

A Fundamental Interpretation of the 2009-2012 Crisis of the Eurozone

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Abstract: Extreme volatility and high uncertainty characterized European financial markets between 2010-2012. In addition to the “financial contagion” effects of the 2007-2009 Subprime Mortgages crisis, the European financial markets’ turbulence was also related to a more fundamentally economic reality: structural heterogeneity among the Eurozone countries which was aggravated by the introduction of the euro in 1999. During the first decade of the Monetary Union there was a productive specialization among Eurozone countries that, contrary to the expectations of public policy designers, resulted in an increased differentiation of the member countries. That process resulted in a deepening gap; there are some countries that have been exceptionally good performers in several dimensions, and there are others that have lagged in most. More specifically, we aim to explain why several European countries were subject to a more adverse reaction from the financial markets than others, pushing them to the brink of illiquidity and making the default on their governments’ obligations a close possibility. To illustrate the increased heterogeneity observed among EU members since the introduction of the euro, we analyze a representative sample of eight countries: the four largest economies in the Eurozone, Germany, France, Italy and Spain; and four smaller economies, of which two are relatively successful exporters, Ireland and The Netherlands; and two more, Greece and Portugal, which have recently undergone serious fiscal and debt problems, so as to need a bailout from the EU, the ECB and the IMF, not to mention the case of Greece whose economy has deteriorated enormously under a populist government and has fallen in arrears on its international compromises.

Key words: structural heterogeneity; Eurozone countries; financial turbulence

JEL codes: F41, F43, O5

1. Introduction

Different attempts to explain the financial turbulence episodes that rocked the financial markets of several Eurozone countries between 2010 and 2012 have related the crisis in Europe with the “contagion” (psychological) effects of the subprime mortgages crisis of the United States between 2007 and 2009. No wonder, a number of European financial intermediaries held American subprime mortgage-backed securities in their portfolios so, when those securities became “toxic”, they were exposed to significant losses. As the securities portfolios of large banks lost value affecting the banks’ equity base and creating the threat of a systemic effect, national governments finally decided to intervene. The possibility that several large European banks were affected by the collapse in value of different types of CDOs and ABSs justified the intervention, and eventually the bailout coordinated

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efforts of the EU, the ECB and the IMF.

In this work we argue that besides the unquestionable importance of the financial crisis contagion effects, aggravated by a psychological overreaction of the markets, there are other fundamental explanations to the complex episode of the Sovereign Debt Crisis in Europe (2011 to the present). In the next sections, we present some of them. We present a scarcely discussed explanation, complementary to what has already been said in other studies, regarding the causes of the Eurozone 2010-2012 financial turbulence.

This work presents evidence that supports the argument that the intensity with which the 2007-2009 financial turbulence was transmitted to individual Eurozone countries was related to fundamental economic reasons, and not only to the psychology of the markets.

Krugman (1993) and Artus & Gravet (2012) postulated that a new division of labor precipitated by the elimination of barriers to international trade would result in increased productive (and economic) heterogeneity among countries, not in a greater homogeneity, as proclaimed by the official position of the European Union (EU), and highlighted as one of the main benefits of monetary union. An explanation of the increased heterogeneity that has resulted from the adoption of the euro was presented almost two hundred years ago by David Ricardo, in his Theory of Comparative Advantage of Countries in International Trade, which we will briefly discuss below.

To illustrate the increased heterogeneity observed among EU members since the introduction of the euro, we analyze a representative sample of eight countries: the four largest economies in the Eurozone, Germany, France, Italy and Spain; and a four smaller economies, of which two are relatively successful exporters, Ireland and The Netherlands; and two more, Greece and Portugal, which have undergone serious fiscal and public debt problems. The former one has fallen in deep recession and in arrears in its international compromises, and is undergoing very difficult negotiations with the EU, the ECB and the IMF.

A basic macroeconomic analysis of the countries included in the sample identified two sub-groups: one that may be characterized as internationally competitive, even global leaders in certain productive activities; and a second that includes countries which are significantly less industrialized and have experienced a reduction of the relative importance of their manufacturing exports in time. The countries in the latter group lagged behind those in the former group in important aspects like fiscal stability and public debt, but more worrying is the fact that, instead of improving their condition, they seem to experience an increasing deterioration after the 2008-2009 international financial crisis.

2. The Nature of Financial Contagion and Its Role during the Recent Financial Crisis

The 2007-2009 Subprime Mortgages crisis represents an exceptional opportunity laboratory to study the role that contagion effects may play in financial markets. As discussed by Longstaff (2008), the issue of contagion in financial markets is of fundamental importance, and there is an extensive literature addressing its causes and effects. Some of the most recent works focused on a description of the contagion mechanisms include Allen and Gale (2000, 2004), Kyle and Xiong (2001), Kodres and Pritsker (2002), Kiyotaki and Moore (2002), Kaminsky, Reinhart, and Vegh (2003), Brunnermeier and Pedersen (2005, 2007).

However, beyond the financial turbulence associated to the direct financial contagion and negative psychological effects of the Subprime Mortgages crisis, the roots of the recent European financial crisis lie on the real sector of the economy. This analysis contributes to a better understanding of the limitations and mistakes of different economic policies that were implemented in the Eurozone in the past, and motivates an interest to revise

the economic plans and policies of EU members for the future.

3. The Adoption of the Euro and the Increased Specialization of Countries

There are powerful economic reasons that explain why during the first ten years after the creation of the Eurozone in 1999, there was an increased economic heterogeneity among the member countries. Heterogeneity may be explained as due to the perfectly normal process of active productive specialization and spontaneous international division of labor, making each national experience different from the others. But it is important to highlight that that process was also the outcome of incorrect domestic economic policies.

Some countries specialized in productive activities that are more stable in time, create more economic value and are capable to reap the benefits of economies of scale like, for example, advanced manufacturing in the automobile and the aeronautics industries. In most instances, manufactured goods produced by those countries are exportable and internationally competitive. In some other countries, however, specialization was focused in more traditional activities, which didn't make those countries more competitive internationally.

Two decades ago, De Grauwe argued that, in the case of the EU, increased market integration would lead to and increased specialization of economic activities.... "this is likely to lead to regional concentration of industrial activities". He also discussed the possibility that shocks in demand would be more likely to have asymmetric effects, "with some and countries being affected more severely than others" (De Grauwe, 1993).

Other implications anticipated by De Grauwe for the "future" EMU were that the macroeconomic adjustment problem would be complicated by the fact that countries would no longer be capable "to use the exchange rate as a policy instrument", but at the same time, would be subject to more frequent asymmetric shocks. He also argued that "the only way this adjustment problem can be made less severe is by centralizing a significant part of the national budgets" (De Grauwe, 1993), a challenge which has, in effect, represented a major feat to the political class in the Eurozone.

Long before the constitution of the European Monetary Union, the 1999 Nobel Laureate in Economic Science, Robert Mundell, explained that a geographic zone with multiple countries could have a single currency as long as the individual countries' economic cycles were somewhat coordinated (Mundell, 1961). In that sense, any external shock that affected all member countries at any moment could be managed with a unified monetary policy. For example, if a high level of economic activity caused the prices and wages of some sectors in the economy to experience inflationary pressures, the Central Bank of the area would be well placed to enforce a restrictive monetary policy by raising interest rates and other measures to disincentive consumption and investment, and reduce the demand-pull component of inflation. That was the sense in which Mundell wrote about the possible existence of an Optimal Currency Area (Mundell, 1961).

