

REM WORKING PAPER SERIES

Germany as a role model for structural adjustment of peripheral Eurozone economies: the Portuguese case

Marta Silva and João Carlos Lopes

REM Working Paper 0143-2020

September 2020

REM – Research in Economics and Management

Rua Miguel Lúpi 20,
1249-078 Lisboa,
Portugal

ISSN

Any opinions expressed are those of the authors and not those of REM. Short, up to two paragraphs can be cited provided that full credit is given to the authors.



The structural adjustment of the Portuguese economy in the context of the economic reform of the Eurozone

Marta Silva^a and João Carlos Lopes^b

^a ISEG – Lisbon School of Economics and Management, Universidade de Lisboa. e-mail: 151200@aln.iseg.ulisboa.pt

^b ISEG – Lisbon Schools of Economics and Management, Universidade de Lisboa; REM – Research in Economics and Mathematics, UECE. UECE – Research Unit on Complexity and Economics. e-mail: jcflopes@iseg.ulisboa.pt

Abstract

This paper aims at analyzing the structural changes that occurred in the Portuguese economy after the 2010/2013 sovereign debt crisis, compared with what occurred in Germany and using the current debate surrounding the new reform of the Eurozone as a backdrop. We thus intend to find out whether a peripheral southern economy like Portugal and the Eurozone's nuclear economy (Germany) have become closer and, if so, what that means in terms of the sustainability of the Eurozone as a set of different economies sharing the same currency. The study will be framed in the varieties of capitalism theory and in the theory of growth regimes.

Keywords: sovereign debt crisis, growth regimes, real convergence, economic structure, varieties of capitalism, Eurozone, Portugal, Germany

JEL codes: F45, O11, O47, O52, O57

The authors acknowledge financial Support from FCT – Fundação para a Ciência e Tecnologia (Portugal), national funding through research grant UIDB/05069/2020.

1. Introduction

The 2010/2013 crisis laid bare the structural fragilities of the Economic and Monetary Union, a monetary area made up of multiple economies with very different institutional structures and growth regimes. The crisis and the European Union's subsequent response, which focused on the correction of imbalances in southern economies, have had a profound impact on all European economies, particularly undermining southern economies' convergence to the level of development of northern countries. This scenario has brought new life to the debate on the reform of economic governance of the Eurozone, and there have already emerged many propositions that, if fulfilled, will have an important impact on the economies of the euro area.

This paper aims at comparing the structural evolution of the Portuguese economy, a typical southern European peripheral economy, with that of Germany, the Economic and Monetary Union's model economy, using the debate on the new reform of the Eurozone as a backdrop. We will thus analyze a set of variables in Portugal and in Germany, before and after the crisis, in order to assess whether the Portuguese economy has become closer to the German model regarding its institutional structure and growth regime, and what that means for the sustainability of the Eurozone. The analysis will be based on the Varieties of Capitalism framework and the theory of growth regimes.

The paper is organized as follows. The theoretical framework is presented in section 2, focusing on the connections between the two theories, followed by a brief discussion of the new reform of the Eurozone. Section 3 presents the methods used and section 4 presents some empirical results of the analysis of the evolution of a set of variables relevant in the context of the theoretical framework. Real convergence and sectoral specialization are also analyzed in this section. Section 5 concludes.

2. Theoretical framework

2.1. Varieties of Capitalism

The Varieties of Capitalism (VoC) theory provides a framework that divides national political economies into three different typologies according to their structure: coordinated market economies (CMEs), liberal market economies (LMEs) and mixed market economies (MMEs).

These three types of economies have different institutional economic structures, leading them to choose different macroeconomic policies (Fioretos, 2001; Hall & Soskice, 2001).

The typical CME is Germany, where the main actors in industrial relations are strong and centralized producers' associations and trade unions, both seeking to control wage growth and inflation in order to maintain competitiveness. This allows for the existence of coordinated wage bargaining that arises in the industrial exporter sector and spreads to the sectors that are sheltered from international competition (eg. the public and the non-tradeable goods sectors) (Hassel, 2014). The existence of coordinated wage bargaining, along with an advanced welfare state and robust labor protection, encourages companies and workers to engage in vocational training, which allows workers to develop very specific skills. The labor market therefore favors incremental innovation (that is gradually put in place and aims at long-term results). This means that CMEs usually specialize in the production of quality differentiated goods that are not very dependent on price competitiveness, as is the case of machinery, high precision tools, transport equipment, motors, etc. (Hall & Soskice, 2001).

The big international financial centers (e.g. the USA and the UK) are in turn the classical examples of LMEs, in almost everything opposite to CMEs. These economies feature highly flexible labor markets, with weak trade unions and labor protection. Therefore, and although there is no coordinated wage bargaining like in CMEs, the flexibility of the labor market and the weakness of trade unions allow for low inflation and unit labor costs (ULCs) (Hall, 2018). Having dynamic and flexible capital markets, these countries usually specialize in radical innovation, producing semiconductors, high technology products, telecommunications, pharmaceutical products, etc. (Hall & Soskice, 2001).

Lastly, in an intermediate position between CMEs and LMEs are the MMEs of southern Europe, Portugal being one of them. MMEs are mostly made up of relatively recent democracies, where the state plays a relevant role in economic activity and in managing industrial relations, acting as a compensator for the inefficiencies of this less "pure" type of capitalism (Molina & Rhodes, 2007; Kuokstis, 2015). Given the fact that trade unions are usually relatively strong but fragmented and showing different political tendencies, there is no coordinated wage bargaining,

but instead there are occasional short-term social pacts (Hassel, 2014). These countries traditionally specialize in low-cost goods that are intensive in low-skilled labor and thus very dependent on price competitiveness (Costa, 2012). Since the labor market is less flexible than in LMEs, but there is no wage negotiation focused on competitiveness like in CMEs, MMEs are prone to high levels of inflation, that they made up for with currency devaluation before the introduction of the euro (Hall, 2018).

2.2. Growth regimes

The growth regimes literature, very close to the post-Keynesian school of thought, gained notoriety in the aftermath of the 2010/2013 crisis, as it is frequently used to explain the origins of the crisis and the fragilities in the architecture of the euro. There are a great variety of terms used to refer to the different growth regimes, but the most common distinction is between export-led and demand-led regimes.

As the name suggests, a country with an export-led growth regime usually has a positive current account, with the biggest contribution to GDP coming from exports. This means that these countries are highly dependent on the dynamics of global demand, that is, demand generated by demand-led countries (Hein, 2019). Hein & Mundt (2013) also identify a weak export-led type of growth, featuring a positive current account but a negative contribution of net exports to GDP growth, owing to growing domestic demand or a decrease in net exports over time and thus reflecting a decrease in competitiveness.

On the other hand, the definition of a demand-led regime is somewhat more complicated since the domestic demand that fuels growth can have different sources. Although demand can be generated by wage growth, the most common model, and the one found in southern Europe before the euro crisis, is demand fueled by debt, arising from financialization and easy access to credit. This regime is highly unstable and is characterized by a positive contribution of domestic demand to GDP growth, while the current account usually runs a deficit (Hein, 2019).

The European Union can thus be divided into an export-led core, consisting of Germany and other northern European countries (Austria, Belgium, Netherlands, the Nordic countries) and a demand-led periphery that is highly dependent on the indebtedness of families and that consists

of southern Europe (Italy, Spain, Portugal, Greece) (Gamberotto & Solari, 2015; Stockhammer & Kohler, 2019). These two growth models are highly interdependent and unstable.

2.3. Varieties of Capitalism and Growth Regimes

The connections between the two frameworks described above have been explored by post-Keynesian authors as well as by authors of the VoC school. Growth regimes and VoC are closely linked, because a given institutional infrastructure tends to favor and even reinforce a specific growth regime (Regan, 2015; Hall, 2018; Perez & Matsaganis, 2018).

Due to its institutional structure, which favors coordinated wage bargaining to restrain wage growth and the existence of vocational training to increase workers' skills, northern Europe's CMEs are usually export-led. These countries' institutional structure also favors conservative fiscal policy and the existence of an independent Central Bank, which enforces restrictive monetary policy (Hope & Soskice, 2016). This also allows these countries to contain inflation and maintain competitiveness in the export sector, leading to the accumulation of current account surpluses (Hancké, 2013; Hall, 2018).

