended counter-cyclically. This was followed by another expansionist fiscal stance, in 2004, similar to the first one in size and slightly counter-cyclical. During the pre-crisis years of 2005-07 another period of fiscal contraction emerged with a neutral stance in the beginning but with a counter-cyclical fiscal stance at the end. Overall, the pre-crisis period was marked by a steady but slow increase in public debt followed by an efficient stabilization between 2005 and 2007.

Figure 18 – Portugal's Fiscal Stance

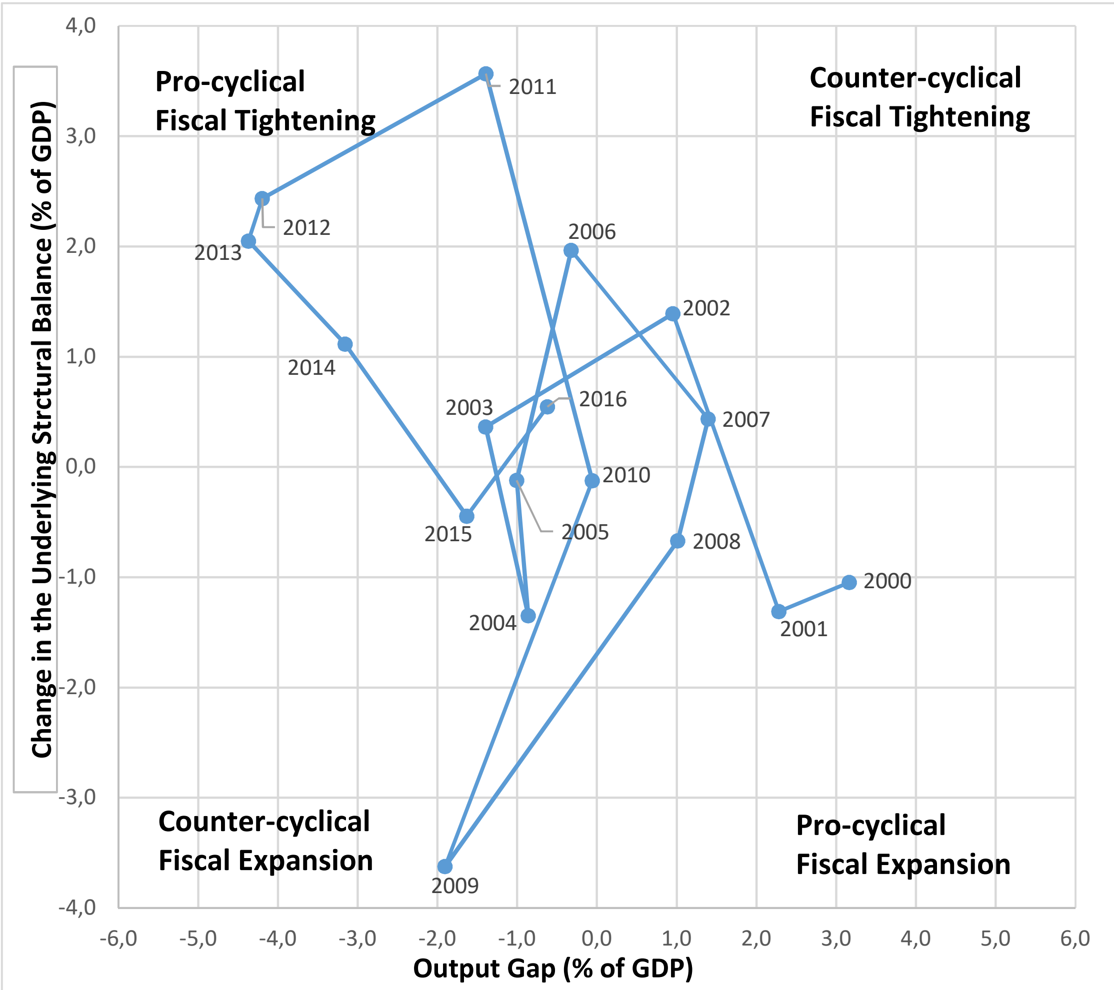


Source: OECD and author's calculations.

Soon after, between 2008 and 2010, there was a substantial fiscal loosening in result of several stimulus measures which started one year later than Ireland and reached a similar magnitude with approximately -3.6% of GDP. It's important to mention, that this expansion started by being pro-cyclically to some extent but in 2009 was already counter-cyclical. What is more, the stimulus comprehended, on the revenue side, cuts in taxes, temporary increase in social protection and unemployment benefits and, on the expenditure side, a raise in public investment and subsidies preferably allocated to small and medium enterprises (Caldas, 2012). As a result, the economy moved away from a contraction of -3.0% in 2009 to a palpable economic growth of 1.9% in 2010.

Subsequently, as the Portugal's financial assistance started, there was once again a mimetic behavior with respect to Ireland, with a promptly swift into an impressive pro-cyclical consolidation process. This adjustment lasted from 2010 until 2014 and reached a maximum of around 3.6% of GDP and it cannot be dissociated from a reversal in the macroeconomic trend. In fact, from 2011 to 2013, the Portuguese economy shrunk a total of 6.9%. From 2014 onwards, the fiscal stance in Portugal has been mostly neutral.

Figure 19 – Portugal's Fiscal Policy



Source: OECD, AMECO and author's calculations.

