

2. Cost competitiveness: the real issue

This chapter will first deal with the consequences of monetary integration for the real economy of the Euro Area. We will then develop a new index for competitiveness based on unit labour cost levels. Finally, we draw some conclusions for policies that aim at reducing macroeconomic imbalances.

2.1 The economic consequences of the euro

Current accounts and competitiveness

The emergence of macroeconomic imbalances in the Euro Area is often explained by the loss of competitiveness. Ten years after the Lisbon Strategy sought to make Europe ‘the most competitive economy in the world’ (European Council 2000), this is the sad state of European affairs. The failure of the Strategy highlights the risks of designing policy instruments on the basis of inappropriate theories. A salient example is the so-called Open Method of Coordination, which was meant to be the instrument by which Europe would reform its economy through voluntary cooperation and peer pressure while maintaining the familiar framework of sovereign nation states. Some observers thought it was a ‘new vision and the revolutionary potential of soft governance in the European Union’ (Tucker 2003; see also Regent 2003; Hodson and Maher 2001). However, it has produced few results. Voluntary policy coordination works only in win–win situations because each actor then has the potential incentive to increase welfare.³⁹ By contrast, competitiveness

39. This is only a potential improvement, for asymmetric information constraint could prevent the attainment of such Pareto-improved outcome.

is always a win–lose situation, which means that the incentives for individual actors are not conducive to engaging in cooperative behaviour. If voluntary cooperation is not forthcoming, therefore, some form of centralized agency is required to preserve the common interest (Collignon 2008; 2003), for, otherwise, partial interests will prevent the realisation of collective welfare. For example, Kevin Featherstone (2005) has explained that ‘soft’ coordination at the EU level has failed to affect, ‘hard’ politics in Greece (see also Hatzopoulos 2007). Clearly, the soft governance of the Lisbon Strategy, with its Open Method of Coordination and many other coordination instruments including the Macroeconomic Dialogue⁴⁰ and most prominently the Stability and Growth Pact, has failed to deliver the structural reforms necessary for improving Europe’s competitiveness.

Yet we have to be careful. Competitiveness is a dubious concept, as Paul Krugman (1994) famously pointed out:

The view that nations compete against each other like big corporations has become pervasive among Western elites. (...) As a practical matter, however, the doctrine of ‘competitiveness’ is flatly wrong. The world’s leading nations are not, to any important degree, in economic competition with each other. Nor can their major economic woes be attributed to ‘losing’ on world markets. Yet theorists of competitiveness, make seemingly sophisticated arguments, most of which are supported by careless arithmetic and sloppy research. Competitiveness is a seductive idea, promising easy answers to complex problems. But the result of this obsession is misallocated resources, trade frictions and bad domestic economic policies.

Many European policy makers have fallen precisely into Krugman’s trap of sloppy thinking. They often affirm that Europe’s South has lost competitiveness and the North has gained it. That is true, but as discussed above it is not true that these two developments are totally independent, as policy discourses in surplus countries often claim. For example, in an early phase of the Euro crisis, the German Finance Minister Schäuble responded to his French counterpart Lagarde, who had urged Germany to boost domestic demand and reduce current account surpluses, that

40. The Macroeconomic Dialogue is a forum for discussion between the European Central Bank, the Council, the Commission and the European social partners. See: http://ec.europa.eu/economy_finance/eu/med/index_en.htm[Accessed 01.03.2012]

German firms were competitive because of their own corporate decisions and the preferences of consumers around the world. Countries in economic trouble had to blame only themselves because they spent years living above their means and the financial and economic crisis had only exposed their weaknesses.⁴¹ In other words, Germany was right to remain ‘competitive’, while the South had to make efforts to copy the German model. However, demands that the South should increase its competitiveness, while the North must not become ‘less competitive’ are logically inconsistent. Competitiveness is a relative concept. As we saw in Box 2, the deficit of one economy is always the surplus of another. If Southern member states ran deficits, it is because the North (mainly Germany) has financed them by surpluses. If one assumes that current account positions measure competitiveness, the German view would be untenable. The only way in which Europe’s South could reduce such deficits and the North simultaneously maintain surpluses is by generating a current account surplus for the Euro Area as a whole. But increasing imbalances in the *global* economy is hardly a desirable strategy in today’s macroeconomic environment (see Collignon et al. 2010).