On the other hand, both LMEs and MMEs are usually demand-led, since they lack the necessary institutional structure to restrain wages and increase workers' skills. Fiscal and monetary policies in these countries tend to be expansionary in order to support domestic demand, leading to current account deficits (Hancké, 2013; Hall, 2018). The situation tends to be more problematic in the MMEs of southern Europe, where trade unions are decentralized but more powerful than in LMEs, especially those in the sheltered sector. Therefore, these economies have trouble containing rising ULCs and, therefore, inflation arising in the sheltered sector, leading to an increase in domestic demand and competitiveness problems that were solved using currency devaluation before the introduction of the euro (Hall, 2012; Hassel, 2014; Johnston et al, 2014).

2.3.1. Varieties of Capitalism and Growth Regimes in the Eurozone

Bringing together many economies with very different institutional structures, the Economic and Monetary Union (EMU) was built in the image of German ordoliberalism, focusing on controlling inflation and turning Germany into the model economy of the Eurozone (EZ) (Bulmer & Paterson, 2013; Nedergaard & Snaith, 2015; Vermeiren, 2017). The coexistence of

countries with very different institutional structures and growth models in the same monetary area and the European Union's (EU) attempt to promote economic convergence have thus favored the export-led growth models of CMEs and created a highly unstable scenario (Baccaro & Pontussen, 2016; Johnston & Regan, 2018).

First, by eliminating the possibility of currency devaluation for members of the EZ, the EMU has reinforced the competitiveness of CMEs (Iversen et al, 2016). Furthermore, the European Central Bank's (ECB) main role is to control inflation, a principle that is completely in line with German ordoliberalism and the export-led growth model (Fioretos, 2001). The competitiveness of Southern countries has in turn suffered not only with the rise of ULCs (which they now can't make up for with currency devaluation), but also with competition coming from China and eastern Europe since the early 2000s. This is problematic because these countries have export structures very similar to that of southern Europe, specializing in the production of low-cost goods that are very dependent on price competitiveness (Simonazzi et al, 2013; Nölke, 2016; Dooley, 2018).

Lastly, financialization also contributed to the worsening of instability in the EZ. With the disappearance of foreign currency risk in the EMU, southern countries saw their interest rates decrease, making access to credit easier and fueling domestic demand (Scharpf, 2011; Parker & Tsarouhas, 2018). However, most of that credit was not channeled to productive activities, but instead to the non-tradeable goods sector, characterized by low productivity but quick profit, as is the case of the construction and real estate sectors (Rodrigues & Reis, 2012). This explains why there was a huge capital flow from the center to the periphery in the 2000s, with northern surpluses fueling southern deficits (Stockhammer, 2011; Parker & Tsarouhas, 2018).

CMEs and MMEs have an almost symbiotic relationship, with the performance of northern Europe's export-led countries being highly dependent on demand generated in the South, since the EZ is an almost closed economy (Stockhammer, 2011; Stockhammer, 2016; Johnston & Regan, 2018). Because demand in MMEs is based on the indebtedness of families, and because the members of the EZ can't use the exchange rate to make up for losses in competitiveness, a particularly unstable scenario arose, which would lead to the 2010/2013 crisis (Streeck &

Elsässer, 2016). Monetary integration has thus turned the coexistence of different varieties of capitalism into something very unstable.

2.3.2. *The crisis and the post-crisis period*

The euro crisis arose due to the frailties inherent to the architecture of the EMU, in the aftermath of the 2008/09 crisis, laying bare the unstable nature of the euro. Given the huge impact of the crisis and its management by the EU on European economies, especially in southern Europe, it is only natural that many authors have already tried to analyze the crisis, its causes and consequences.

The VoC literature identifies the competitiveness problems that arose in the South as the main cause of the crisis, those problems being closely related to these countries' structural inability to control ULCs and made worse by wage restraint in CMEs (Hancké, 2013; Johnston et al, 2014; Kuokstis, 2015). On the other hand, the post-Keynesian school emphasizes the instability resulting from financialization and private indebtedness in the South, financed by northern surpluses and fueled by monetary integration (Scharpf, 2011; Hein, 2019; Stockhammer & Kohler, 2019). However, there are now more and more contributions that look at these two factors together (Stockhammer, 2011; Hassel, 2014; Nölke, 2016).

The EU's response to the crisis focused mainly on the correction of excessive deficits of the current account that southern economies had accumulated in the years before, naming those countries' "irresponsibility" as the main cause of the crisis (Stockhammer, 2011; Gambarotto & Solari, 2015). Deprived of the possibility of currency devaluation to enhance competitiveness and promote exports, southern countries were forced to follow a strategy of internal devaluation and flexibilization of the labor market, in order to decrease ULCs and domestic demand (Steinberg & Vermeiren, 2016; Parker & Tsarouhas, 2018). This means that although southern deficits essentially corresponded to northern surpluses, the weight of adjustment fell mostly on MMEs, with serious social consequences and deepening the recession and the peripheric nature of southern European countries even more (De Grauwe & Ji, 2014; Gambarotto & Solari, 2015; Perez & Matsaganis, 2018; Kohler & Stockhammer, 2020).

The EU's adjustment strategy materialized through the reinforcement of the Stability and Growth Pact, with the introduction of the fiscal compact, the six pack and the two pack. This meant a growing transfer of competences to the European Commission, especially regarding the monitoring of fiscal and macroeconomic imbalances (Falkner, 2016). However, given the deep impact of adjustment on the structure of the economies of the South and the resurgence of nationalist and populist parties all over Europe, there are now concerns regarding the EU's democratic legitimacy to force these types of reforms on sovereign States (Höpner & Schäfer, 2010; Scharpf, 2015; Falkner, 2016).

The structural reforms enforced by the EU aimed essentially at transforming the economic structure of southern economies, trying to bring them closer to the northern European model (Hall, 2014; Scharpf, 2016; Hall, 2018). This translated into an attempt at transforming their growth model into an export-led growth regime, reinforcing their exports and reducing their imports (Felke & Eide, 2014; Vermeiren, 2017). The reforms were also an attempt at transforming Southern MMEs into LMEs like the United Kingdom, and not CMEs like Germany, since southern countries lack the institutional structure that allows Germany to keep its export competitiveness. This resulted in a reduction of trade unions' power and of labor protection in the South, as well as a wave of privatizations (Hall, 2018).

But changing a country's economic structure is a very difficult and painful process because its institutional design tends to reinforce its growth model, and vice-versa. So, it is only natural that there are concerns regarding the reforms' success and desirability, considering the heavy burden they bring onto the population. First, although the reforms were successful in liberalizing labor relations, their success at reorienting southern economies towards exports is doubtful. Although there was in fact an increase in exports in southern countries, austerity had an even greater impact on domestic demand. The export sector is thus still relatively small, especially in Greece (Vermeiren, 2017). Excessive concerns about ULCs also caused Southern exports to become even more dependent on price competitiveness, as there was no transition to more complex and higher quality products (Simonazzi et al, 2013; Kohler & Stockhammer, 2020). Besides, since the EU is an almost closed economy, some countries need to run deficits in order

to accommodate the surpluses of export-led countries. This is why the export-led growth strategy is often referred to as “beggar-thy-neighbor” (Johnston & Regan, 2018; Kohler & Stockhammer, 2020). The solution to this problem has been to reorient southern exports to markets outside the EU (Felke & Eide, 2014), leaving these countries more vulnerable to appreciations of the euro (Steinberg & Vermeiren, 2016).

Not all countries have the institutional structure necessary to successfully follow a growth strategy based on exports, meaning that the model that currently exists in southern Europe is highly unstable. If, on one hand, we can assume that the South has become export-led (Hein, 2019), it is also possible in turn to identify a debt- and austerity-driven depression model (Kohler & Stockhammer, 2020), considering the serious depression that austerity forced onto these countries. We thus risk the perpetuation of “growth models without growth” in the EZ (Hall, 2018), a situation that can condemn the periphery to many years, or even decades, of weak economic growth (or near stagnation), hindering real convergence to central and northern Europe’s level of development (Johnson & Papageorgiou, 2020).

2.4. The new reform of the Eurozone

The euro crisis has laid bare the need to reform the EZ in order to make it more resistant to future crises, making not only southern countries but also northern Europe bear the weight of adjustment, contrary to what happened during the 2010/2013 crisis. Recovery based on internal devaluation is seen by many authors as insufficient and harmful, and many find that it is preferable to follow a strategy based not only on the reinforcement of southern competitiveness, but also on the promotion of internal revaluation in countries like Germany, in order to boost domestic demand and reduce surpluses there (Simonazzi et al, 2013; Johnston & Regan, 2015; Parker & Tsarouhas, 2018).