In the after-crisis period, there was notorious deterioration of public finances with consecutive violations of both deficit and public debt initial targets (Organization for Economic Co-operation and Development, 2011). An effective public debt stabilization would only be achieved after 2013.

It is important to mention that the differences between the CAPB estimator and the mixed estimator used by Carnot & Castro (2015) were not as notorious as they were in Germany and Ireland. Still one of the most significant deviations occurred in years such as 2011, 2012 and 2013 both in CAPB and output gap but without altering their fiscal stance.

Again, it was possible to verify the existence of a much higher amplitude when comparing with Germany's fiscal stance, especially in the after-crisis period but still globally less than Ireland. This is consistent with the idea expressed by Carnot & Castro (2015) about the presence of a boom and bust cycle in countries such as Ireland and Portugal, and that its respective effects were less predominate in the later.

Dimension 3: The size and composition of fiscal consolidations

Before the great recession, there were at least 5 episodes of fiscal consolidation (see Table 4) of considerable proportions in Portugal, as depicted by Guajardo et al. (2014). These efforts in conjunction with economic growth improved the country's fiscal position and nourished an efficient public debt stabilization between 2005 and 2007 (Organization for Economic Co-operation and Development, 2011).

Table 4 – Portugal's Consolidation Episodes

Country	Year	Consolidation (% of GDP)	Revenue (% of GDP)	Expenditure (% of GDP)
Portugal	2000	0.50	0.00	0.50
	2002	1.60	1.20	0.40
	2005	0.60	0.52	0.08
	2006	1.65	1.10	0.55
	2007	1.40	0.50	0.90
	2010	2.20	1.70	0.50
	2011	3.40	1.60	1.80
	2012	6.00	2.20	3.80
	2013	3.50	2.80	0.70
	2014	1.90	0.50	1.40

Source: Guajardo et al., 2014; Kataryniuk & Vallés, 2015; Organization of Economic Co-operation and Development, 2011.

Despite that, after the great recession, in result of the stimulus measures and automatic stabilisers that were set in place to accommodate the economic downturn, the fiscal balance deteriorated profoundly into deficit of 9.8% of GDP in 2009, followed by a record high of 11.2% of GDP in 2010. Consequently, in 2010, there was another sizeable consolidation package (2.2% of GDP) urging to avoid a debt spiral, which was not successful, so a 3-year financial assistance programme was requested in April of 2011.

During that period, under troika supervision, the country would be subjected to massive adjustments. Those included reductions in social expenditures like 5% wage cut in the public sector, higher restrictions on staff hiring and on non-contributory social security schemes, in conjunction with several measures to expand the tax base (Organization for Economic Co-operation and Development, 2011). Even after the "clean exit" from the bailout, in 2014, this same policy persisted uninterrupted. In spite of these efforts, the consolidation process failed its stabilization goal as public debt surged from 96.2% to 130.6% of GDP between 2010 and 2014. Moreover, the deficit target set by the government was constantly surpassed by a large margin.

One of the most remarkable aspects of Portugal's consolidation when comparing with the other countries, aside from a substantial larger size, was a higher emphasis on measures from the revenue side. Actually, there were detected several years in which the revenue side even prevailed in comparison with the expenditure side. What is more, the tax burden persistently increased from 31.1 to 34.5% of GDP between 2009 and 2013 (see Annex A5).

As previously mentioned, there is a firm consensus in the literature claiming that this sort of strategy usually produces stronger recessive effects and it not the most efficient way of stabilizing a debt soar, as it was possible to witness in Portugal.

As for the classification presented in Organization for Economic Co-operation and Development (2011), Portugal belongs to the same group of Irelands (category 1), meaning that the country's public finances and growth were so severely deteriorated that the government had to engage on harsh consolidation policies due to sovereign debt market pressure.