Net exports – that is, the difference between exports and imports – can be an indicator of the capacity of an economy to sell abroad and this may reveal competitive advantages. An economy may generate large export volumes because it has specialized on supplying products for which there is high demand from abroad. For example, the relatively price-insensitive demand for German products is often explained by technological advantage – ‘*Vorsprung durch Technik*’. It is also possible that the firms in a given country have developed good commercial relations in rapidly expanding foreign markets. Again, it is said that German exports into booming China and Asia are strong, while Southern Europe is hardly present in these markets. Such trade flows are signs of competitiveness that reflect entrepreneurial skills, although competitiveness is also supported by a broader economic environment, such as infrastructure, labour costs, human capital, and so on.

No doubt trade flows may under certain circumstances be a relevant indicator of competitiveness, but the same is not necessarily true of current account balances. First of all, current accounts are often wrongly

41. Der Spiegel, <http://www.spiegel.de/international/europe/0,1518,683567,00.html> [Accessed 01.03.2012]

identified with net exports. Secondary, even net exports do not always reflect a country's export capacity, because the trade balance depends also on imports, which are a function of aggregate demand. Furthermore, current account statistics include factor incomes and remittances and other transfers between countries. If these payment flows compensate each other, the current accounts do indeed reflect net exports, but this is not necessarily always the case.

Table 1 shows that for some countries, such as Germany, the current account position and net exports correspond neatly; but for others, like Luxembourg and Ireland, this is not the case. A closer look reveals that in Germany the primary factor income (essentially profits from foreign investment) of €+33.5 billion is large (more than a quarter of net exports), but it is closely balanced by net transfers of €-32.4 billion to the rest of the world, so that the net balance of factor income plus transfers is close to zero. In Ireland and Luxembourg, by contrast, two countries which have attracted significant foreign investment in the past, net primary income is strongly negative (firms are repatriating profits), while transfer payments are irrelevant. Especially in small member states the export performance depends sometimes on very small groups of firms (chemical exports from Ireland to Germany; Nokia in Finland). Hence the current account position reflects not only export capacity, but also factor income and therefore the ownership structure of capital and the distribution of skills in the labour force.

In a fully integrated economic and monetary union, capital and labour should be allocated efficiently according to micro-comparative advantages. The capacity to attract foreign direct investment (FDI) could then be a sign of competitiveness. However, as Table 2 indicates, FDI flows simultaneously in and out of countries and these flows depend more on the level of economic development and the related vertical integration of transnational corporations than on competitiveness. The European Union has a net outflow of FDI, but Portugal has a net inflow. The gross value of accumulated FDI into the rest of the world relative to GDP is above the EU average in France, the UK and especially in Ireland; in Germany, Italy, Portugal and Greece it is below the average. The net position is negative for the EU and most member states, meaning that European firms have invested more abroad than foreign firms have invested in the EU. In Portugal it is the opposite. But does that mean that Portugal is more competitive than the rest of the EU? This seems hardly convincing. A priori, it is difficult to identify a causal link between FDI and competi-

Table 1 Current accounts as % of GDP, 2010

	Current account	Net exports	Factor income and transfers
Luxembourg	8.4	34.1	-25.7
Netherlands	5.2	7.2	-2.0
Germany	4.8	4.7	0.1
Estonia	4.1	5.3	-1.2
Austria	3.0	5.0	-2.0
Belgium	1.7	2.4	-0.8
Finland	1.3	2.5	-1.3
Euro Area 12	-0.4	1.3	-1.7
Euro area 17	-0.5	1.2	-1.7
Slovenia	-0.7	0.9	-1.6
Ireland	-1.1	19.3	-20.4
Slovakia	-2.9	-0.3	-2.6
Italy	-3.2	-0.8	-2.4
France	-3.3	-2.6	-0.7
Malta	-3.9	1.9	-5.9
Spain	-4.8	-2.1	-2.7
Cyprus	-6.1	-4.1	-2.1
Greece	-10.6	-7.3	-3.3
Portugal	-10.7	-8.0	-2.8