During the years that followed the adoption of the euro, the economic development of each member country was characterized by a mechanism of international distribution of labor in the purest sense of David Ricardo's classical writings' specialization process, that results from each country's natural endowment of productive factors (Ricardo, 1821).

In this study we find evidence to support the argument that monetary union, contrary to what many believed, instead of creating more a more homogeneous pattern of economic development across Eurozone nations, has resulted in an increasing heterogeneity.

After the euro was introduced in 1999, all Eurozone countries increased their specialization because the

exchange rate risk, which at the time was one of the few remaining obstacles to total freedom of movement for goods, services, labor and capital, was eliminated. Until then, full specialization had not been attained only because of the existence of currency exchange rate risk and by the frictions associated to the bid-ask spread that were paid in every currency exchange transaction.

In many cases, productive activities, for which some countries were well endowed, were operated below their optimal scale because of weak demand, while potential demand from other EU countries existed but did not become effective because of the frictions of currency exchange risks and bid-ask spreads.

Besides trade barriers, cultural barriers or transportation costs, international trade is usually subject to currency exchange rate exposure. In a world with freely-floating currency exchange rates, the potential benefits derived from an optimal scale of operations, which would result in lower per unit costs of production and maximize potential profits, may not be enough to convince a producer. The potential losses due to unexpected exchange rate fluctuations on commercial transactions like, for example, suppliers' credit or commercial credit granted to foreign customers, represent implicit frictions.

In the face of potentially unfavorable exchange rate fluctuations, both the producers and the consumers operate at suboptimal levels of profitability and satisfaction. Additionally, the relative scarcity of the products in question is likely to result in higher target market prices even before any currency exchange rate fluctuations, further aggravating the suboptimal situation faced by both the producer and the consumer.

An alternative strategy open to the producer would be to install a complete productive facility in the target market and eliminate any remaining operating currency exchange rate exposure. But that strategy would work only in those cases where the depth and breadth of the market justifies the full investment strategy, once all technological and logistic constraints are considered, excluding a number of potentially attractive but very small markets to support such investments.

4. Economic Integration and the Adoption of the Euro

The EU integration process, along with its successes and vicissitudes, has been extensively documented in the academic literature. In most cases, findings confirm that the Eurozone member countries are heterogeneous in different ways and that there doesn't seem to be a clear pattern towards increasing similarities.

Some of those studies have focused in the differences in inflation observed across countries albeit a unified monetary policy was already in place. For example, Hofmann and Remsperger (2005) review the development, potential causes and macroeconomic implications of inflation differentials in the euro area and present evidence, based on an estimated New Keynesian style model, of the euro area economies. Their empirical analysis revealed that the observed inflation differentials since the creation of the European Monetary Union were mainly driven by temporary shocks, combined with a rather important inflation inertia component. They also found that inflation persistence was virtually zero in the group of countries with comparably low and stable inflation before the monetary union, and concluded that "since the monetary policy of the Eurosystem is geared at delivering and maintaining low and stable inflation rates, inflation persistence should also decrease in the other countries, which would in turn mitigate the persistence of euro area inflation differentials".

Or, MacDonald and Cezary (2008) who proposed an alternative explanation for the nature, sources and consequences of inflation rate differential in a monetary union and discuss the inflationary consequences of the catching-up process in a heterogeneous monetary union. They also demonstrate that divergent inflation rates

between countries are not necessarily an equilibrium phenomenon, and show how such divergence may arise when countries differ in size and in longer-term productivity growth.

In a similar vein, Angeloni, Ignazio and Michael Ehrmann (2007) developed a stylized 12-country model of the euro area and used it to study how differences in national inflation and growth rates arise within the European Economic and Monetary Union (EMU). Their main findings are that the main source of differentials in the early years of the EMU were “aggregate demand shocks, followed by cost-push shocks; euro exchange rate shocks come third” (a similar conclusion to that of Hofmann and Remsperger, 2005). They also report that among the propagation mechanisms, inflation persistence has a key role; for plausible parameter values even small changes in persistence can produce a dramatic increase in the differentials. Finally, they also find that a tight control of average area-wide inflation around a target tends to reduce the differentials as well.

Other studies have focused on the degree of integration between European countries. For example, a very well crafted attempt to incorporate a measurable dimension to the process of the EU integration process is that by König and Ohr (2013), who propose that the European integration is a multilayer process consisting of significant differences in efforts and capabilities of the member State’s, which result in very vague statements about the national level of European economic integration. These authors propose to fill that gap by developing a composite indicator that measures the extent of economic integration within the European Union, and which they named the “EU Index”, that offers a unique basis as the national differences can be illustrated by one statistical measure. Published by The Center for European Governance and Economic Development, the EU Index suggests that large heterogeneities exist between the EU member States. By using cluster analysis, they also show that the prevailing economic heterogeneities in the EU are combined with a strong and even growing clustering of its members, a fact that represents a real challenge to the design of a critical route to achieve European integration. In a related way, Ekinci, Kalemli-Ozcan and Sorensen (2009), investigated financial integration within and between European countries. To that end, they construct two measures of de-facto integration across European regions to capture “diversification” and “development”, and report having found evidence that “capital market integration within the EU is less than what is implied by theoretical benchmarks and also less than what is found for U.S. states”. In first instance, they use country-level data for economic institutions, to find that these are not able to explain differences between countries. Then, they proceed to use regional data from the World Values Surveys, and investigate the effect of “social capital” on financial integration. Interestingly enough, they report that “regions, where the level of confidence and trust is high, are more financially integrated with each other”.

How do shocks asymmetrically affect participants in the Economic and Monetary Union (EMU) has also been a subject of detailed study. For example, Sekkat and Mansour (2005) focus on the likelihood of asymmetric shocks in Europe originating from the impact of exchange rate fluctuations on trade. They identify two necessary conditions for such asymmetric shocks to occur. First, they argue that “exchange rate fluctuations should have different impacts across sectors and countries should have different industrial specialization”. To make an empirical contrast of their argument, they use data of bilateral imports of the EMU members from other countries, and estimate the elasticity of trade to exchange rate changes for 42 industrial sectors. Their finding are that exchange rate fluctuations do, indeed, have different impacts across sectors. Next, they examine the pattern of industrial specialization in Europe, and find that there are non-negligible dissimilarities among members’ industrial structure.

Adopting a slightly different approach, but still focused on the asymmetrical response of different countries to external influences, Lane (2012) argued that the capacity of the euro-member countries to withstand negative

macroeconomic and financial shocks was a major challenge for the success of the euro from the beginning. Lane suggests that by adopting the single currency, national governments switched off the option for national currency devaluations, which was the traditional short-term Balance of Payments (and more precisely, differences in productivity) adjustment mechanism between national economies. With the elimination of national currencies, “national fiscal policies took on additional importance as a tool for countercyclical macroeconomic policy”. One of the most relevant consequences was that, since banking regulation and supervision remained under national authority, all the risk of a banking crisis, as well as the potential recapitalization of banks after a crisis, individual government were to gravitate over national governments. The same author suggests there are three channels that connect the euro and the European sovereign debt crisis: (1) the initial institutional design of the euro increased fiscal risks during the pre-crisis period; (2) once the crisis happened, design flaws amplified the fiscal impact of the crisis through multiple channels; (3) the response of the single market monetary authorities shaped the duration and tempo of the anticipated post-crisis recovery period.