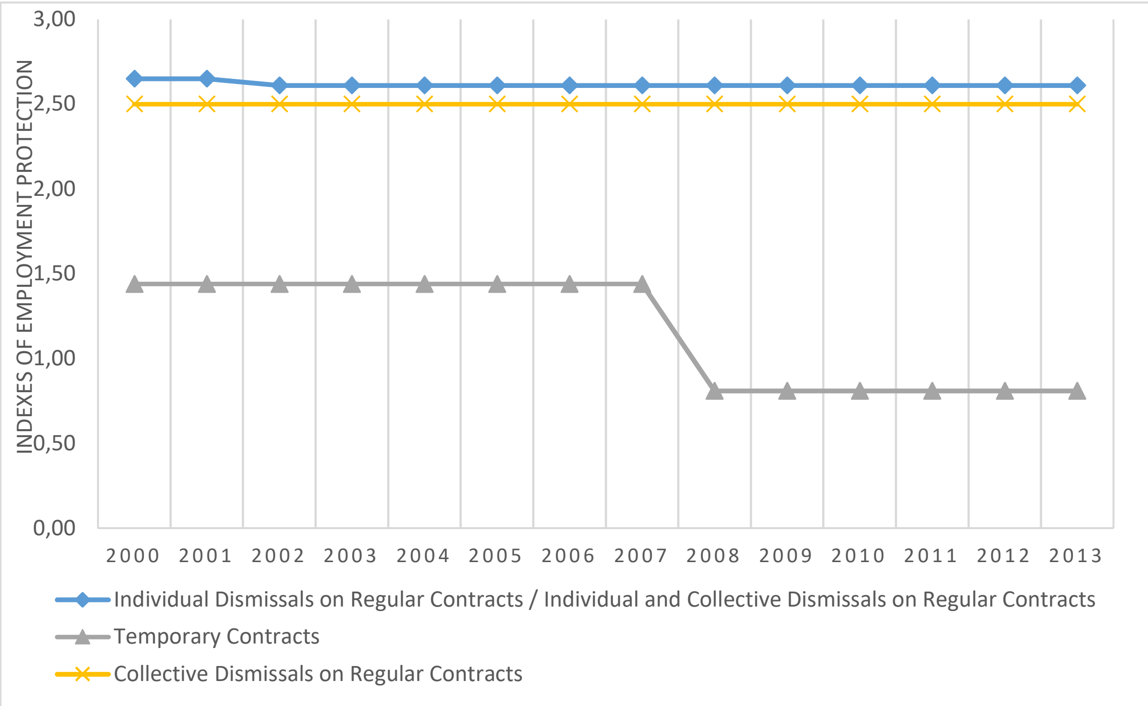
3.3– Sweden

Dimension 1: The role of structural reforms

During the period of study, Sweden has enacted a set of labour market reforms that followed the same principles of the Hartz reforms in Germany. Notably, after the centre-right government's election in 2006, there was a clear focus on activation policies like cuts in passive schemes and benefits especially for part-time workers, strictness in eligibility requirements and flexibilization of fixed-term contracts (Thelen, 2014).

Similarly, to what was observed for Germany but in a lesser extent, the employment protection indexes on both collective and individual dismissals on regular contracts remained high and with no significant variations (see Figure 20). While the protection index for temporary contracts, which was already much smaller, decreased even more since 2008. As a consequence, the dualization process was subject to a strong increment after 2008.

Figure 20 – Sweden's Strictness of Employment Protection

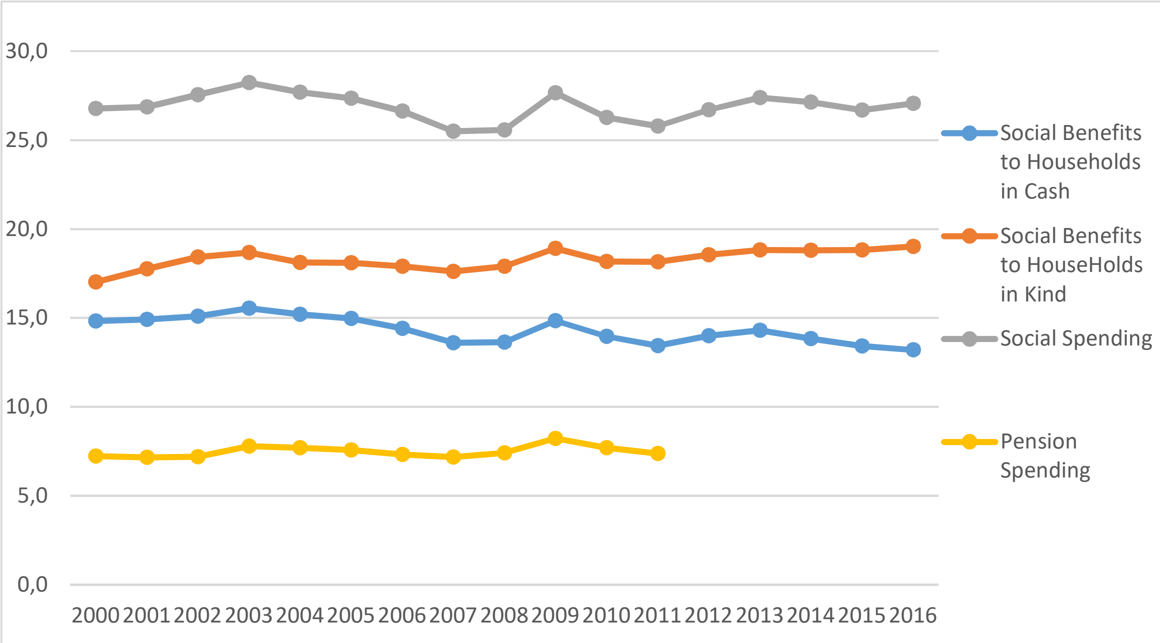


Source: OECD Database (2017), version 1.

Regarding the policy on social protection (see Figure 21), the data on social spending (% of GDP) showed a stabilizing behaviour during 2000 and 2016, with some discernible variations. The highest increment occurred in 2009 the year right after the financial crisis in part due to the automatic stabilizers.

A similar tendency towards stabilization was identified in the benefits to households (% of GDP) both in cash and in kind, with the highest increment once again occurring in 2009 but in a short period of time it would return to the same level. Conversely to what happen in other countries analysed, here there was always an evident preference for benefits in kind. Overall, the pension spending (% of GDP) remained stable during the observation period.