Source: Eurostat.

tiveness, as many other factors like market proximity, product processes, exchange rate volatility, and so on influence FDI decisions by firms. Yet capital flows will affect the current accounts when they finance trade deficits and/or affect the transfer balance. As we have discussed, in separate currency areas, they condition the exchange rate and therefore relative costs for exports and imports. Given that in the EU capital and labour should flow freely across different jurisdictions, these flows will also accentuate payments for factor income: workers will remit wages, firms return profits. In addition, cross-border social transfers for social pensions and health care will also increase in aging societies when pensioners move from the North to warmer climates in the South. As a consequence, divergences between current account statistics and net

Table 2 Foreign direct investment: stocks

	1995 (USD billion)	2010 (USD billion)	% change	1995 (% of GDP)	2010 (% of GDP)	% change
European Union						
In	1151.5	6890.4	498.4%	11.3	42.5	276.1%
Out	1324.1	8933.5	574.7%	13.5	55.0	307.4%
Net	-172.6	-2043.1	1083.7%	-2.2	-12.5	468.2%
Germany						
In	165.9	674.2	306.4%	6.6	20.4	209.1%
Out	268.4	1421.3	429.5%	10.6	43.0	305.7%
Net	-102.5	-747.1	628.9%	-4.0	-22.6	465.0%
France						
In	191.4	391.0	104.3%	12.2	39.1	220.5%
Out	204.4	925.9	353.0%	13.0	59.1	354.6%
Net	-13.0	-534.9	4014.9%	-0.8	-20.0	2400.0%
UK						
In	199.8	1086.1	443.6%	17.3	48.4	179.8%
Out	304.8	1689.3	454.2%	26.3	75.3	186.3%
Net	-105.0	-603.2	474.5%	-9.0	-26.9	198.9%
Italy						
In	65.3	337.4	416.7%	5.8	16.4	182.8%
Out	106.3	475.6	347.4%	9.4	23.2	146.8%
Net	-41.0	-138.2	237.1%	-3.6	-6.8	88.9%
Ireland						
In	44.1	247.1	460.3%	65.9	121.3	84.1%
Out	16.8	348.7	1975.6%	25.1	171.1	581.7%
Net	27.3	-101.6	-472.2%	40.8	-49.8	-222.1%
Spain						
In	110.2	614.5	457.6%	18.5	43.7	136.2%
Out	36.5	660.2	1708.8%	6.1	46.9	668.9%
Net	73.7	-45.7	-162.0%	12.4	-3.2	-125.8%
Portugal						
In	18.9	110.2	483.1%	16.3	48.2	195.7%
Out	3.6	64.2	1683.3%	3.1	28.1	806.5%
Net	15.3	46.0	200.7%	13.2	20.1	52.3%

Table 2 Foreign direct investment: stocks (cont.)

	1995 (USD billion)	2010 (USD billion)	% change	1995 (% of GDP)	2010 (% of GDP)	% change
Greece						
In	11.0	33.6	205.7%	8.3	11.1	33.7%
Out	2.9	37.9	1206.9%	2.2	12.5	468.2%
Net	8.1	-4.3	-153.2%	6.1	-1.4	-123.0%

Source: UNCTAD.

exports are likely to increase in the Euro Area and that has little to do with competitiveness within the European Union. On the other hand, the free flow of capital and labour may lead to economies of scale and agglomeration effects, which can further accentuate competitive divergences. As a result, current accounts are inappropriate for measuring export competitiveness.