A study in line with this one is that of Botta (2014), who analyzes and attempts to measure productive and technological asymmetries between central and peripheral economies in the Eurozone. Then, he assesses the effects of such asymmetries on center-periphery divergence/convergence patterns, and derives relevant implications for the design of future industrial policy at the European level. The relevant conclusion to which Botta arrives, and with which I fully agrees, is that the future EU industrial policy should be regionally focused and target structural transformation in the periphery countries as the strategy to follow in order to favor convergence, but more significantly, to minimize the chances of reappearance of past external imbalances.

During several decades and previous to the adoption of the single currency, European countries underwent a dynamic economic integration that can be dated back to the creation of the European Common Market in the Treaty of Rome (1957), and the formalization of the European Union with the Maastricht Treaty (1993), practically eliminating all institutional barriers to international trade.

Removing tariffs and other impediments to the free movement of goods and services, allowed member countries to specialize in producing those goods for which they had a comparative advantage, and to give up the production of other goods in which, by comparison they were at a disadvantage. The abolition of trade barriers induced a movement of resources from the relatively less efficient to the relatively more efficient industries (Liesner, 1958). Greater specialization permitted economies of scale and made countries more efficient in what they produced, increasing investment, employment, and the well being of the population.

The only remaining non-explicit barrier to trade among the European Union countries was, precisely, the existence of different currencies. As long as “transaction” and “economic” exchange rate exposure existed, there was a motivation for countries to produce domestically some of the goods in which they were not internationally competitive, but in which they preferred to avoid the transaction costs associated with currency exchange.

With the adoption of the euro (1999), currency exchange rate risk was also eliminated and the conditions for a fully integrated economic area moved ahead significantly. The main benefit expected from the elimination of that last barrier to trade was, precisely, the final specialization of countries in those industries for which they were better endowed, increasing their international competitiveness. In retrospective, that was the strongest possible argument to the adoption of a single currency for the Eurozone member countries.

While the evidence suggests that at least two groups of countries resulted from that specialization process, there was not a parallel improvement in competitiveness and, indirectly, of their population living standards. In order to explore those different economic prototypes, we focused our attention on a limited sample of countries,

including the four largest members of the EU (Germany, France, Italy and Spain), two smaller successful exporters (Ireland and The Netherlands) and two countries that were severely affected by the recent financial turbulence of 2009-2012 (Greece and Portugal), and have experienced a fundamental rigidity to adapt to a more open and competitive economic reality. While we do not claim that a strict classification can be established for Eurozone countries, there is enough evidence to support the argument that there are, at least, two possible specialization models.

The first group includes the more industrialized EU countries in Northern Europe (Germany, Ireland and The Netherlands). Since the introduction of the euro in 1999, those countries have reinforced their manufacturing base, made significant progress in building a stronger and more efficient productive base, and have grown as strong exporters. A second group, which includes Portugal, Spain, Ireland, and Greece, had more similarities than differences among themselves. However, the case of France, a significantly developed country with a strong manufacturing sector seems to be a middle-of-the-road case. France is not as indebted as its Southern neighbors (Italy and Greece), but it has been losing competitive edge, and its exports are increasingly insufficient to finance its imports.

At a high level of generality, the structural heterogeneity observed in Europe is the outcome from the choice of different productive inclinations at the individual countries' level. That was, most certainly, influenced by the natural endowments of productive factors enjoyed by the different nations. However, several other factors were at play, including their cultural and political preferences, the existence of important differences in the way the labor markets work, the efficiency and depth of domestic credit and capital markets and, most importantly, the vast spectrum observed in the design and implementation of government policies from one country to another.

The choice of different economic development models and the effects of the ensuing economic policies derived from that choice, had an important influence. Instead of minimizing productive heterogeneity, they favored it.

Some of the euro zone countries consolidated an advanced manufacturing industry, and positioned themselves as world leaders in the design, production and distribution of sophisticated products. Their exports to the rest of the world represent a source of significant foreign trade surpluses, and their economic potential, as well as their institutional framework, attract significant amounts of Foreign Direct Investment (FDI). At the same time, that group of countries also generates significant flows of FDI towards other Eurozone member countries, as well as towards the rest of the world.

Other Eurozone countries have, instead, opted for a portfolio of productive activities that is more closely related to the primary sector (agriculture, mining) and to the services sector (trade, transportation, tourism), and have experienced large, chronic foreign trade deficits. The foreign-sector deficits and low levels of fiscal income have forced those governments to increase public debt levels in order to respond to their population higher standards of living expectations. Finally, more indebtedness represents an increasing weight, as well as a risky bet in times of uncertainty, as was evidenced by the recent financial crisis and is more recently threatening the permanence of Greece as part of the monetary union.

5. Empirical Evidence on the Structural Heterogeneity of the Eurozone

5.1 International Competitiveness

In what follows, we undertake the comparison of the eight countries in our sample based on selected

macroeconomic variables that configure a fundamental diagnosis of any country's economy, for the period that goes from the introduction of the euro, in January 1999, and until December of 2012.

Figure 1 presents the Current Account Balance for the eight countries in the sample. Although for the rest of the analysis we separated the sample in two groups of four countries each, this first figure includes all eight with the intention to highlight the main argument of this work: economic heterogeneity is reflected in terms of the greater or lesser ability of countries to maintain a favorable external sector trade balance. In other words, we are assuming that a modern economy is that which can compete in the international markets with its products and services. It is in that sense that we propose that EU countries can be classified according to their international competitiveness. In that sense, what Figure 1 shows is that, in terms of international competitiveness as an exporter, Germany is an outlier in terms of the absolute value of its International Current Account positive balance, and that during the last twelve years it only increased its distance from the rest of the Eurozone countries.