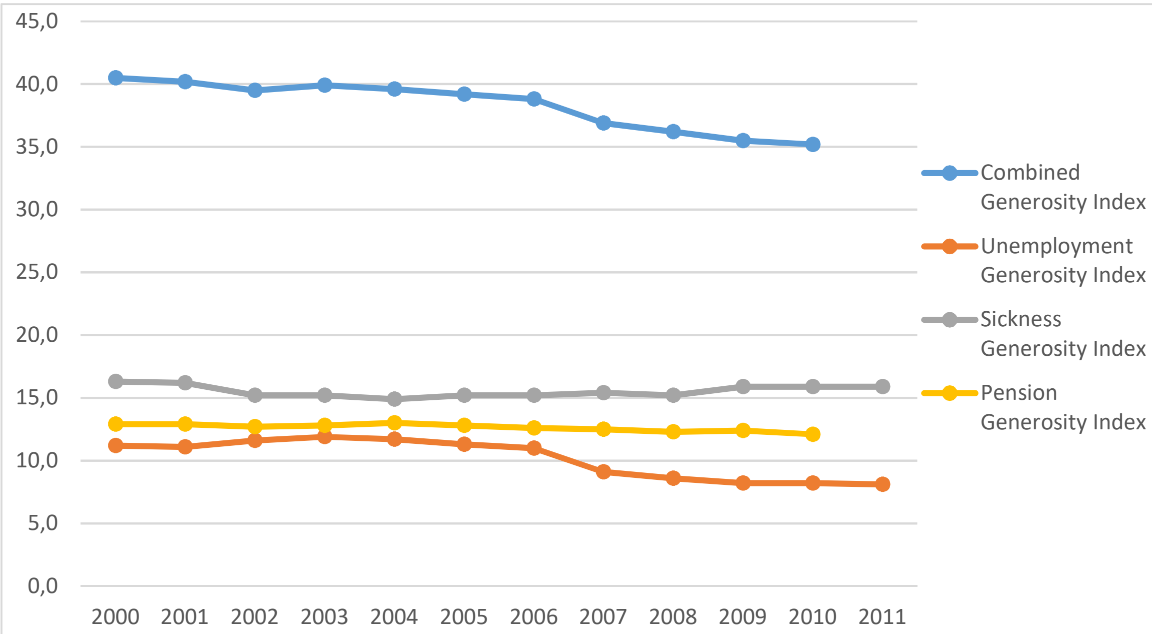
Figure 21 – Sweden's Social Benefits



Source: OECD Database (2017).

In addition, Sweden has been displaying a notable decreasing trend in the generosity of its social protection system, during 2000 and 2010, with particular evidence to the reduction experienced by the combined generosity and unemployment indexes after the implementation of the structural reforms in 2006 (see Figure 22). Both indexes from sickness and pension remained roughly unchanged during the available period.

Figure 22 – Sweden's Generosity Indexes



Source: CWED 2 Database (2017).

Broadly speaking, Sweden's public spending on social protection reached higher figures in comparison with the other countries here studied, which is in accordance with its social-democratic feature as identified by Esping-Andersen (1990). The only exceptions being the social benefits in cash that were always inferior to Germany's and the pension spending that after 2007 was surpassed by Portugal. This same inclination towards a more extensive social protection system in Sweden was also noticeable in the generosity indexes, with the exception of pension and unemployment that experienced palpable reductions in recent years.

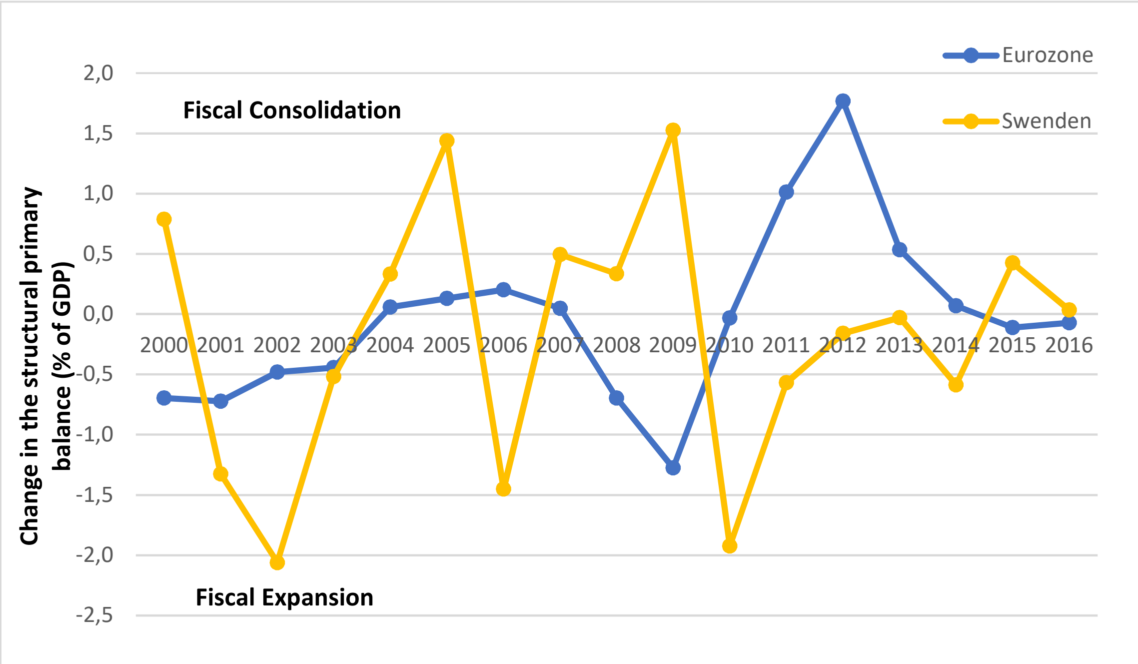
In summary, during the period before the crisis, the Swedish labour market was subjected to a profound change in result of structural reforms implemented in 2006, mostly inspired by the German Hartz reforms. Those included a clear focus on activation policies and the simplifying of regulation and improvement of the possibilities of using temporary contracts, while the regulation of regular contracts had remained untouched. This led to a drop in the index of protection for temporary contracts and a soar in dualization. With respect to social protection, one example of this activation feature in these reforms was the creation of an in-work tax credit to make work economically more rewarding in comparison to unemployment or inactivity (LABREF database). And finally, public debt revealed a consistent decreasing behaviour from 52.5% to 37.5% between 2001 and 2008.