Nevertheless, competitive advantages have shifted significantly within the EU over the last two decades. This transformation of the European economy was intended and wanted, but its consequences were neither anticipated nor are they taken into account by policy makers. The creation of the European Single Market in 1992 and European Monetary union in 1999 had a clear purpose: to improve Europe's productive capacity and competitiveness in the global economy. The Cecchini Report (1988) had identified significant welfare gains from 'more Europe', and reality has not been disappointing: in fact, the European economy has outperformed these earlier forecasts.⁴²

However, there is a problem: European unification has created winners and losers. The gains from greater market integration are not equally distributed and this fact is generating a growing army of Eurosceptics. The tradable goods sector in manufacturing has generally benefitted from economies of scale, but other sectors have suffered, especially those which depend on low-productivity, low-skilled labour and produce non-tradable goods. These shifts in the distribution of welfare gains are typical for efficient market economies. Kaldor (1939) has shown that, in

42. EU Commission in 1992 White Paper (Growth, Competitiveness, Employment).

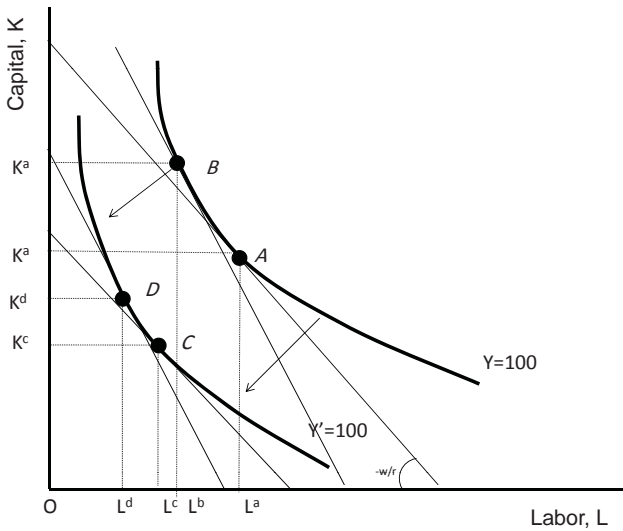
a welfare-maximising economy, winners should compensate losers. Inspired by the German model, the European Union has paid lip service to this idea by declaring in the Lisbon Treaty that it is a Social Market Economy, but at the same time it has resisted a Transfer Union, where rich 'countries' pay for the poor. This resistance is understandable. Structural funds in the EU budget are the main mechanisms for compensating losers, and they are funded by national taxes. Quite naturally, national tax payers ask: what do we get in return? This question will not go away until there are European tax payers in other words, until the EU budget is financed by own resources. However, regional transfers address the need for social equity only imperfectly, because they cannot distinguish sharply between losers and winners and therefore between legitimate transfer receivers and donors. To understand the distributional dynamics, we need to look at the causes behind the transformation of the European economic tissue. We will first sketch a theoretical model and then analyze the empirical evidence.

A theoretical model

It is a rarely acknowledged fact that the European economy has effectively started to behave like any other fully integrated economy, such as the United States. This mode of functioning is the direct consequence of the removal of trade barriers in the single market and of the abolition of exchange rates and financial uncertainty within the Euro Area. In a single market with monetary stability, factors of production are allocated according to comparative advantages. Investors seek to combine capital and labour in such a way that costs are minimised in the EU. Relative factor prices of labour and capital are increasingly determining the allocation of factors of production and this transforms traditional production models. Economic theory teaches that higher wages and/or lower interest rates should encourage the substitution of labour by capital. This means that for the same level of output, investment will rise, while employment creation will slow down. As a consequence, labour productivity will increase and capital productivity will fall.