However, over the last few years Germany has accumulated ever bigger surpluses and the response to the crisis has been framed by the principles of German ordoliberalism, so it is very unlikely that a solution that threatens this scenario will ever be adopted (Steinberg & Vermeiren, 2016; Johnston & Regan, 2018; Hein 2019).

There are many concrete proposals to reform the EZ, aiming at providing the members of the EMU with a greater ability to resist future crises in an integrated and cohesive way. First, many countries recognize the need to complete the Banking Union, that was created as a response to the crisis, but that is yet to be completed. However, the weak consensus surrounding the Banking Union doesn't apply to the rest of the proposals, making it possible to divide EZ members into two groups: those that defend a stability union (keeping the current status quo) and those that support the deepening of integration through a fiscal union (Hacker & Koch, 2017). This means that proposals that could have a relevant impact, such as the creation of an EZ budget, EZ bonds and automatic stabilizers like European unemployment benefits, are far from gathering consensus (Parker & Tsarouhas, 2018). The desired level of integration varies from country to country, with southern countries generally seeking deeper integration and northern countries preferring to maintain the status quo. But there are concerns coming from both sides regarding the success to these proposals, because many fear that they will result in the creation of a transfers union, with the periphery being unable to develop (like the Italian *Mezzogiorno*) and becoming ever more dependent on the core (Scharpf, 2016; Streeck & Elsässer, 2016).

Structural imbalances in the EZ thus still remain and the debate surrounding the new reform has been losing ground to more urgent matters¹. It is likely that different varieties of capitalism and growth regimes will continue to coexist in the same monetary area in an unstable way, translating into weak growth and real divergence, bringing about the conditions to the rise of new crises and forcing peripheral countries to bare the weight of adjustment.

3. Methods and databases

The following empirical analysis covers a period spanning from 1995 until the most recent available information. This long period has been divided into shorter subperiods for the analysis of the contribution of each component to GDP growth and for the sectoral analysis.

¹ The sanitary emergency brought about by Covid 19 and the subsequent very serious economic recession will be an important test to the future of the Eurozone and of the European Union itself. The joint solidary response to this crisis, namely the recovery program with a big transfers component (new generation EU), can be decisive for highly indebted peripheral countries, at least in the foreseeable future. But we don't know yet whether this will be enough, in the medium and long run, and whether the strict fiscal frame of the EMU won't be prematurely reintroduced, in a context of great indebtedness and incomplete recovery.

Regarding growth regimes, the contribution of each component to GDP growth in each time period corresponds to the weight of that component's variation over GDP variation. This means, for example, that the contribution of private consumption (C) to GDP (Y) growth in 1995-2001 can be written as follows:

$$\text{Contribution of } C = \frac{(C_{2001} - C_{1995})}{(Y_{2001} - Y_{1995})}$$

For the analysis of product specialization in both countries we used the Krugman Specialization Index (K), measuring the distance between a region's productive structure and the productive structure of the reference region (European Central Bank, 2004). The calculations were performed for 38 sectors, using total employment and gross value added (GVA). The index is computed as follows:

$$K = \sum_{i=1}^I |b_i - \bar{b}_i|$$

In this case, b_i corresponds to the ratio employment/GVA in sector i over the ratio total employment/GVA in Portugal and \bar{b}_i corresponds to the same measure in Germany. The index can take values between 0 and 2: lower values reflect similar productive structures in the two countries and higher values reflect a very different product specialization in the two countries.

Lastly, sectoral convergence was calculated using labor productivity, measured as:

$$\text{Productivity} = \frac{GVA}{\text{total employment}}$$

The variables concerning VoC were obtained using multiple databases. ICTWSS (Database on Institutional Characteristics of Trade Unions, Wage Setting, State Intervention and Social Pacts), version 6.1 of November 2019, drawn up by the Amsterdam Institute of Advanced Labour Studies of the University of Amsterdam, provided information on the following variables: trade union density, wage bargaining coverage, type of wage bargaining coordination, State intervention in wage bargaining and sectoral organization of industrial relations. From Eurostat's database we obtained information regarding temporary employment contracts and continuous

vocational training. Lastly, from OECD.Stat, OECD's database, we obtained data relating to the strictness of employment protection.

In the section about growth regimes, the following variables related to foreign trade (all at current prices) were extracted from AMECO (Annual Macro-economic Database of the European Commission's Directorate General for Economic and Financial Affairs): GDP, exports of goods and services and imports of goods and services. The following variables related to the contribution of the many components to GDP growth were also obtained from AMECO (all at constant prices): GDP, private consumption, investment, public consumption, exports and imports. The decomposition of the Balance of Payments (current account, capital account and financial account), the decomposition of the current account (balance of goods, balance of services, primary income and secondary income) and data concerning the net international investment position were all obtained from the Balance of Payments statistics of Banco de Portugal, for the Portuguese case, and of the Bundesbank, for the German case. Macroeconomic convergence was calculated using GDP per capita in Purchasing Power Parity, also obtained in AMECO.

Lastly, in the section about product specialization, the information about the Economic Complexity Index was obtained from the Observatory of Economic Complexity, an online data viewing tool about international trade, developed by the Macro Connections group at the MIT Media Lab. The Krugman Specialization Index and sectoral convergence were computed using GVA at current prices and total employment, extracted from INE (*Instituto Nacional de Estatística*), for the Portuguese case, and from Eurostat, for the German case.

4. Empirical analysis

4.1. Varieties of Capitalism

Although the German model is viewed by many as the most successful in the EZ, southern countries don't possess the institutional structure that allows Germany to contain ULCs and specialize in quality differentiated and high technology goods, promoting its success as an exporting country. For this reason, the EU response to the crisis in Southern MMEs focused mainly on the liberalization of their economic structure, especially the labor market, in an attempt

at transforming these economies into LMEs, and not CMEs. These pressures were reinforced with the 2010/2013 crisis, but the liberalization process is an old and relatively generalized trend, encompassing not only southern countries, but also the CMEs of northern Europe.

It is therefore necessary to assess whether the Portuguese economic structure transitioned towards a purer variety of capitalism after the EZ crisis, that is, a LME, which is apparently better capable of facing crises than southern MMEs. However, it is also important to evaluate whether this generalized trend towards liberalization has affected Germany, the model economy of the EZ and the typical example of a CME. It will then be possible to assess whether the institutional structure of both countries has become closer in recent years.

First, both Germany and Portugal have seen their unionization rates decrease since the second half of the 1990s. Starting from similar and already somewhat reduced levels in 1995, unionization rates are currently at historically low levels in both countries. This might not be very surprising for a MME like Portugal, where trade unions are traditionally strong but very partisan and fragmented, but it means a relevant change for a CME like Germany.

Regarding collective negotiation, the tendency for liberalization is more apparent in Germany than in Portugal. Showing a clear downward tendency over time, the percentage of workers covered by collective bargaining in Germany is currently much lower than in 1995, having gone from about 81% to 56% in 2016. On the other hand, Portugal recorded periods of rising and lowering collective negotiation levels since the second half of the 1990s, showing a much less marked tendency for liberalization: the country went from about 78% of workers covered by collective bargaining in 1995, to about 74% in 2016 (Table 1).

Table 1 – Collective bargaining coverage rate (as a % of employed paid workers with a right to bargain)

	1995	2000	2005	2010	2015	2016
DEU	80,8	67,8	64,9	59,8	56,8	56,0
PRT	77,5	78,4	83,2	76,7	73,6	73,9

Source: ICTWSS, version 6.1

Although the evolution of union density and collective bargaining coverage might show a tendency towards liberalization, the structures of wage bargaining coordination have remained

more or less unchanged in both countries. As is shown in Table 2, the high level of wage bargaining coordination that existed in Germany in the 1990s, a typical feature of a CME, has endured until now, regardless of the 2010/2013 crisis. Through pattern bargaining, strong trade unions and employers' associations seek to extend collective agreements to other negotiation processes and, in this way, to achieve cross-sector coordination and wage restraint. This type of coordination does not exist in Portugal, which has seen a higher level of government intervention in wage setting in areas like public sector wages and minimum wage since 2010. This type of government intervention in the labor market, along with the institutional weakness of trade unions and employers' associations, are a typical feature of a MME (Molina & Rhodes, 2007).