In the after-crisis period, no meaningful reforms were conducted regarding the protection of regular contracts. Once again, only the fixed-term employment was subject of revision with a new temporary agency directive and provision established in 2012. In addition, in 2009, the possibility of temporary layoffs in manufacturing was introduced (LABREF database). Despite that, it was possible to register no variation in the index of protection for this type of contracts. As for the social protection policy, an expansionist stance in 2009 and 2010 in consonance with its peers was noticed, although in a much smaller scale. The relaxing of unemployment benefit eligibility, the temporary modification of the eligibility requirement for individuals on long-term sickness and the entitlement for self-employment are some examples of this (LABREF database). In general, for the period of study, the indicators on social spending have been displaying a stagnation trend with some minor variations due to cyclical adjustments. On the other hand, is was possible to identify a clear decreasing tendency in the combined generosity index. In that period public debt remained roughly stabilized regardless of the economic crisis of 2008 and financial markets instability.

Dimension 2: The role of counter-cyclical policies

Sweden entered in the new millennium with a discernible counter-cyclical consolidation (see Figure 23 and Figure 24). In the face of the early 2000s recession, it was possible to identify a counter-cyclical expansionist stance in the Swedish fiscal policy (around -2% of GDP), comparable to countries like Germany and Portugal but much smaller than Ireland.

Figure 23 – Sweden's Fiscal Stance

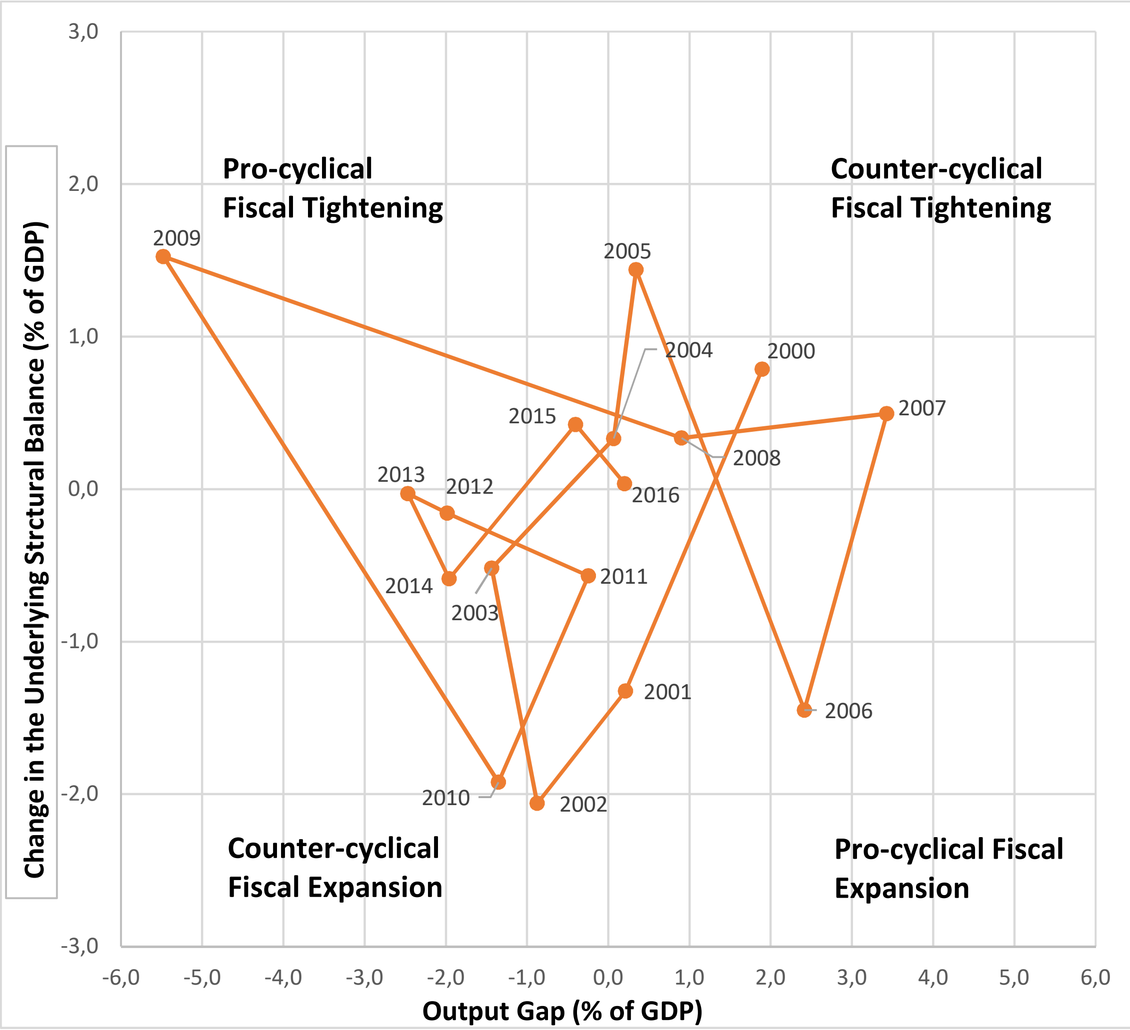


Source: OECD and author's calculations.