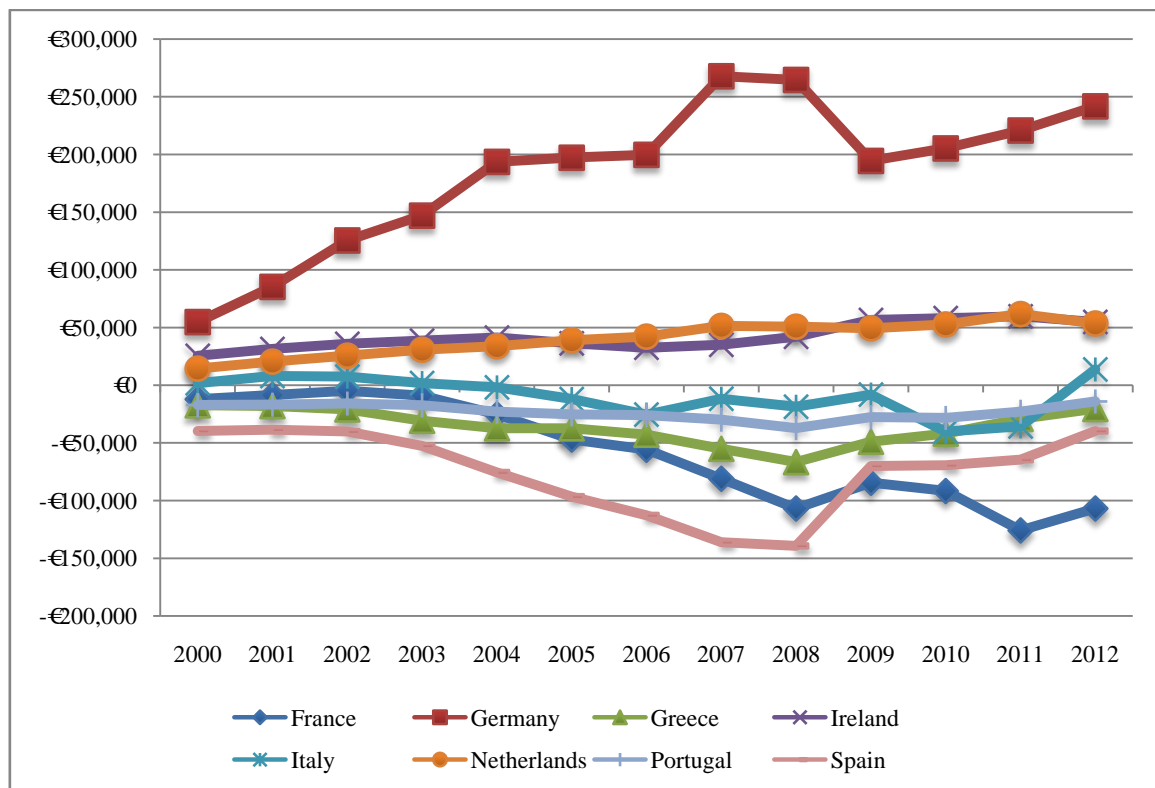


Figure 1 Total Current Balance of Trade in Constant Prices of 2012 (Millions of Euros)

Source: © Euromonitor International

To obtain more precise conclusions from our analysis, we grouped the sample countries in two subgroups. The first subgroup included those countries that by the end of the period of analysis, the year 2012, were ranked among the four “less favorable performers”, and denominated “Group A”. The second subgroup included the four countries revealed as the “best performers” in each of the dimensions we analyzed, and denominated “Group B”.

After the analysis of the Current Account balance presented in Figure 1, Figures 2 and 3 separate the sample countries in the two subgroups that were just described. Figure 2 presents the Current Account balance evolution for Group A, including those countries that had a less favorable Current Account balance during the period of analysis, while Figure 3 presents the results for Group B, including the more successful international traders, i.e.,

those that were able to achieve and maintain a more favorable (less unfavorable) Current Account balance.

As mentioned, there was a clear deterioration in the Current Account balance of these four countries, and Spain recorded the deepest deficit during the period, but experienced a fast rebound after 2008, most likely associated with the economic slowdown and the harsh austerity measures put in place by the Spanish government.

The Current Account balance of the four countries in Group B (Figure 3) was positive in 2012. While Italy experienced several periods of negative balance, it was never too large and, by 2012, had fully returned into the positive zone. Again, Germany's performance throughout the period can only be described as extraordinary.

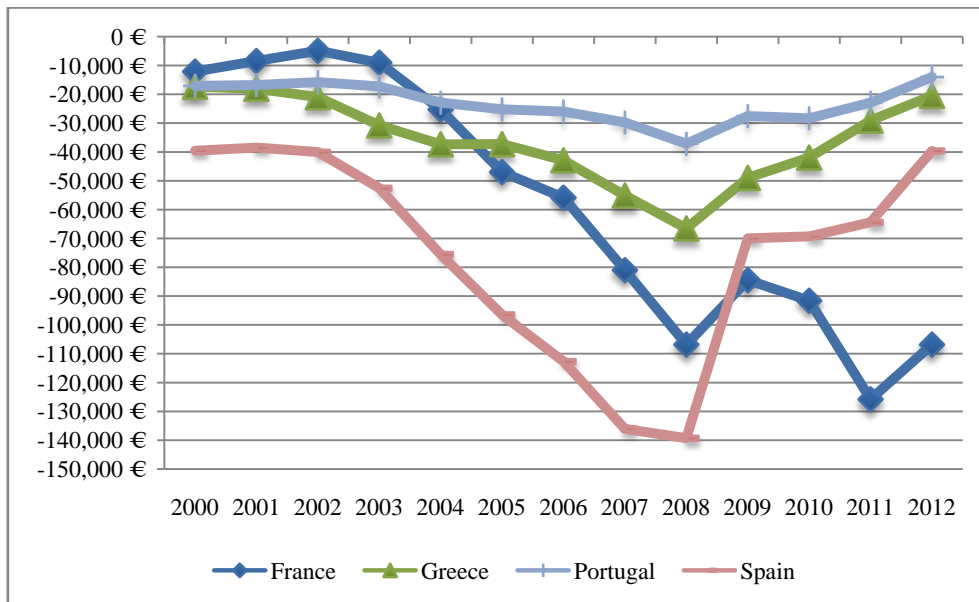


Figure 2 Group A: Total Current Balance of Trade in Constant Prices of 2012 (Millions of Euros)

Source: © Euromonitor International

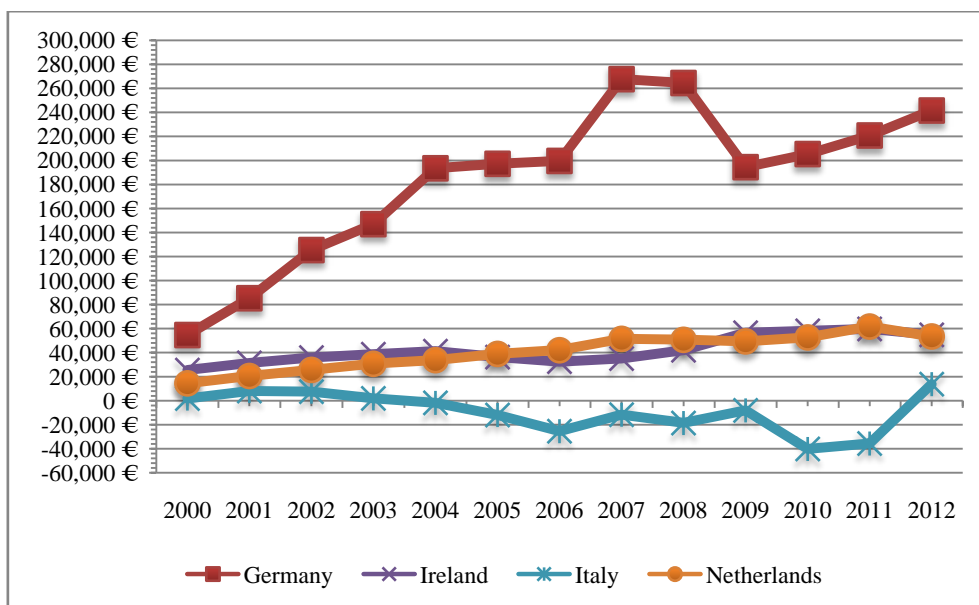


Figure 3 Group B: Total Current Balance of Trade in Constant Prices of 2012 (Millions of Euros)

Source: © Euromonitor International

At a more disaggregated level, statistical data on the different components of EU members' foreign trade with all countries suggests that there is a clear differentiation between those countries that have achieved a manufacturing superiority and those that have specialized in a more traditional (and less competitive) portfolio of productive activities.

Figure 4 shows the Manufacturing Current Balance for the four countries that had a less successful performance in terms of balancing their manufacturing imports with manufacturing exports, again classified as Group A. This time, Group A included France, Greece, Portugal and Spain. It is interesting to notice the extraordinary recovery of Spain from a serious foreign trade imbalance close to 85 billion in 2007 to achieve almost a breakeven balance in 2012. France, by contrast, only achieved a tepid inflexion in 2012.