Table 2 – Type of wage bargaining coordination

	1995	2000	2005	2010	2015	2016	2017
DEU	2	3	2	2	2	2	2
PRT	3	3	3	1	1	1	1

1-Government signals (public sector wages, minimum wage)

2-Pattern bargaining

3-Intra-sectoral negotiation (informal centralization)

Source: ICTWSS, version 6.1

The tendency towards liberalization seems to be absent in vocational training. Both in LMEs and MMEs there isn't a big investment in continuous vocational training of workers within the company, contrary to what happens in CMEs. For this reason, workers tend to have general and low-specialization skills in LMEs and MMEs, and very industry-specific skills in CMEs (Hall & Soskice, 2001). It is then only natural that there has been a reinforcement of continuous vocational training in Germany since 2005 (Table 3). But Portugal has also seen an improvement in workers' specific skills. In 2005, about 44% of Portuguese companies provided continuous vocational training; in 2015, this number had evolved to 75%, a number very close to the German level (about 77%).

Table 3 – Companies providing vocational training (as a % of all companies)

	DEU	PRT
2005	69,5	44,1
2010	72,8	64,6
2015	77,3	75,0

Source: Eurostat

Finally, the evolution of social protection and employment stability reveals a liberalization trend much more evident in Portugal than in Germany and reflects the profound impact of the 2010/2013 crisis on the Portuguese economy. In 2013, Germany showed the same level of employment protection it had in 1995, measured in terms of the costs of the dismissal of workers. On the other hand, Portugal registered a clear deterioration of employment protection during the crisis, as both individual and collective dismissals became easier. Besides, the percentage of workers with temporary employment contracts in Portugal was almost three times higher in 2018 than in 1995. In 1995 this percentage was lower than in Germany, but in 2018 it was almost twice the German number. Germany in turn registered only a small increase in this type of contracts in the same period.

Although the tendency for liberalization is evident in both countries, the 2010/2013 crisis had a greater impact in Portugal, especially regarding employment protection and stability. But it is not yet possible to say that Portugal has become a LME, since the country still shows the typical features of a MME, e.g. a high level of government intervention in the labor market. Despite generalized pressures towards liberalization and the evolution of both economies in the same direction, Portugal and Germany are not much closer at an institutional level now than they were before the crisis. This goes in line with the notion that an economy's institutional structure tends to endure over time, and it is very difficult to significantly change it.

4.2. Growth models and macroeconomic convergence

The response to the crisis in southern Europe focused not only on the liberalization of the labor market, but also the promotion of an export-led growth strategy according to the German model. It is thus relevant to observe whether the export-led growth model was reinforced in Germany after the 2010/2013 crisis, and whether there was a shift from a debt-based demand-led growth model to a growth strategy based on exports in Portugal.

4.2.1 – Foreign trade and the Balance of Payments

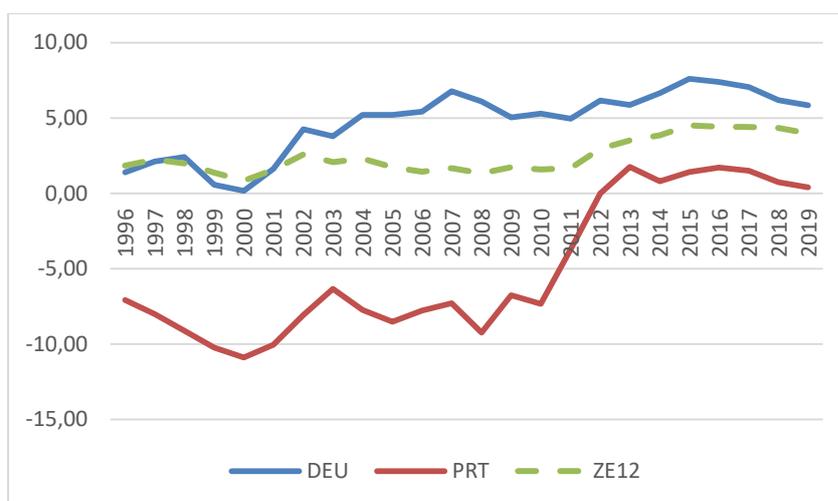
Since the early 2000s, the German economy has been much more open to foreign trade than the Portuguese economy, that is, the weight of foreign trade (exports and imports) on GDP is bigger in Germany than in Portugal. Germany is also more open to foreign trade than the 11

original EZ members plus Greece (EZ12), while in Portugal the contrary is true. However, in the post-crisis period the two countries have become closer due to an increase in the degree of openness of the Portuguese economy.

Since 1995, both the EZ12 and Germany have recorded a coverage rate of imports by exports over 100%, which means both regions hold a strong competitive position. But Portugal always registered a coverage rate below 100% during this period, reflecting a weak competitive position. This trend ended in 2013, with Portugal recording a coverage rate above 100% since then, although still below the German and EZ12 levels.

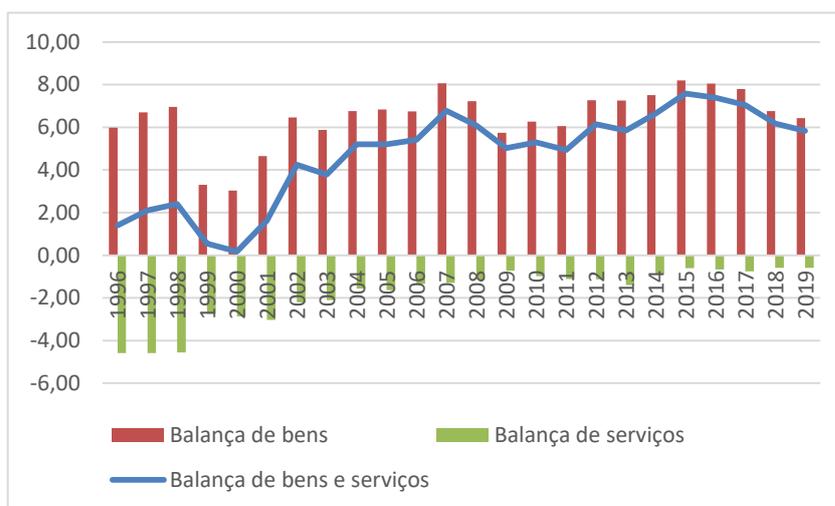
As is shown in Figure 1, the balance of goods and services is very different in Germany and in Portugal throughout the period analyzed. The German balance of goods and services has never run a deficit since the second half of the 1990s, showing quick improvement in the early 2000s and recording surpluses above 4,5% of GDP since then, even during the international financial crisis of 2008 and the subsequent EZ crisis. This clearly reflects the country's growth strategy based on exports. On the other hand, Portugal's net exports have always been negative since 1995, reaching values under -10% of GDP at the turn of the millennium. This trend was only reversed in the post-crisis period, with Portugal registering a slight surplus in the balance of goods and services since 2012, which is a sign of the European strategy's focus on the correction of external imbalances in deficit countries.

Figure 1 – Net exports as a % of GDP



Sources: AMECO, Banco de Portugal and Bundesbank

Figure 2 – Germany: Decomposition of the balance of goods and services as a % of GDP

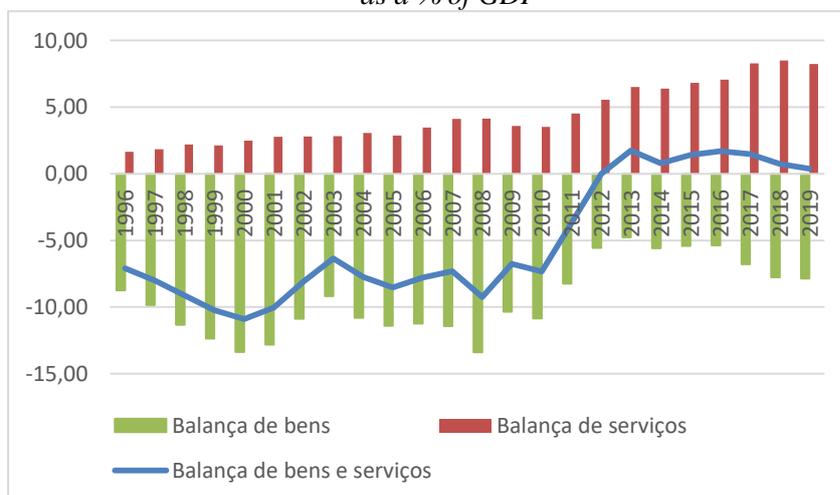


Source: Balance of Payments' Statistics of the Bundesbank

Although the recovery of Portuguese net exports after the crisis has brought the country closer to the German position, this doesn't mean that Portugal is now following a strategy in all similar to that of Germany. As Figure 2 shows, Germany's success is based on a positive balance of goods, that since 2002 has always remained above 2% of GDP, while the German balance of services has always run a deficit since the second half of the 1990s.