Nevertheless, during the period 2004-05 there was a brief but palpable consolidation process with a slightly counter-cyclical stance. This was interrupted by a pro-cyclical expansion in 2006 of about -1.5% of GDP. Soon after, there was another consolidation period from 2007 to 2009 that reached the same amplitude of the previous one, though in this case, at the peak of the great recession, there was a shift from a counter-cyclical in 2007 to a notorious pro-cyclical adjustment in 2009.

As a result, the economy moved away from a contraction of -5.2% in 2009 to a considerable economic growth of 6.0% in 2010, the highest recorded among the countries analysed. At its maximum and similarly to Germany' stimulus polices, a value of approximately -2% of GDP was achieved, though rather modest in comparison with Ireland and Portugal. From 2012 onwards, the fiscal stance in Sweden has been roughly neutral.

Figure 24 – Sweden's Fiscal Policy



Source: OECD, AMECO and author's calculations.

From the comparison of CAPB results obtained here with the missed estimator of Carnot & Castro (2015) the largest deviations were detected in 2008, 2009 2010. Once again, similarly to what was seen for the other countries analyzed, they occurred during a period of high disturbance in the market and, for that reason, a period when nonpolicy factors can influence the most. Specifically, according to Carnot & Castro (2015), the years of 2008 and 2009 should be treated as a counter-cyclical expansion instead of counter-cyclical tightening and a pro-cyclical tightening, respectively. In addition, 2010 should be regarded as a pro-cyclical expansion instead of a counter-cyclical expansion.

In fact, as confirmed by Jochem (2010), the stimulus was initiated by the Swedish government in 2008 with the introduction of measures both to stabilize the financial sector and preserve domestic demand through a fiscal stimulus of around 1% of GDP. Those measures include capital support to solvent banks, deposit guarantees as well as tax cuts, reductions in employer's contributions and a raise in public spending in infrastructure, education and social security.

It's also important to point out the lower amplitude of Sweden's fiscal stance when compared with countries such as Portugal and Ireland, and extremely close to Germany. So, it's an indication that Sweden was not engaged in a boom and bust cycle with large revenues windfalls followed by large revenues shortfalls.

Dimension 3: The size and composition fiscal consolidations

With respect to Germany and the extreme cases of Ireland and Portugal, in light of its reinforced fiscal position at the break of the great recession, the consolidation efforts required were quite limited in Sweden (see Table 5). This favourable position was attained as a result of a strong political commitment, a transparent fiscal policy framework and a relatively sound financial system. Notably, in 2000, it was implemented a fiscal rule to target "a government surplus of 1% of GDP on average over the business cycle" and a special council was created in 2007 to oversee and clarify the fiscal policy (Organization for Economic Co-operation and Development, 2011). In fact, during the period before the crisis, Sweden achieved a successful debt stabilization as it fell from 52.1% to 37.5% of GDP between 2001 and 2008, and no concrete consolidation policies were required as reported by Guajardo et al. (2014).

Table 5 – Sweden's Consolidation Episodes

Country	Year	Consolidation (% of GDP)	Revenue (% of GDP)	Expenditure (% of GDP)
Sweden	2011	0.10	0.00	0.10
	2012	0.50	0.00	0.50
	2013	0.60	0.00	0.60
	2014	0.60	0.00	0.60

Source: Guajardo et al., 2014; Kataryniuk & Vallés, 2015; Organization of Economic Co-operation and Development, 2011.

After the great recession, the country's economy experienced a sudden recovery relatively to its peers. Following a GDP contraction of -5.2% in 2009 the country managed to achieve a consistent economic growth in recent years. As for the fiscal balance, it turned into a deficit during the peak of the crisis between 2009 and 2014, but with considerable lower figures in comparison with the other countries here analysed. However, most remarkably, public debt remained roughly untouched around 40% of GDP. It is very likely that this was a reflect of the institutional motives aforementioned in conjunction with a relatively positive economic environment and extremely low interest rates. Indeed, Swedish long-term interest rates in after-crisis period were on average significantly smaller than in the pre-crisis period and, in comparison with the other countries analysed the difference was even more shocking (see Annex A4). The Eurozone non-membership was particularly relevant in that regard.

Still, the government announced the commitment to proceed with a fiscal tightening of 0.6% of GDP per year in a total of four. This consolidation effort was entirely composed by expenditure cuts and the roll-back of measures included in the stimulus packages was one of its most decisive contributors (Organization for Economic Co-operation and Development, 2011).

Thus, the Swedish government achieved a successful debt stabilization in the turbulent years after the great recession, between 2009 and 2013. This suggests that the consolidations were adequately conceived to generate broadly balanced budgets with the decline in tax revenue being entirely compensated by spending cuts.

Once again it was impressive the contrast both in size and composition of the consolidation strategies adopted by Sweden and Portugal. The former decided not to heighten a tax burden that was already one of the largest in the world despite the significant reduction from 49.0 to 43.3% of GDP between 2000 and 2015 (see Annex A5).