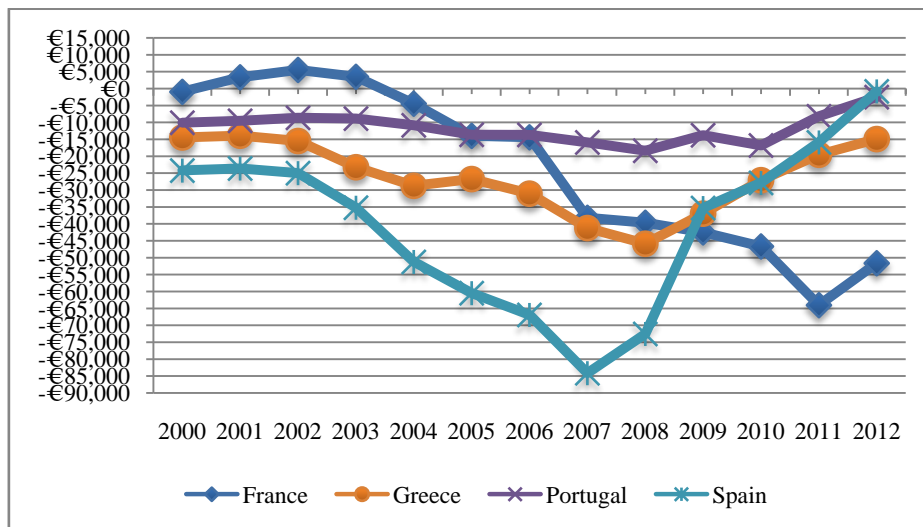


Figure 4 Group A: Current Trade Balance in Manufacturing Products at Constant Prices of 2012 (Millions of Euros)

Source: © Euromonitor International

As illustrated in Figure 5, the manufacturing trade better performing group (Group B) included Germany, Ireland, Italy and The Netherlands. The amazing performance of Germany's manufacturing sector trade balance performance was only briefly interrupted in 2009, as a consequence of the serious economic slowdown of the Eurozone.

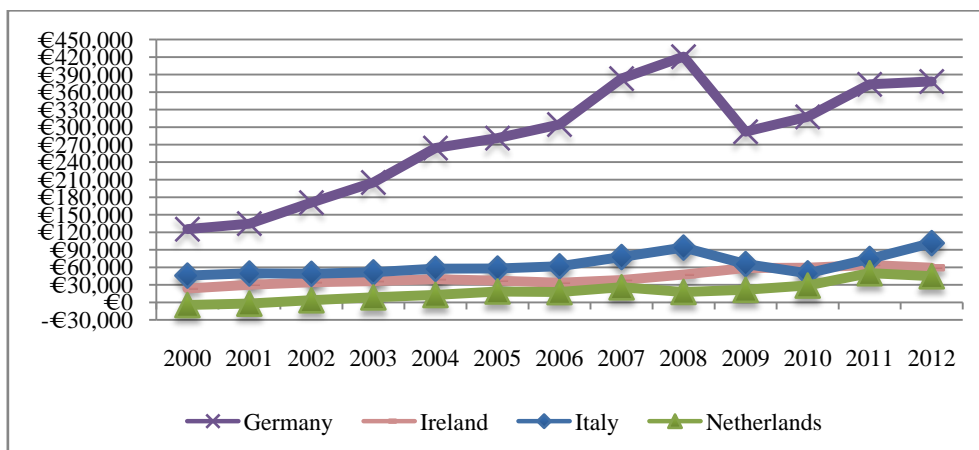


Figure 5 Group B: Current Trade Balance in Manufacturing Products Constant Prices of 2012 (Millions of Euros)

Source: © Euromonitor International

The performance of the Current Account for products different from Manufacturing shows that, by contrast, the best performers were the less industrialized countries and France.

Figure 6 presents the Current Account balance in non-manufacturing goods for the group of countries that did not perform well during the period of analysis. The case of Germany as the worst performer of the sample in this dimension is in not a coincidence. Germany specialized in high tech manufacturing and most of its consumption of raw materials and food is imported from the rest of the world.

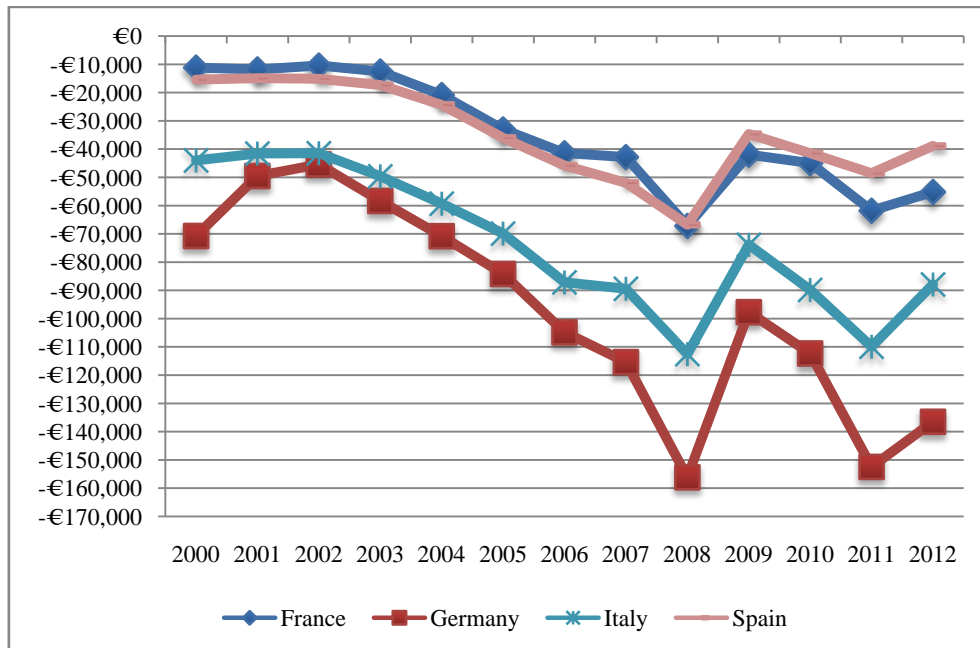


Figure 6 Group A: Current Trade Balance in Non-Manufacturing Products in Constant Prices of 2012 (Millions of Euros)

Source: © Euromonitor International

Group B, the better performing countries in terms of the non-manufacturing imports and exports were Greece, Ireland, The Netherlands and Portugal. Greece and Portugal had a negative non-manufacturing goods Current Account balance, but they seemed to recover during the last four years of the period, as can be seen in Figure 7.

5.2 Public Finances and Public Debt

Following the same methodology as before, to analyze the fiscal implications of the different economic development models followed by the Eurozone members, we classified our sample of countries in two groups.

We first look at Public Deficit data and then we extend our analysis to Public Debt. It is to be expected that a fundamentally healthy Fiscal Balance would maintain Public Debt levels under control. If, by contrast, the Fiscal Balance is unfavorable, one would expect that Public Debt levels increased through time.