We may illustrate this by a simple text book model. Figure 7 shows the logic of the substitution of factors of production in accordance with relative factor prices. The vertical axis gives the amount of capital, the horizontal axis the amount of labour, and the inward-bending iso-cost curve indicates the possible combinations of capital and labour required to

Figure 7 Relative factor prices and shifts on the production function



produce a given amount of output. Total factor productivity increases, when we move from the higher iso-cost curve to the lower curve at the left, because less capital and less labour are now required to produce the same amount of output.

In theory, any point on the iso-curve is efficient. The question is then: where will an economy find itself on this curve? The answer depends on relative factor prices. Profit maximising firms will chose a combination of capital and labour, at which the total costs are minimized, and this depends on the relative price of these two factors of production. The relative price ratio of labour to capital is indicated by the tangent of the line that touches the iso-curve at point A. If relative factor prices change because capital becomes cheaper and labour more expensive, the economy moves from point A to a new tangent point B, provided total factor productivity does not change. As a consequence, more capital and less labour will be used to produce the same output, which means that the capital productivity will fall and labour productivity will increase. In this case, a fall in capital productivity would be associated with a rapid accumulation of capital.

Although the accumulation of capital would be associated with diminishing returns, it may also improve production technologies in general, so that Total Factor Productivity increases. The economy then moves from a higher to a lower iso-cost curve. These shifts may take a variety of adjustment paths in response to changes in the relative cost of capital and labour. For example, a movement from point A to Point D increases both capital and labour productivity, although capital productivity would improve less. The opposite effect obtains when capital (labour) becomes relatively more expensive (cheaper). In reality, an economy may see simultaneously movements on the iso-curve, and shifts of the curves themselves. This makes it a priori difficult to explain the *empirical* productivity variations observed in Europe.

Since the beginning of European monetary union in 1999, relative factor prices have shifted significantly for Southern member states in the Euro Area. With the single currency, interest rates and the cost of capital have converged to the low levels which had characterized Germany before EMU. As a consequence, the cost of capital has fallen and the average capital efficiency (ACE)⁴³ has slowed down, while labour productivity has improved. In the North, on the other hand, the cost of capital has remained fairly constant, while wages have fallen relative to the Euro Area. Such a shift in relative factor prices would have moved the equilibrium points of the North and South in the opposite direction, so that the average capital efficiency has risen in the North and fallen in the South. The inverse movement must have taken place for labour productivity. Clearly, these trends must have had consequences for the relative competitiveness of the member states.

Empirical evidence

Figure 8 gives a two decades overview over the average efficiency of the capital stock (ACE) of major member states of the Euro Area. The levels of average efficiency vary substantially; with Northern Europe, often, but not always, performing better. Over the last decade, capital productivity

43. The concept of average capital efficiency (ACE) used in the empirical part of this paper is an approximation of capital productivity. It is calculated as the ratio of the nominal value of output (GDP) to the value of the economy's capital stock. It therefore represents capital productivity multiplied by the ratio of the GDP deflator to the capital goods deflator. In the long run, this latter ratio should be one, so that ACE is a good proxy for capital productivity.