Considering the classification presented in Organization of Economic Co-operation and Development (2011), Sweden has all the characteristics of a category 4 country, with rather low consolidation needs in result of strengthened fiscal position in pre-crisis period.

4. DISCUSSION AND FINAL CONCLUSIONS

Results suggest that the most determinant condition for a successful debt stabilization is a favourable growth dynamic. For all countries here analysed, with the exception of Portugal, that stability was largely supported through exports. This means that countries with an export-led growth model and relying on a stronger competitive position were better prepared to deal with the challenges of globalization. A remarkable example is the case of Ireland, that along which in spite of having the highest public debt in 2012 managed to reduce it considerably in recent years due to an unprecedent raise in exports. This same behaviour was registered in the pre-crisis where the country reduced public debt to a historical minimum. Germany and Sweden also benefited from this comparative advantage during the period of study. Withal, it is important to point out that the standard interpretation of competitiveness as a direct consequence of unit labour costs fluctuations is quite restricted and often subject of criticism. Some doubts have been raised not only concerning the estimation of the unit labour costs but also because of the omission of crucial variables, such as capital costs, on the study of competitiveness (Mamede, 2015; Müller, Schulten, & Zuckerstätter, 2015). Thus, the correct strategy to mitigate the risks of incurring in a sovereign debt crisis is through a broad policy of economic development and not engaging in a one-side focused internal devaluation.

Another important condition to guarantee a sustainable debt stabilization was the Eurozone's membership as it was possible to notice by Sweden's extremely soundness fiscal position. That particular status protected the country against the risks of contagion in the bonds market – as interest rates remained one of the lowest in the countries studied – and from the risks of a self-fulfilling debt crisis.

As for structural reforms, evidence suggests that their role is quite limited. During the observation period, this group of countries was subject to similar measures but still their growth dynamics and debt trajectories were definitely distinct. In that respect, the tendencies observed in Germany and Portugal were paradigmatic. In the case of the former, it seems that having one of the highest scores in employment protection for permanent contracts, didn't had harmful implications on economic performance and competitiveness. While the later, suffered an economic downturn as well as a devastating surge in unemployment and working conditions deterioration, in spite of the flexibilization efforts on regular contracts after 2011 and still having the highest protection for atypical forms of work of the countries analysed. Likewise, there is no unequivocal evidence of harmful economic effects resulting from excessive employment protection as previously asserted by Piasna & Myant (2017) and Presidente (2015).

In what concerns the level of generosity of the social protection system, a decreasing tendency could be noticed in countries such as Germany and Sweden, largely affected by stricter unemployment benefits. On the other hand, in Ireland the level of generosity was roughly the same while Portugal experienced an increase strictly related with the expansion of pension benefits. Given that the available data did not comprise the most severe years of the crisis, further research is needed to give us a full assessment of that period.

Altogether, it seems that both austerity policies and competitiveness-improving structural reforms were conceived in one-size-fits-all approach without taking into consideration country-specific characteristics namely, as described by Regan (2015), the different growth regimes in Europe: a demand-led model in southern countries and an export-led model in the northern countries. Thus, it is important to proceed with further research on the role of this capitalist regimes divergency on the success or failure of fiscal consolidation policies.

With respect to the role of counter-cyclical policies, the use of these measures was truly limited during the study period. In the pre-crisis period, both Germany and Portugal achieved a successful counter-cyclical consolidation without economic stagnation, suggesting that austerity should be implemented during a boom. Later, the counter-cyclical expansionist policies initiated in 2008 were abruptly interrupted providing insufficient information, so further research is required. Yet, it was possible to register positive developments on economic growth in 2010.

Finally, when it comes to size and composition, it seems that the impact of this dimension on consolidations outcome is not direct but rather indirect through the changes it produces on economic growth. Portugal is example that validates this argument since it achieved debt stabilizations both in the period before the crisis and after 2012 regardless of the effort's size and if the measures were adopted in the revenue or expenditure side. Sill, the impact of composition on economic growth was notorious. After the great recession, Portugal was the country that relied more on revenue side measures and, as a result, suffered the most intense and enduring recession of the countries analysed. This confirms the conventional view in the literature stating that adjustments based on tax hikes produce greater distortionary effects, specifically on consumption decisions which might cause or accentuate recessions.

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ANNEXES

Annex A1 - Government Consolidated Gross Debt (% of GDP)

Geo / Time	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
European Union (28 Countries)	-	-	58.9	60.4	60.9	61.5	60.1	57.6	60.7	72.8	78.4	81.1	83.8	85.7	86.7	84.9	83.5
Eurozone (19 Countries)	68.1	67.0	66.9	68.1	68.4	69.2	67.4	65.0	68.6	78.4	83.9	86.1	89.5	91.4	92.0	90.3	89.2
Germany	58.9	57.7	59.4	63.1	64.8	67.0	66.5	63.7	65.1	72.6	81.0	78.7	79.9	77.5	74.9	71.2	68.3
Ireland	36.1	33.2	30.6	29.9	28.2	26.1	23.6	23.9	42.4	61.7	86.3	109.6	119.5	119.5	105.3	78.7	75.4
Portugal	50.3	53.4	56.2	58.7	62.0	67.4	69.2	68.4	71.7	83.6	96.2	111.4	126.2	129.0	130.6	129.0	130.4
Sweden	50.7	52.1	50.2	49.7	48.7	48.9	43.7	39.0	37.5	41.0	38.3	37.5	37.8	40.4	45.2	43.9	41.6