The Portuguese balance of goods and services shows an opposite trend, as seen in Figure 3: Portugal has a negative balance of goods and a positive balance of services since 1996.

Figure 3 – Portugal: Decomposition of the balance of goods and services as a % of GDP



Source: Banco de Portugal

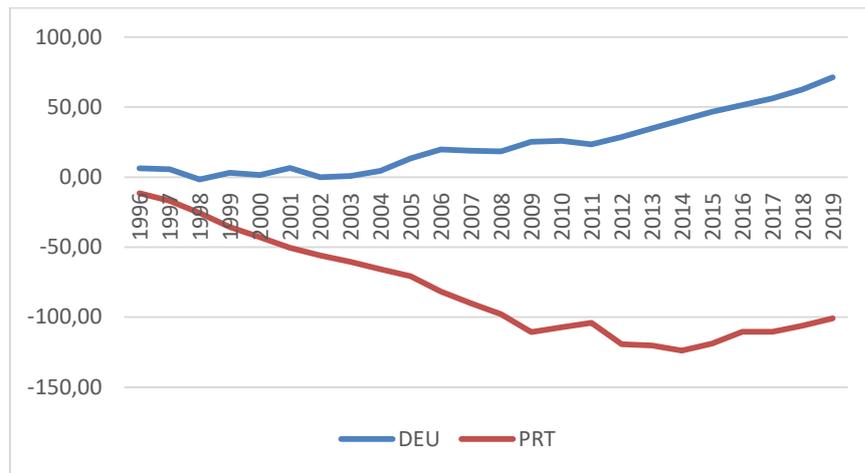
Despite the slight reduction of the balance of goods deficit in 2011, the true fuel for Portuguese recovery has been the balance of services, which more than doubled between 2010 and 2019. The balance of goods and services recovery thus came mainly as a result of growing exports of services and not exports of goods, unlike in the German case.

Regarding the Balance of Payments, Portugal and Germany show opposite trends over time. Germany had a slightly positive financial account and a slightly negative current account until 2001, when it quickly reversed this situation. Since then, the country consistently records a negative financial account and a current account surplus over 4% of GDP. By looking at the German current account in detail, it is easy to confirm that its quick recovery in the early 2000s was due to an improvement in the balance of goods and in the primary income, which was made possible by the growing profits of German multinationals abroad (an advantage that doesn't exist in Portugal).

On the other hand, Portugal has always registered current account deficits and financial account surpluses, until it inverted this trend in 2013. The recovery of the Portuguese current account after the crisis was due to a slight recovery in the balance of goods and a sharp improvement in the balance of services, with primary income staying negative and secondary income growing slightly due to emigrants' remittances.

Lastly, the state of the current and financial accounts translates into the evolution of external debt, an important indicator for a country's sustainability that is measured, in this case, through the net international investment position (IIP). As is shown in Figure 4, beginning at a similar level, since 2004 the German IIP started to improve progressively. However, the Portuguese IIP was already in a trajectory of rapid deterioration since the second half of the 1990s, sinking to about -124% of GDP in 2014. After the EZ crisis, the situation began to stabilize in Portugal, which currently shows a slight improvement in its IIP (it was about -101% of GDP in 2019). Germany's IIP has in turn maintained its upward tendency, having reached 71% of GDP in 2019. This means that the German economy is currently much more sustainable than the Portuguese one.

Figure 4 – Net international investment position as a % of GDP



Source: Balance of Payment statistics of Banco de Portugal and the Bundesbank

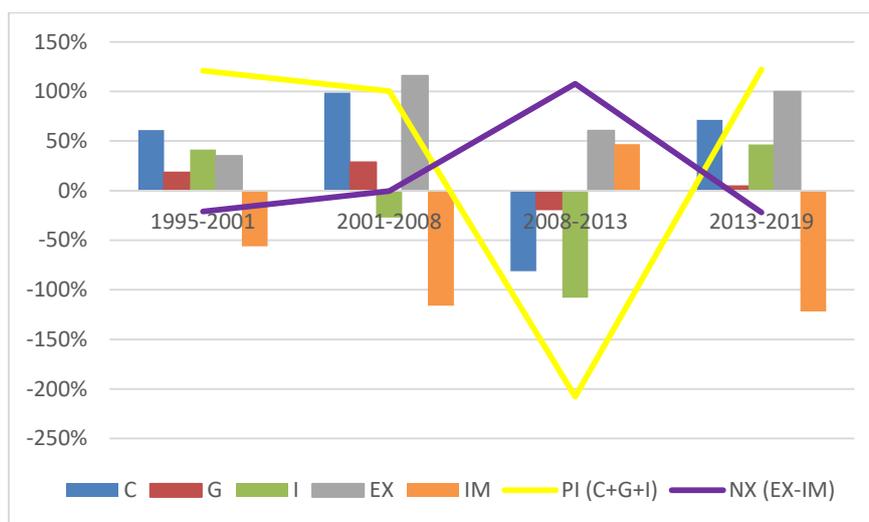
4.2.2. Economic growth and the contributions of the components of GDP

Looking at the average annual growth rate (AAGR) of GDP in both countries, as well as in the EZ12, it is possible to observe four distinct periods. Between 1995 and 2001 there was an expansion period, with accelerated growth in the three regions, especially in Portugal. A stagnation period followed in 2001-2008, with all the regions recording little GDP growth (especially Portugal). The 2008-2013 period corresponds to the two big crises: the international financial crisis of 2008/2009 and the subsequent EZ crisis. Both Portugal and the EZ12 showed negative AAGR of GDP in that period, while Germany was able to maintain a slight GDP growth. The period that followed (2013-2019) was a time of recovery, with the three regions showing AAGR of GDP around 2%.

Before the crises period, domestic demand (DD), composed of private consumption (C), public consumption (G) and investment (I), had a very important contribution to Portuguese GDP growth, unlike the balance of goods and services (NX), comprising exports (EX) minus imports (IM). Private consumption contribution to GDP growth was about 99% during the stagnation period, almost matching the contribution of exports in that same period (Figure 5). However, in 2008-2013 the situation was reversed and the balance of goods and services became the fuel for Portuguese GDP growth, due to a dramatic decrease in imports, leading their contribution to become positive (about 47% of GDP). Domestic demand started contributing negatively to GDP

growth during this time, mainly due to the negative contributions of private consumption (about -81%) and investment (about -108%). This fall in consumption and investment reflected the profound impact of the European strategy of crisis management on a demand-led country like Portugal. During the period of recovery, the situation reversed almost entirely to the pre-crisis scenario. However, the contributions of private and public consumption remain below the 2001-2008 levels and exports still provide the main positive contribution to GDP growth.