Figure 8 Average efficiency of capital

North

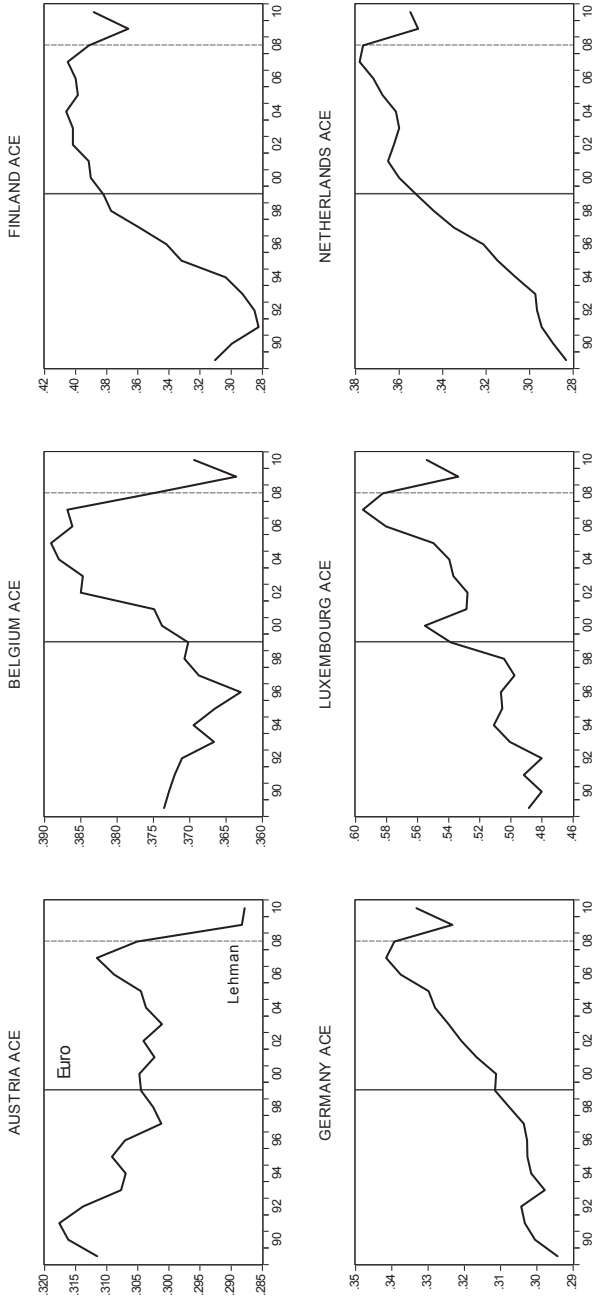


Figure 8 Average efficiency of capital (cont.)