For Group A countries, Public Deficit data as a percentage of GDP shows that Ireland was a notable outlier, reaching a -30% value in 2010. It is interesting to notice that even when Ireland was one of the better performing countries in terms of international competitiveness, its public finances deteriorated drastically when, in 2008, the country was forced to deal with a severe banking crisis, as a result of a real estate properties bubble that burst at almost the same time as the Subprime Mortgages crisis occurred in the United States. The other countries in the group were also among the worst performers in terms of international competitiveness.

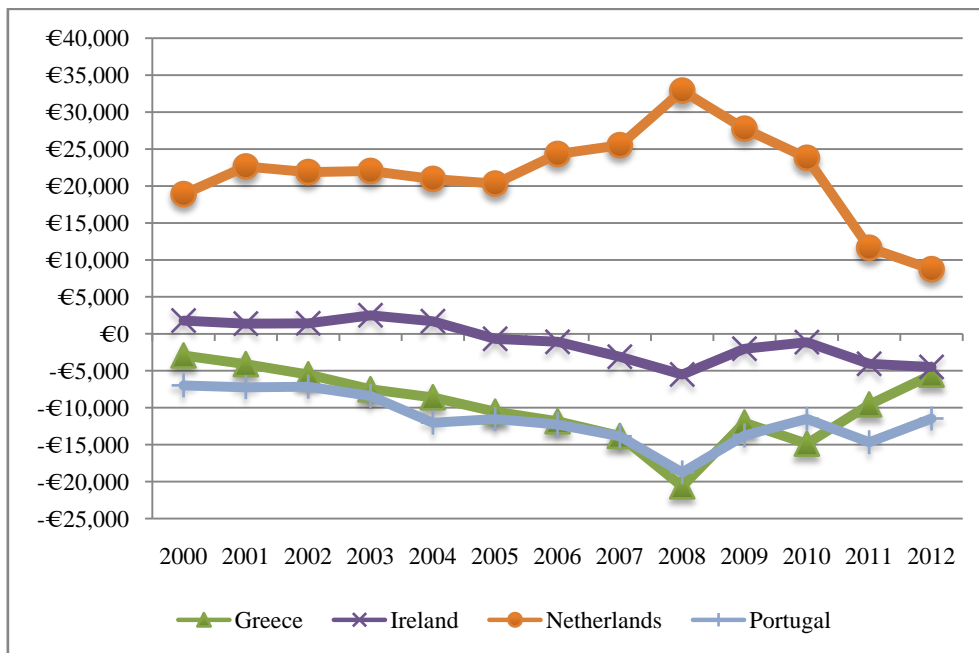


Figure 7 Group B: Current Trade Balance in Non-Manufacturing Products in Constant Prices of 2012 (Millions of Euros)

Source: © Euromonitor International

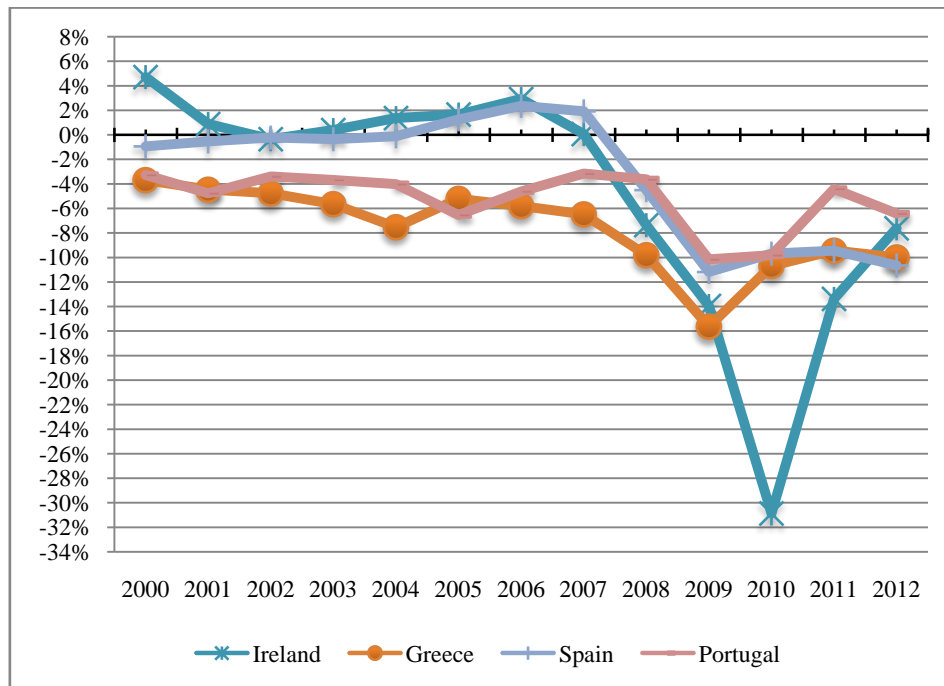


Figure 8 Group A: Public Deficit as a Percentage of GDP

Source: © Euromonitor International

The 2007 downturn also affected (augmented) the Public Deficit of all countries in Group B, and in all cases there was a turnaround either in 2009 (France, Netherlands and Italy) or in 2010 (Germany). The worst performer in this group was France, that attained a deficit of almost 8% of GDP in 2009, but had recovered to only -5% by 2012.