Source: Eurostat (2017) downloaded at http://ec.europa.eu/eurostat/web/products-datasets/-/tsdde410

Annex A2 - Government Deficit-Surplus (% of GDP)

Geo / Time	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
European Union (28 Countries)	-	-	-2.6	-3.2	-2.8	-2.5	-1.6	-0.9	-2.5	-6.6	-6.4	-4.6	-4.3	-3.3	-3.0	-2.4	-1.7
Eurozone (19 Countries)	-0.3	-2.0	-2.7	-3.2	-3.0	-2.6	-1.5	-0.6	-2.2	-6.3	-6.2	-4.2	-3.6	-3.0	-2.6	-2.1	-1.5
Germany	0.9	-3.1	-3.9	-4.2	-3.7	-3.4	-1.7	0.2	-0.2	-3.2	-4.2	-1.0	0.0	-0.2	0.3	0.7	0.8
Ireland	4.9	1.0	-0.3	0.4	1.3	1.6	2.8	0.3	-7.0	-13.8	-32.1	-12.6	-8.0	-5.7	-3.7	-2.0	-0.6
Portugal	-3.2	-4.8	-3.3	-4.4	-6.2	-6.2	-4.3	-3.0	-3.8	-9.8	-11.2	-7.4	-5.7	-4.8	-7.2	-4.4	-2.0
Sweden	3.2	1.4	-1.5	-1.3	0.3	1.8	2.2	3.3	1.9	-0.7	-0.1	-0.2	-1.0	-1.4	-1.5	0.3	0.9

Source: Eurostat (2017) downloaded at http://ec.europa.eu/eurostat/web/products-datasets/-/teina200

Annex A3 – Real GDP Growth Rate - Volume

Geo / Time	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
European Union (28 Countries)	3.8	2.2	1.3	1.4	2.5	2.1	3.3	3.1	0.4	-4.4	2.1	1.7	-0.5	0.2	1.6	2.2	1.9
Eurozone (19 Countries)	3.8	2.1	1.0	0.7	2.3	1.7	3.2	3.0	0.4	-4.5	2.1	1.5	-0.9	-0.3	1.2	2.0	1.7
Germany	3.0	1.7	0.0	-0.7	1.2	0.7	3.7	3.3	1.1	-5.6	4.1	3.7	0.5	0.5	1.6	1.7	1.9
Ireland	9.9	6.1	5.6	3.7	6.7	5.8	5.9	3.8	-4.4	-4.6	2.0	0.0	-1.1	1.1	8.5	26.3	-
Portugal	3.8	1.9	0.8	-0.9	1.8	0.8	1.6	2.5	0.2	-3.0	1.9	-1.8	-4.0	-1.1	0.9	1.6	1.4
Sweden	4.7	1.6	2.1	2.4	4.3	2.8	4.7	3.4	-0.6	-5.2	6.0	2.7	-0.3	1.2	2.6	4.1	3.3

Source: Eurostat (2017) downloaded at http://ec.europa.eu/eurostat/web/products-datasets/-/tec00115

Annex A4 - Long-term Interest Rates, 10-year maturity, EMU Convergence Criterion Series (%)

Geo / Time	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
European Union (28 Countries)	-	5.30	5.07	4.35	4.45	3.76	4.08	4.56	4.55	4.11	3.82	4.27	3.65	2.95	2.20	1.44	1.11
Eurozone (19 Countries)	5.43	5.00	4.91	4.14	4.12	3.42	3.84	4.32	4.31	3.82	3.60	4.34	3.86	2.99	2.04	1.22	0.86
Germany	5.26	4.80	4.78	4.07	4.04	3.35	3.76	4.22	3.98	3.22	2.74	2.61	1.50	1.57	1.16	0.50	0.09
Ireland	5.51	5.01	5.01	4.13	4.08	3.33	3.77	4.31	4.53	5.23	5.74	9.60	6.17	3.79	2.37	1.18	0.74
Portugal	5.59	5.16	5.01	4.18	4.14	3.44	3.91	4.42	4.52	4.21	5.40	10.24	10.55	6.29	3.75	2.42	3.17
Sweden	5.37	5.11	5.30	4.64	4.43	3.38	3.70	4.17	3.89	3.25	2.89	2.61	1.59	2.12	1.72	0.72	0.54

Source: Eurostat (2017) downloaded at http://ec.europa.eu/eurostat/web/products-datasets/-/tec00097

Annex A5 – Tax Burden (% of GDP)

Geo / Time	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Germany	36.2	35.0	34.4	34.6	33.9	33.9	34.5	34.9	35.4	36.1	35.0	35.7	36.3	36.4	36.6	36.9	-
Ireland	30.8	28.6	27.3	27.9	28.9	29.4	30.8	30.4	28.5	27.4	27.1	27.1	27.5	28.2	28.7	23.6	-
Portugal	31.1	30.8	31.2	31.3	30.2	30.8	31.3	31.8	31.7	29.9	30.4	32.3	31.8	34.1	34.2	34.5	-
Sweden	49.0	46.8	45.2	45.5	45.6	46.6	46.0	45.0	44.0	44.1	43.2	42.5	42.6	42.9	42.8	43.3	-

Source: OECD (2017) downloaded at https://data.oecd.org/tax/tax-revenue.htm