South

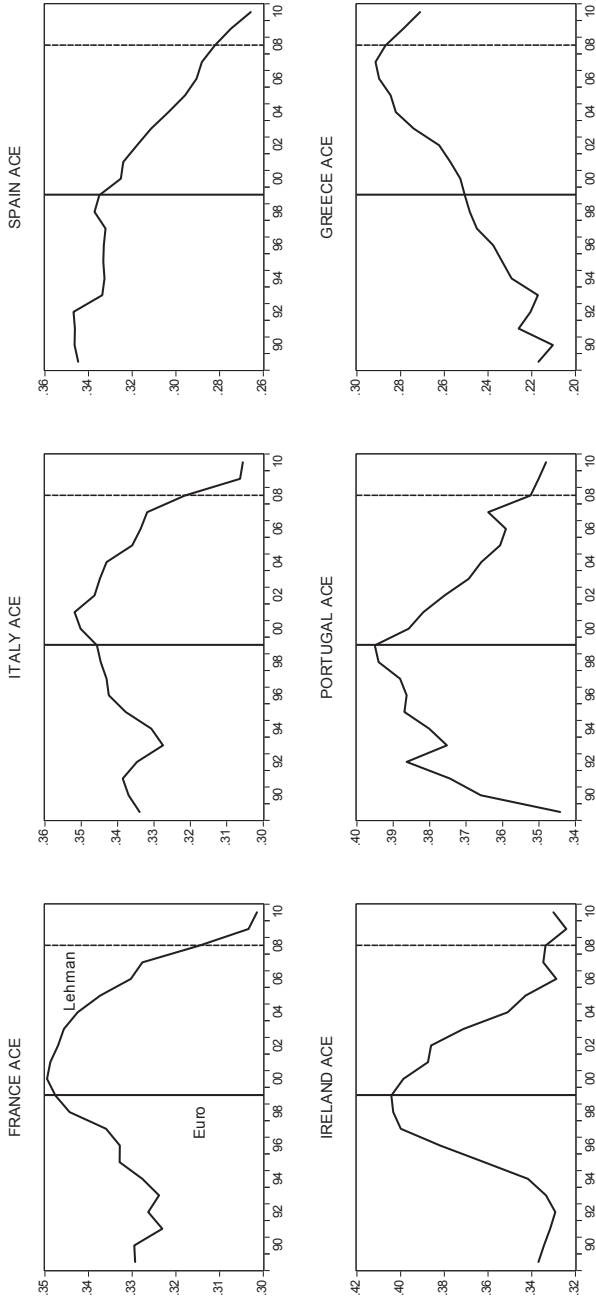
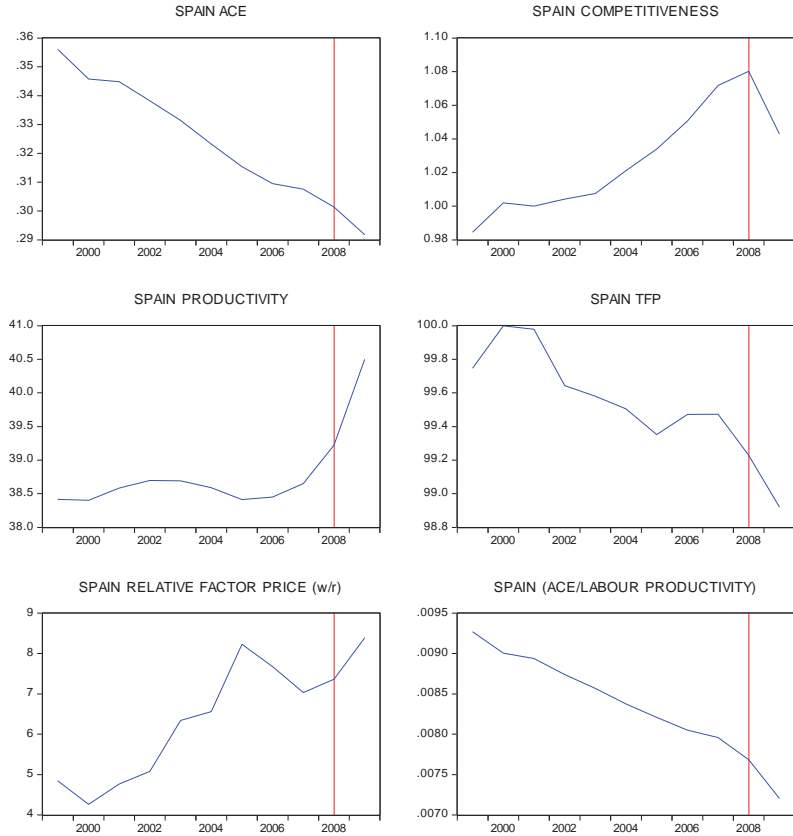


Figure 9 Spain's shifting production function



has been high in the Benelux countries and Finland. It has remained stable in Austria, rising again in the Benelux countries and Finland, but also in Germany and Greece; it had a tendency to decline in France, Ireland, Italy, Portugal and Spain. With the exception of Greece, capital productivity has therefore developed as one would expect, given our theory: when interest rates came down in the South after the start of monetary union, the resultant over-accumulation of capital generated diminishing returns on capital. The local economies have adjusted to this new factor price relation. Nevertheless, we observe that capital productivity was negatively affected by the financial crisis in all Euro member states. At this point it is too early to say what effect the European debt crisis with

large yield spreads will have for the allocation of capital in the Euro Area, but is likely to increase ACE in the South.

Spain is an interesting case for our hypothesis because Total Factor Productivity (TFP) has remained stagnant over the last decade, which means that we can observe movements on the iso-curve in Figure 7. Figure 9 gives some evidence for the adjustment dynamics in Spain. TFP has been constant over the first decade of the Euro (the movements have remained in the one percentage point range). We would expect the reduction in interest rates after the introduction of the euro to have caused a move on the iso-curve to the left where capital productivity is lower and labour productivity higher. This is what the ACE and productivity panels in Figure 9 confirm. The two lower panels also indicate the shift on the iso-curve to the steeper tangent line, because relative factor prices for labour (w) and capital (r) have increased, while the productivity of capital relative to labour has fallen. The figure also indicates a loss in competitiveness before the Lehman crisis, but we will discuss that in detail below.