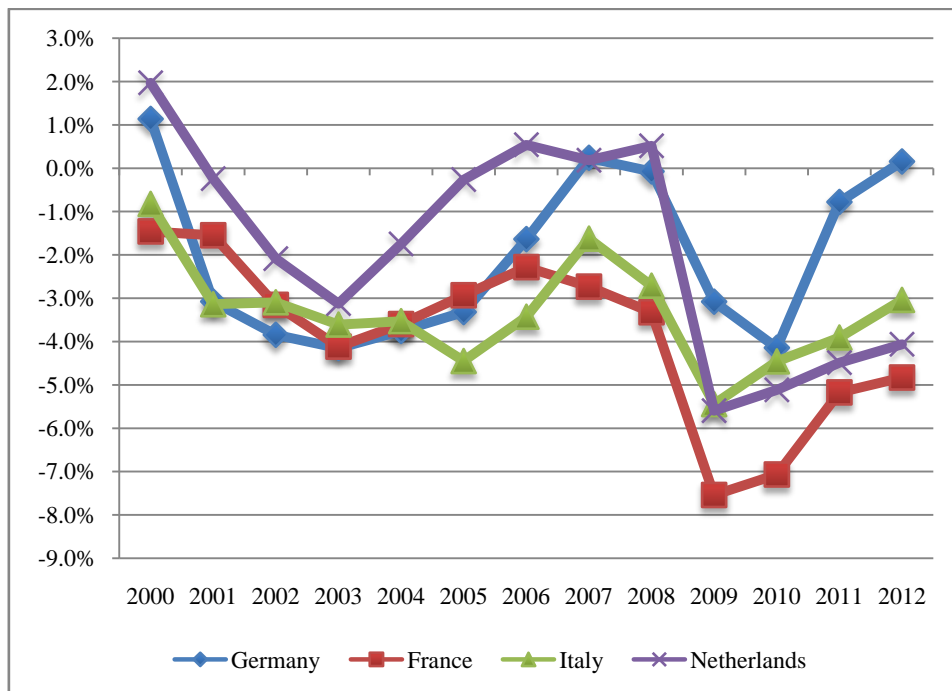


Figure 9 Group B: Public Deficit as a Percentage of GDP

Source: © Euromonitor International

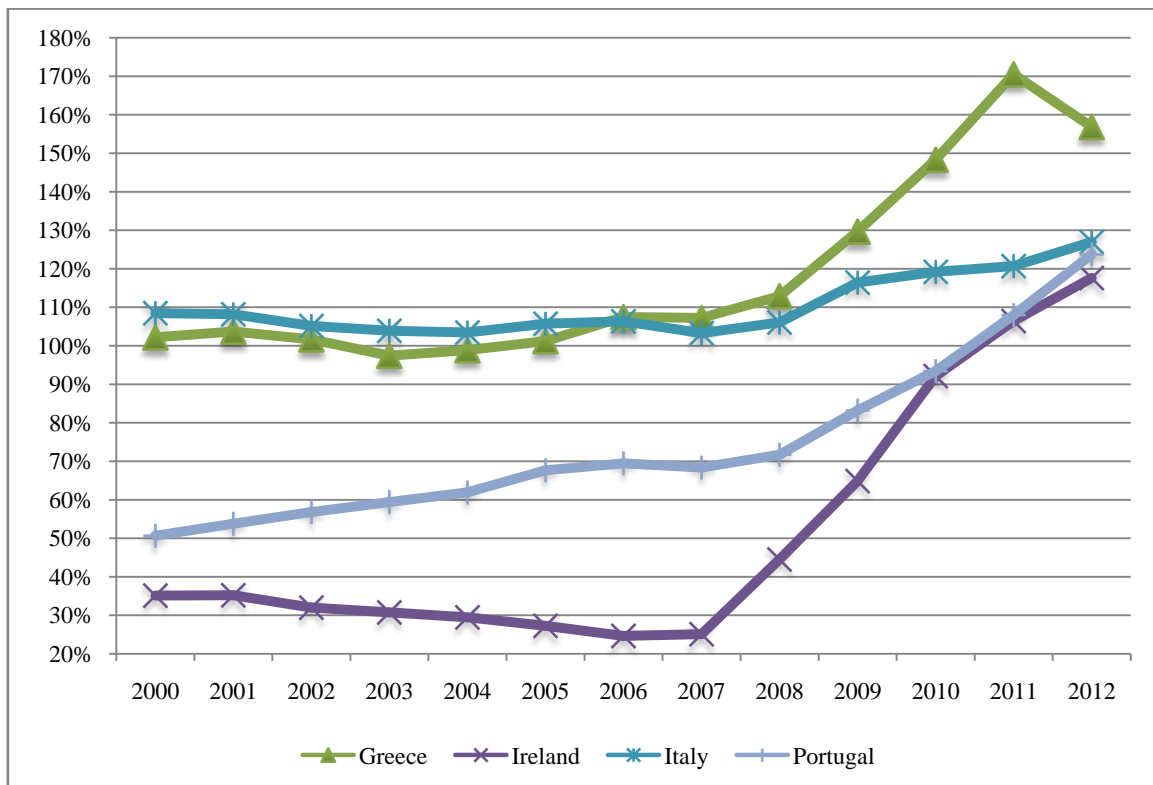


Figure 10 Group A: Public Debt as a Percentage of GDP

Source: Eurostat Database

Figure 10 presents those countries whose Public Debt as a percentage of GDP was the highest by December 2012, including Greece, Ireland, Italy and Portugal. Both Italy and Greece started the period with already high levels of debt, and did not reduce them. By contrast, Portugal and Ireland were more conservative in their utilization of debt but the prevailing conditions during the last years of the period forced them to borrow significantly to overcome the serious challenges they faced.

Figure 11 presents the less indebted countries from the sample: France, Germany, The Netherlands and Spain. It is noticeable how the 2007-2009 financial crisis had a negative effect on the Spanish economy, forcing its government to abandon a debt reduction trajectory, as economic slowdown, unemployment and serious financial institutions problems forced it to use more public debt. In some ways, the Spanish experience resembles that of Ireland because both were disciplined and careful in the utilization of Public Debt, but at some point were forced to significantly increase its utilization to face the disastrous consequences of the real estate bubble burst that was, again a common trait. France was the country with highest public debt as a percentage of GDP in this Group, almost 90% of GDP.

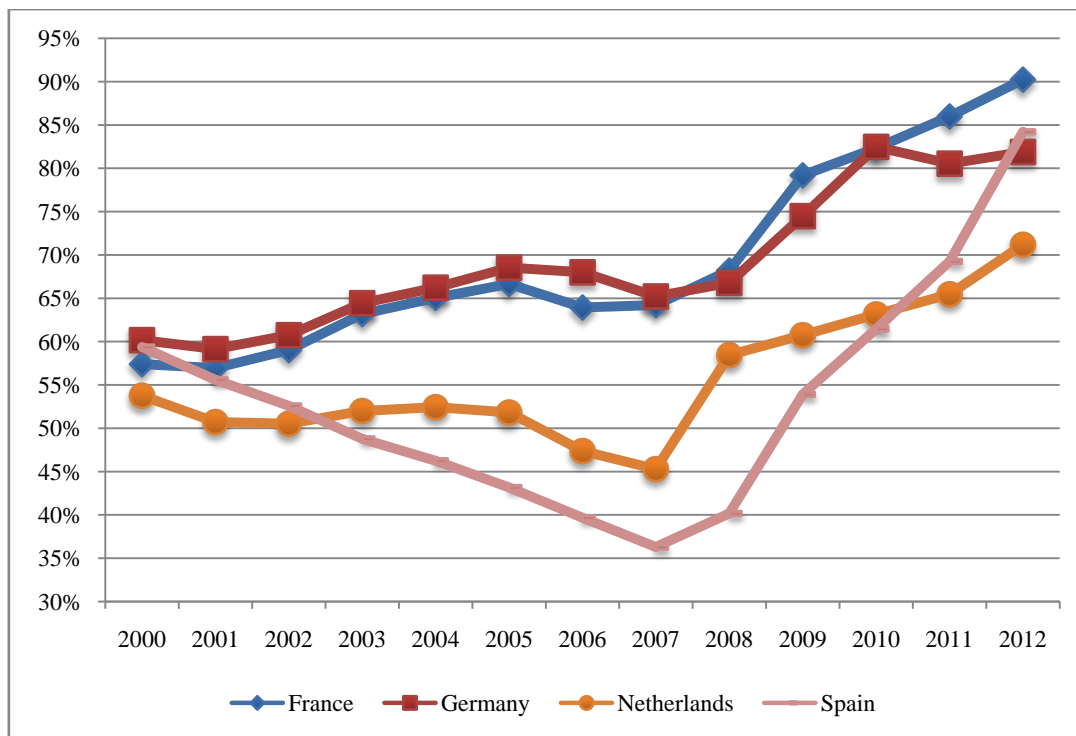


Figure 11 Group B: Public Debt as a Percentage of GDP

Source: Eurostat Database

Table 1 summarizes the findings of the above analysis and separates the sample of eight countries in two subgroups of four countries each, according to how satisfactory was their performance in terms of Current Account Balance, the Manufacturing Trade Balance, the Non-Manufacturing Trade Balance, the Public Deficit as a % of GDP, the Public Debt as a % of GDP and the Terms of Trade results for the period of analysis. The first subgroup includes those four countries with satisfactory performance and the second those other four with less satisfactory results.