Figure 5 – Portugal: The contribution of the components of GDP to GDP growth (as %)



Source: AMECO and own calculations

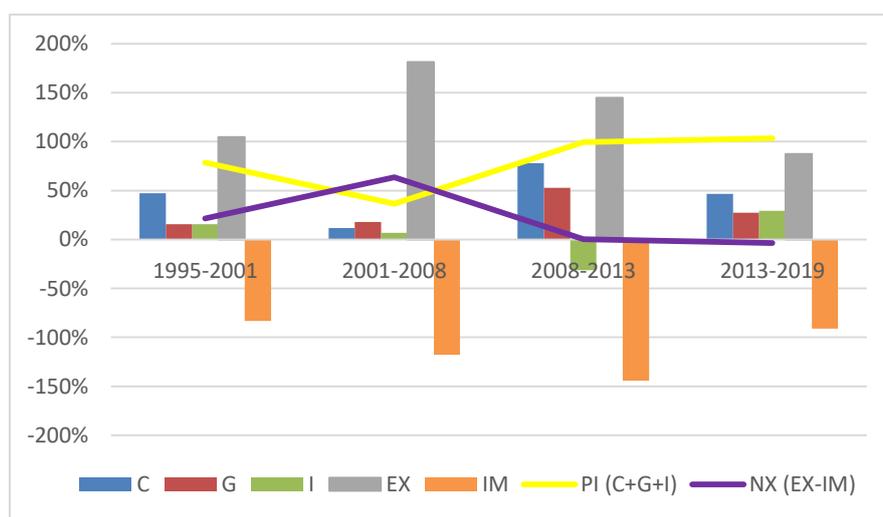
It is thus possible to identify an export-led type of growth in Portugal during the crisis period. However, since the AAGR of GDP was negative in that period, it is difficult to speak of a truly successful export-led strategy in Portugal (Kohler & Stockhammer, 2020). In the recovery period the situation became less clear, with Portugal reversing to the pre-crisis scenario, calling into question the success of the export-led growth model in the country once again. This transitional scenario in the recovery period, when Portugal recorded a slight current account surplus but a negative contribution of net exports, can be defined as a weakly export-led growth model, arising due to a decrease in the country’s competitiveness (Hein & Mundt, 2013).

The evolution of the situation in the EZ12 is more similar to that of Portugal than Germany, but the contribution of private consumption was never as important as in Portugal and the contribution of the balance of goods and services was always more relevant to the EZ12 than to the Portuguese economy. The EZ12 also went from a demand-led to an export-led growth

model during the crisis (although the region as a whole also registered negative AAGR of GDP during this time) and then reverted back to the pre-crisis situation during the recovery period.

The scenario in Germany is very different. Figure 6 clearly shows Germany's strong bet on exports, that always provided the main contribution to the country's GDP growth. During the stagnation period, the contribution of NX to GDP growth was even higher than the contribution of domestic demand. In the crises period there was a slight change: Germany's expansionary efforts translated into an increase in the contribution of private consumption and public spending, as the country focused on the domestic market to fight the crisis and compensate for the decrease in world trade. In the recovery period the negative contribution of imports was even slightly higher than the contribution of exports, but there was also a deep reduction in public spending (about half the contribution of the previous period) and private consumption (about half the contribution of exports). Considering that in 2013-2019 exports still represented by far the biggest positive contribution to German GDP and that the country recorded a significant current account surplus in that time, and bearing in mind the reduction in the contribution of private consumption, Germany appears to have kept its export-led growth model after the crises.

Figure 6 – Germany: The contribution of the components of GDP to GDP growth (as %)



Source: AMECO and own calculations

In conclusion, the two countries are now closer than before the crisis, given Portugal's apparent shift to an export-led strategy, even if with questionable success, and the expansion of

private consumption in Germany. However, both countries seem to be reverting to their pre-crisis situations.

4.2.3 – Macroeconomic convergence

Following the analysis of macroeconomic growth, it is also relevant to look into real convergence between the Portuguese and German economies, that is, whether Portuguese GDP per capita has become closer to the German level.

According to the evolution of both countries' AAGR of GDP per capita in Purchasing Power Parity (PPP), as seen in Table 4, Portugal had always grown faster than Germany until the crises period, converging to the German level even during the first decade of the euro. However, during the crises Portugal began to diverge from Germany's level of development, recording negative growth (although Germany's growth also slowed down considerably). After the crises, both economies clearly recovered, with Portugal resuming the process of real convergence.

Table 4 – Average annual growth rate of GDP per capita in Purchasing Power Parity (as %)

	1995-2001	2001-2008	2008-2013	2013-2017
DEU	1,30	1,31	0,86	1,47
PRT	3,23	1,57	-1,35	2,06

Source: AMECO and own calculations

The evolution of relative GDP per capita in PPP (Table 5) offers similar conclusions. Until the time of the crises there was real convergence, with Portuguese GDP per capita in PPP becoming almost 70% of the German level in 2008. But convergence during the pre-crisis period was much lower than what had been expected as a result of monetary integration (Banco Central Europeu, 2015). In the crises period, Portugal began diverging from Germany, until in 2017 the country was below the 2001 level in relative terms, with its GDP per capita in PPP representing only about 64% of that of Germany.

Table 5 – Relative GDP per capita in Purchasing Power Parity (as %)

1995	2001	2008	2013	2017
60,86	68,13	69,38	62,09	64,26

Source: AMECO and own calculations

It is then clear the deep impact that the crises and the European response had on the Portuguese economy, perpetuating a scenario of little convergence to the German level of development since the second half of the 1990s.

4.3 – Sectoral analysis of the productive structure

4.3.1 – Technology and knowledge

Although Portugal is currently closer to the German model, the EZ crisis did not lead to a reorientation of Portuguese exports of goods to more technology-intensive sectors, as the evolution of the Economic Complexity Index (ECI) shows. The ECI measures the relative knowledge intensity of a given economy considering the knowledge intensity of the products it exports.

Starting from a point far below Germany in 1995, Portugal’s ECI improved progressively until the second half of the 2000s, when it began to stagnate (see Table 6). Germany has in turn registered a more or less stable ECI since 1995, with its 2018 level being exactly the same as in 1995, although much higher than in Portugal.

Turning to the composition of both countries’ exports of goods, there are important differences. According to the Observatory of Economic Complexity, Portugal’s main exports of goods in 2018 were cars (6,02%), vehicle parts (4,94%), refined petroleum (3,98%), leather footwear (6,02%) and uncoated paper (2%). On the other hand, in 2018 Germany was mainly exporting motor cars (10,3%), vehicle parts (4,53%), packaged medicaments (3,71%), planes, helicopters and spacecrafts (2,06%) and blood, antisera, vaccines, toxins and cultures (1,96%). This means that Portugal still specializes in the export of goods with a lower technology content than Germany.

Table 6 – Economic Complexity Index

	1995	2000	2005	2010	2015	2016	2017	2018
DEU	1,89	1,94	2,01	1,93	1,89	1,89	1,91	1,89
PRT	0,13	0,18	0,38	0,48	0,48	0,49	0,45	0,50

Classification according to the Harmonized System (HS92) with a depth of 6 digits
Source: The Observatory of Economic Complexity

According to the Observatory of Economic Complexity's ECI ranking, in 2018 Germany was the fourth most complex economy out of a total of 138 countries (it placed third in 1995), while Portugal occupied the 48th position (it placed 46th in 1995). Given the stagnation of Portugal's ECI at a relatively low level, the distance between Portugal and Germany regarding the complexity of the goods they export has remained almost unchanged since the 1990s.

4.3.2 – Product specialization

Despite the differences in the composition of their respective balances of goods and services and although the Portuguese economy has retained a low level of complexity over time, Portugal and Germany are currently closer in many aspects, as has already been discussed. It is therefore important to look at the productive specialization of both countries, in order to assess whether their productive structures are now more similar than in 1995.

According to the Krugman Specialization Index, based on total employment (Table 7), product specializations are similar, since K has taken values close to 0 since 1995. The distance between the two countries increased slightly between 1995 and 2001 and decreased markedly in the post-crisis period. In 2017 the two countries were significantly more similar in their product specialization than in 1995.

Table 7 – Krugman Specialization Index (employment)

	1995	2001	2008	2013	2017
K	0,48	0,50	0,46	0,41	0,38

Source: INE and Eurostat

Basing the analysis on GVA instead of total employment allows for similar conclusions (Table 8). Although the evolution is not as glaring, when using GVA as a variable both countries are still closer after the crisis than in the late 1990s.

Table 8 – Krugman Specialization Index (GVA)

	1995	2001	2008	2013	2017
K	0,45	0,48	0,47	0,43	0,42

Source: INE and Eurostat

4.3.3 – Sectoral convergence

Seeing as Portugal's product specialization is currently more similar to that of Germany than it was in 1995, it is important to evaluate whether this meant there was sectoral convergence

between the two countries. That is, to check whether productivity in most sectors of the Portuguese economy has been converging to German levels.

The 38 Portuguese sectors as a whole converged to the German level until 2013, even during the crisis, and only began to diverge in the recovery period (Table 9). Portuguese sectoral productivity went from around 37% of the German level in 1995 to about 56% in 2013, falling slightly to around 54% in 2017. This seems to contrast with the process of macroeconomic convergence, as the Portuguese economy began diverging from Germany earlier in 2008, resuming the process of convergence after the crisis. However, while macroeconomic convergence deals with GDP per capita, sectoral convergence is based on GVA per worker, so it is possible that sectoral convergence during the crises years was due not to an increase in GVA, but to a sharp decrease in employment².

Table 9 – Selected industries: Average annual growth rate of sectoral productivity (as %)

	1995-2001		2001-2008		2008-2013		2013-2017	
	PRT	DEU	PRT	DEU	PRT	DEU	PRT	DEU
Food and tobacco	8,47	-1,12	4,14	-0,06	3,13	2,23	1,84	3,08
Textiles	2,95	2,11	4,02	3,54	4,59	2,23	1,84	3,41
Wood and paper	4,98	1,26	2,80	0,74	3,71	1,51	2,02	2,39
Chemical products	1,21	1,69	2,82	2,42	2,97	1,09	5,32	4,58
Rubber and plastics	4,47	-0,50	3,01	2,22	3,06	1,74	2,27	2,79
Metals	3,25	2,00	5,16	3,43	0,18	0,17	3,73	1,59
IT equipment	4,07	2,95	2,45	3,28	-6,54	0,52	0,88	3,73
Electrical equipment	5,43	-0,15	5,55	3,58	-1,75	1,83	0,58	3,22
Machinery	8,11	2,53	4,09	3,90	3,20	0,16	0,62	3,26
Transport equipment	13,88	2,26	0,82	2,84	4,06	5,59	-0,04	6,98
Total 38 sectors	5,00	0,74	4,09	1,87	1,83	1,26	1,21	2,56

Source: INE, Eurostat and own calculations

According to the AAGR of productivity in 9 selected industries, the industrial sector appears to have followed the general trend, converging until 2013 and beginning to diverge from Germany in the post-crisis period. But some sectors were already diverging in 2008-2013, as is the case of IT equipment, electrical equipment and transport equipment.

² These differences between the relative evolution of GDP per capita and that of labor productivity raise multiple questions and deserve to be analyzed with more depth in further studies.

The evolution of relative sectoral productivity allows for similar conclusions: most sectors converged to the German level until 2013, even during the crises period with the exception of the previously mentioned sectors (Table 10).

Table 10 – Selected industries: Relative sectoral productivity (as %)

	1995	2001	2008	2013	2017
Food and tobacco	31,99	55,74	74,37	77,68	74,02
Textiles	31,24	32,81	33,88	37,98	35,73
Wood and paper	43,89	54,50	62,81	69,91	68,92
Chemical products	46,33	45,04	46,28	50,75	52,20
Rubber and plastics	39,54	52,95	55,91	59,63	58,43
Metals	35,92	38,65	43,41	43,44	47,21
IT equipment	62,36	66,55	62,91	43,71	39,09
Electrical equipment	32,23	44,66	50,95	42,59	38,41
Machinery	28,70	39,45	39,95	46,38	41,82
Transport equipment	20,43	38,97	33,91	31,51	24,01
Total 38 sectors	36,78	47,15	54,83	56,39	53,48

Source: INE, Eurostat and own sectors

Lastly, the evolution of the productivity of services that represent costs to businesses also deserves a brief overview. Both the transport and the water and sewage sectors have converged to the German level since 1995, always growing faster than their German counterparts until 2013 (Table 11). However, the water and sewage sector began to diverge in 2013, representing in 2017 only 37% of German productivity in the same sector, a number that is lower than the one recorded in 2008 (Table 12). The electricity and gas sector shows a positive trend, being much more productive in Portugal (it represented about double the German productivity in 2017)³. Lastly, the telecommunications sector shows a rather unique evolution: with a higher productivity than the German sector since 1995, in 2008 the Portuguese sector began to diverge, registering negative AAGR until it sunk to about 68% of German productivity in 2017.

Table 11 – Selected services: Average annual growth rate of sectoral productivity (as %)

	1995-2001		2001-2008		2008-2013		2013-2017	
	PRT	DEU	PRT	DEU	PRT	DEU	PRT	DEU
Electricity and gas	6,30	3,78	8,29	8,81	7,20	-2,17	3,09	0,80
Water and sewage	8,99	0,65	7,86	3,86	3,19	0,93	-2,39	3,18
Transport	5,62	3,07	3,71	2,89	2,46	0,88	1,38	0,42

³ It would be interesting to assess whether this sector's good relative performance in Portugal is due to real improvements in efficiency or to an increase in rents, which would require more thorough analysis.

Telecommunications	9,06	6,24	3,43	1,75	-6,67	2,72	-2,84	4,35
Total 38 sectors	5,00	0,74	4,09	1,87	1,83	1,26	1,21	2,56

Source: INE, Eurostat and own calculations

Table 12 – Selected services: Relative sectoral productivity (as %)

	1995	2001	2008	2013	2017
Electricity and gas	123,41	142,49	137,81	217,74	238,19
Water and sewage	18,82	30,34	39,53	44,16	35,37
Transport	62,14	71,97	76,08	82,20	85,37
Telecommunications	111,59	130,54	146,49	90,71	68,16
Total 38 sectors	36,78	47,15	54,83	56,39	53,48

Source: INE, Eurostat and own calculations

5. Conclusion

In this paper we tried to assess whether the Portuguese economy has become closer to the German economy after the 2010/2013 crisis and what that means for the process of real convergence and the cohesion of the Eurozone.

Despite being quite rigid, the structure of the labor market has been evolving towards liberalization in both countries, especially regarding employment protection and stability in Portugal. This comes as a consequence of the attempt at correcting imbalances in the Portuguese economy by turning it into a LME, and not a CME like Germany. However, over time both countries have kept most of the typical features of their specific variety of capitalism, confirming the resistance and durability of an economy's institutional structure.

The biggest changes after the crisis are related to the countries' growth regimes. It is clear that there has been an attempt at transforming the Portuguese economy into an export-led economy according to the German model. But considering the features of Portuguese growth during the crises years (mostly based on exports of services and greatly impaired by the decrease in domestic demand) as well as the fact that the country appears to be reverting to a scenario similar to the pre-crisis years, the success of the export-led model in Portugal seems questionable. Furthermore, after a period of consistent convergence to the German level of development before the crisis, Portugal began to diverge from Germany in 2008, and only resumed the convergence process in 2013, when the country began to revert to the pre-crisis model.

Although their export growth is based on different strategies, Portugal and Germany are now closer in what concerns their product specialization than they were before the crisis. Furthermore, average productivity of the many sectors of the Portuguese economy converged to the German level until 2013, when they began to diverge slightly. However, the fact that the two countries are now closer hasn't translated into a significant increase in the complexity of Portuguese exports.

To sum up, it is possible to say that Portugal and Germany are now closer than in the second half of the 1990s, and that this was mainly due to the euro crisis. But significant differences remain, and the trend is now for both economies to return to the pre-crisis situation.

The effects of the 2010/2013 crisis and of the EZ response have been evident throughout the entire analysis. With the reform the Eurozone's economic governance now losing ground to more urgent matters, and bearing in mind both countries' tendency to return to the growth model typically associated with their variety of capitalism over the last few years, the question of the sustainability of the Eurozone and its ability to survive future crises becomes inevitable.

Finally, it is worth noting that this work provides only a wide overview of the structures of Portuguese and German economies, and it would be very interesting and useful to compare each one of its several aspects in more depth.

References

- Baccaro, L., & Pontussen, J. (2016). Rethinking Comparative Political Economy: The Growth Model Perspective. *Politics & Society*, 44(2), pp. 175-207.
- Banco Central Europeu. (2004). Sectoral Specialisation in the EU: A Macroeconomic Perspective. *Occasional Paper Series No. 19*, 1-59.
- Banco Central Europeu. (2015). Real convergence in the Euro area: Evidence, Theory and Policy Implications. *ECB Economic Bulletin, Issue 5*, 30-45.
- Bulmer, S., & Paterson, W. (2013). Germany as the EU's Reluctant Hegemon? Of Economic Strength and Political Constraints. *Journal of European Public Policy*, 20(10), pp. 1387-1405.