Table 1 grouping was a preliminary step towards an analysis of the frequency of occurrence of Satisfactory or

Non-Satisfactory results per country, which is presented in Table 2. In this latter table countries are rated according to the number of “upper-half” or “lower-half” performance criteria belonging. A Performance Index (PI) was calculated adding one unit whenever a country was classified in the “Satisfactory” group and subtracting one unit when it was classified in the “Non-Satisfactory” group. This approach reveals that the Netherlands was the country with the highest PI value (6), due to the fact that country was included in the Satisfactory Performance group in all six macroeconomic criteria. The second best country according to these criteria was Germany, with a PI value (4), indicating that country’s performance was Satisfactory in five of the six criteria. Italy and Ireland followed in third place, with a PI value (2) that reflect these countries performed well in four out of six criteria. The other half of the sample obtained a negative PI value, meaning that the Non-Satisfactory classifications dominated. France obtained a PI value (-2) that suggests there more than half of that country’s macroeconomic dimensions were Non-Satisfactory. Finally, Greece, Portugal and Spain obtained a PI value (-4), indicating that five out of the six macroeconomic dimensions analyzed in this study were Non-Satisfactory. The last column of Table 1.b includes a very brief description of what are the circumstances that explain each country’s PI values.

Table 1 Grouping of the Countries’ Analyses Results in Satisfactory vs. Non-Satisfactory Performance

	Current account balance	Manufact. trade balance	Non-manufacturing trade balance	Public deficit as % of GDP	Public debt as % of GDP	Terms of trade
Satisfactory	Germany	Germany	Greece	Germany	France	Germany
	Ireland	Ireland	Ireland	France	Germany	Ireland
	Italy	Italy	Netherlands	Italy	Netherlands	Italy
	Netherlands	Netherlands	Portugal	Netherlands	Spain	Netherlands
Non-satisfactory	France	France	France	Ireland	Greece	Greece
	Greece	Greece	Germany	Greece	Ireland	France
	Portugal	Portugal	Italy	SPAIN	Italy	Portugal
	SPain	Spain	Spain	Portugal	Portugal	Spain

Table 2 Summary of the Analysis Results and Performance Index

	Satisfactory	Non-Satisfactory	Perf. Index	Explanation of relative position
France	2	4	-2	Structurally driven but fiscally “well behaved”
Germany	5	1	+4	Consistent
Greece	1	5	-4	Structurally driven
Italy	4	2	+2	Consistent but too much debt
Ireland	4	2	+2	Crisis driven
Netherl.	6	0	+6	Outstanding
Portugal	1	5	-4	Structurally driven
Spain	1	5	-4	Crisis driven/structurally driven

Source: Own calculations with information obtained from the Eurostat Database

5.3 Dimensions and Root Causes of the Structural Heterogeneity Observed in the EU

We have presented evidence to support the argument that the structural heterogeneity presently observed among the sample of eight EU member countries derives from:

(a) Pre-existing different models of development and different productive orientation, likely explained by the specific sociopolitical context and the natural endowments of each country; the former differences have a

historical origin and the endowment differences are determined by nature. Combining both explanations, it is possible to argue that the current macroeconomic standing of countries is congruent with an optimal utilization of their productive resources (David Ricardo's Theory on the Comparative Advantage of Nations).

(b) Structural differences, associated with inefficiencies or frictions at the level of specific factors' markets (e.g., labor, capital), that exist because the presence of regulatory or policy distortions. These should not prevail in the long run but will require a proactive approach to minimize the adverse effects of their presence.

Unfortunately, the EU's economic heterogeneity is not widely recognized neither in the public domain nor in the discourse of the high ranking officers of most Pan European institutions. On the contrary, there seems to be a tacit agreement that the simple adoption of a common currency will make all EU member countries more even. Naturally, European institutions are not prepared to deal with the challenge, nor were designed to do so because structural heterogeneity and its main consequences, productivity heterogeneity and international competitiveness, were not at the center of the developers of the single currency model priorities.

High indebtedness in the case of the peripheral countries (Greece, Portugal, Ireland and Italy) is not a policy decision variable, which can easily be corrected. The weak fiscal base and the lack of enough political stability that blocks their ability to raise tax revenues mostly explain the problem. Fiscal integration of the Eurozone countries would minimize the risk of periodical regional crises, but this process will undoubtedly face many challenges. The more homogeneous North Eurozone countries would favor more fiscal cooperation and coordination (and eventually, unification), but the periphery countries would rather keep their budgetary autonomy (South Eurozone countries). Moreover, the problem of excessive sovereign debt levels and the necessary austerity measures that ensue (all derived from the weak fiscal structure of these countries) also has recessionary effects and leads to deterioration in the situation of banks, high level of interest rates and massive decline in business investment.

Structural heterogeneity of the EU members strongly supports the argument that a "single" monetary policy does not fit all countries in the Eurozone. For example, low interest rates may lead to a misallocation of capital in the periphery countries towards the private non-tradable goods sector (e.g., construction and building in Ireland and Spain) and in the public sector (too expansionary budgetary policy in Greece and Portugal), instead of promoting more internationally competitive productive activities.

Since national inflation rates still differ among member states, real interest rates and real exchange rates are also divergent. The periphery countries have allowed an excessive nominal wage growth that exceeds productivity gains and has resulted in inflated wages relative to the core countries. Higher nominal unit labor costs result in higher inflation which lead to an appreciation of the real exchange rate, reduce exports and re-direct demand from domestic to foreign goods and services. A pernicious effect of an overvalued real exchange rate is that it has an influence on the structure of production, favoring non-tradable sectors, speculative bubbles and many associated risks. Economic convergence is not an automatic outcome of economic and monetary integration. It will require specific institutional settings and public policy interventions to deal with the deep structural asymmetries that exist among the Eurozone countries.

6. Conclusion

Several member countries of the Eurozone face structural problems that deserve closer attention, in some cases, to recover fiscal stability, in others, to reduce extremely high unemployment, and in some others, to

reinitiate economic growth based on the clear identification of the many different and potentially rich complementarities that exist among EU countries.

However, the nearsighted belief that convergence will result automatically from the adoption of the euro distracts the attention from fundamental issues that need to be addressed if economic integration is to be taken seriously. Rejection of Fiscal Federalism by several members of the EU blocks any solidarity measures. The only possible solution if the euro is meant to last, is to contemplate a permanent fiscal integration, similar in conception to the already existing Monetary Union. Undoubtedly, the implementation of a Fiscal Union faces many severe challenges, not the lesser of which is the nationalistic view of most political actors.

However, more urgent matters are at sight. The debt expedient will no longer be feasible after the 2011-2013 Sovereign Debt crisis. Private and public debt was a temporary expedient to artificially compensate the financial tightness derived from the structural problems of the real economy. It is urgent to fix the external accounts of several members because, in the absence of a Federalist solution, fiscal equilibrium and external sector equilibrium are *sine qua non* conditions for long-term growth.

Moreover, the abundant evidence reported on structural heterogeneity in this and other former studies suggests that EU members' convergence is not diminishing, or at least it is not diminishing fast enough. Consequently, all the policy tools of industrial policy should be considered by the European Commission and individual countries to accelerate that process. Fiscal policy, while still not unified, could be a strong lever of the process, by assigning subsidies and incentives directed to exporters, imports substitution producers, innovative firms, or qualified labor employment creators. Governments (and the EU) could also promote joint R&D projects whose results, shared among several companies, may have important multiplicative effects.

The Eurozone industrial policy should be interventionist and dispose of much larger funding to take on the challenge of faster convergence towards a more productive and competitive EU.

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