- Costa, H. (2012). From Europe as a Model to Europe as Austerity: The Impact of the Crisis on Portuguese Trade Unions. *Transfer: European Review of Labour and Research*, 18(4), pp. 397-410.
- De Grauwe, P., & Ji, Y. (2014). How Much Fiscal Discipline in a Monetary Union? *Journal of Macroeconomics*, 39, pp. 348-360.
- Dooley, N. (2018). Portugal's Economic Crisis: Overheating Without Accelerating. In O. Parker, & D. Tsarouhas (Eds.), *Crisis in the Eurozone Periphery: The Political Economies of Greece, Spain, Ireland and Portugal* (pp. 73-88). Sheffield: SPERI Research & Policy.
- Falkner, G. (2016). The EU's Problem Solving Capacity and Legitimacy in a Crisis Context: A Virtuous or Vicious Circle? *West European Politics*, 39(5), pp. 953-970.
- Felke, R., & Eide, S. (2014). Export-Driven Adjustment in Portugal. *Intereconomics*, 49(3), pp. 170-178.
- Fioretos, O. (2001). The Domestic Sources of Multilateral Preferences: Varieties of Capitalism in the European Community. In P. Hall, & D. Soskice (Eds.), *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage* (pp. 213-244). Oxford: Oxford University Press.
- Gambarotto, F., & Solari, S. (2015). The Peripheralization of Southern European Capitalism Within the EMU. *Review of International Political Economy*, 22(4), pp. 788-812.
- Hacker, B., & Koch, C. (2017). The Divided Eurozone. Mapping Conflicting Interests on the Reform of the Monetary Union. In Friedrich-Ebert-Stiftung, *Politik für Europa #2017* (pp. 1-52). Bruxelles: FES-Europabüro.
- Hall, P. (2012). The Economics and Politics of the Euro Crisis. *German Politics*, 21(4), pp. 355-371.
- Hall, P. (2014). Varieties of Capitalism and the Euro Crisis. *West European Politics*, 37(6), pp. 1223-1243.
- Hall, P. (2018). Varieties of Capitalism in Light of the Euro Crisis. *Journal of European Public Policy*, 25(1), pp. 7-30.
- Hall, P., & Soskice, D. (2001). An Introduction to Varieties of Capitalism. In P. Hall, & D. Soskice (Eds.), *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage* (pp. 1-68). Oxford: Oxford University Press.
- Hancké, B. (2013). The Missing Link. Labour Unions, Central Banks and Monetary Integration in Europe. *Transfer: European Review of Labour and Research*, 19(1), pp. 89-101.
- Hassel, A. (2014). Adjustments in the Eurozone: Varieties of Capitalism and the Crisis in Southern Europe. *LSE Europe in Question - Discussion Paper Series, LEQS Paper No. 76/2014*, pp. 1-37.
- Hein, E. & Mundt, M. (2013). Financialization, the Financial and Economic Crisis, and the Requirements and Potentials for Wage-led Recovery. In M. Lavoie & E. Stockhammer

- (Eds.), *Wage-led Growth: An Equitable Strategy for Economic Recovery*, (pp. 153-186). Palgrave Macmillan UK.
- Hein, E. (2019). Financialisation and Tendencies Towards Stagnation: The Role of Macroeconomic Regime Changes in the Course of and After the Financial and Economic Crisis 2007-09. *Cambridge Journal of Economics*, 43(4), pp. 975-999.
- Hope, D., & Soskice, D. (2016). Growth Models, Varieties of Capitalism and Macroeconomics. *Politics & Society*, 44(2), pp. 209-226.
- Höpner, M., & Schäfer, A. (2010). A New Phase of European Integration: Organised Capitalisms in Post-Ricardian Europe. *West European Politics*, 33(2), pp. 344-368.
- Iversen, T., Soskice, D., & Hope, D. (2016). The Eurozone and Political Economic Institutions. *Annual Review of Political Science*, 19, pp. 163-185.
- Johnson, P., & Papageorgiou, C. (2020). What Remains of Cross-Country Convergence? *Journal of Economic Literature*, 58(1), pp. 129-175.
- Johnston, A., & Regan, A. (2015). European Monetary Integration and the Incompatibility of National Varieties of Capitalism. *Journal of Common Market Studies*, 54(2), pp. 318-336.
- Johnston, A., & Regan, A. (2018). Introduction: Is the European Union Capable of Integrating Diverse Models of Capitalism? *New Political Economy*, 23(2), pp. 145-159.
- Johnston, A., Hancké, B., & Pant, S. (2014). Comparative Institutional Advantage in the European Sovereign Debt Crisis. *Comparative Political Studies*, 47(13), pp. 1771-1800.
- Kohler, K., & Stockhammer, E. (2020). Growth Models in Advanced Countries Before and After the 2008 Crisis: Competitiveness, Financial Cycles and Austerity. *Post-Keynesian Economics Society Working Paper 2008*, pp. 1-41.
- Kuokstis, V. (2015). Jingle Bells and the Struggling GIPS: Comparing the Baltic and the Southern Eurozone's Crisis Experience Using the Varieties of Capitalism Framework. *Acta Oeconomica*, 65(S1), pp. 39-64.
- Molina, O., & Rhodes, M. (2007). The Political Economy of Adjustment in Mixed Market Economies: A Study of Spain and Italy. In B. Hancké, M. Rhodes, & M. Thatcher (Eds.), *Beyond Varieties of Capitalism - Conflict, Contradictions and Complementarities in the European Economy* (pp. 223-249). Oxford: Oxford University Press.
- Nedergaard, P., & Snaith, H. (2015). "As I Drifted on a River I Could Not Control": The Unintended Ordoliberal Consequences of the Eurozone Crisis. *Journal of Common Market Studies*, 53(5), pp. 1094-1109.
- Nölke, A. (2016). Economic Causes of the Eurozone Crisis: The Analytical Contribution of Comparative Capitalism. *Socio-Economic Review*, 14(1), pp. 141-161.
- Parker, O., & Tsarouhas, D. (2018). Causes and Consequences of Crisis in the Eurozone Periphery. In O. Parker, & D. Tsarouhas (Eds.), *Crisis in the Eurozone Periphery: The*

- Political Economies of Greece, Spain, Ireland and Portugal* (pp. 1-23). Sheffield: SPERI Research & Policy.
- Perez, S., & Matsaganis, M. (2018). The Political Economy of Austerity in Southern Europe. *New Political Economy*, 23(2), pp. 192-207.
- Regan, A. (2015). The Imbalance of Capitalisms in the Eurozone: Can the North and South of Europe Converge? *Comparative European Politics*, 15(6), pp. 969-990.
- Rodrigues, J., & Reis, J. (2012). The Assymetries of European Integration and the Crisis of Capitalism in Portugal. *Competition and Change*, 16(3), pp. 188-205.
- Scharpf, F. (2011). Monetary Union, Fiscal Crisis and the Preemption of Democracy. *LSE Europe in Question - Discussion Paper Series, LEQS Paper No. 36/2011*, pp. 1-50.
- Scharpf, F. (2015). After the Crash: A Perspective on Multilevel European Democracy. *European Law Journal*, 21(3), pp. 384-405.
- Scharpf, F. (2016). Forced Structural Convergence in the Eurozone - Or a Differentiated European Monetary Community. *Max-Planck-Institut für Gesellschaftsforschung Discussion Paper Series 16/15*, pp. 1-47.
- Simonazzi, A., Ginzburg, A., & Nocella, G. (2013). Economic Relations Between Germany and Southern Europe. *Cambridge Journal of Economics*, 37(3), pp. 653-675.
- Steinberg, F., & Vermeiren, M. (2016). Germany's Institutional Power and the EMU Regime After the Crisis: Towards a Germanized Euro Area? *Journal of Common Market Studies*, 54(2), pp. 388-407.
- Stockhammer, E. (2011). Peripheral Europe's Debt and German Wages: The Role of Wage Policy in the Euro Area. *International Journal of Public Policy*, 7(1/2/3), pp. 83-96.
- Stockhammer, E. (2016). Neoliberal Growth Models, Monetary Union and the Euro Crisis. A Post-Keynesian Perspective. *New Political Economy*, 21(4), pp. 365-379.
- Stockhammer, E., & Kohler, K. (2019). Financialization and Demand Regimes in Advanced Economies. . *Post-Keynesian Economics Society Workin Paper 1911*, pp. 1-24.
- Streeck, W., & Elsässer, L. (2016). Monetary Disunion: The Domestic Politics of Euroland. *Journal of European Public Policy*, 23(1), pp. 1-24.
- Vermeiren, M. (2017). One-size-fits-some! Capitalist Diversity, Sectoral Interests and Monetary Policy in the Euro Area. *Review of International Political Economy*, 24(6), pp. 929-957.