The shifts in relative costs of capital and labour have, therefore, transformed the comparative advantages in the Euro Area. The Spanish example is impressive for the clarity with which it confirms our theoretical model, but similar movements have taken place in all Southern member states, even if shifts in Total Factor Productivity have blurred the picture. Thus, while our model would lead us to expect that labour productivity in the South has risen more than in the North, this is not always true. In many Southern economies, labour productivity and total factor productivity have both deteriorated *relative to the Euro Area average*. This could be a consequence of differences in national TFP relative to the Euro Area, but there is also evidence for sectoral shifts in comparative advantages, which may have counterbalanced the logic of higher labour productivity. For example, in Spain, the accumulation of capital was concentrated in the real estate sector, where labour productivity has remained stagnant. After 2008, this sector was in recession, jobs were eliminated and productivity has increased. There are three explanations of how the structural shifts in relative factor costs may have affected the competitiveness position of member states.

First, in some Southern economies, most dramatically in Ireland and Spain, and to a lesser degree in Portugal and France, the low interest rates have led to property booms that have accelerated the accumula-

tion of capital without technological change. As a consequence, the three variables of average efficiency of capital, labour productivity and Total Factor Productivity have stagnated and even fallen relative to the Euro Area average. Second, in some other member states, especially in Germany, labour has become cheaper, but not capital. This has increased employment. However, it has not lowered productivity, because new investment has improved capital productivity by incorporating technological change, while labour productivity still benefits from the improved quality of the capital stock. This development is particularly pronounced in the manufacturing sector, which benefits from economies of scale in the large European market and the global exports sector (see CER 2011 for evidence). Third, in Greece, probably as a consequence of the Olympics in 2004, significant investment in infrastructure has improved both ACE and TFP. According to our model above, this investment has also benefitted labour productivity. It is interesting to note, however, that the improvement in Greek labour productivity was mostly concentrated in tourism (CER, 2011). Thus, until the financial crisis in 2008 ended the story, Greece seemed to be on the way to take off with accelerated catch-up growth. In this respect, Greece is a very different story from Portugal, where all indicators have deteriorated over the last decade.

These developments have consequences for competitiveness and wage bargaining. *Ceteris paribus*, higher ACE would reduce the cost of capital and higher labour productivity would lower wage costs per unit of output. However, whether this will actually be the case depends on nominal wage settlements. We will discuss wage-setting rules below. What matters here is that assuming a constant wage share, higher capital efficiency will improve profitability and therefore competitiveness. However, *when ACE is falling, a constant wage share is not enough to sustain the return on capital* and the economy will be losing competitiveness and market shares. Hence, the shift in relative factor costs induced by European monetary union with its implication for capital productivity has transformed the competitive advantages of member states and caused a profound process of structural re-allocation of resources across Europe. Firms in Germany and the Netherlands are emerging as the major exporters in manufacturing, while Italy and France are gradually de-industrialising.

As a result of this transformation, some member states will show persistent current account deficits, while others will generate structural surpluses. These imbalances are a feature of Europe's brave new world

in monetary union. They resemble developments we know from other large economies like the USA. These imbalances are the result of a functioning market economy and although they are socially problematic, they are economically sustainable. As was shown in the first part of the paper, the current account deficits within the Euro Area can be financed by the European banking system and they will remain sustainable as long as debtors are able to service their debt. The problem is that national policies affect the economic conditions for entire jurisdictions and thereby increase, or lower, the risk of failure for firms operating within these regions. In this respect, the most important policy variable is wage-setting.

The broad picture is that current account imbalances reflect the new resource allocation in a fully integrated European market. Net exporters into global markets like Germany will provide foreign exchange reserves for the Euro Area, while the European banking system will finance the current account deficits within the Euro Area. Not every region needs to have the same production mix, nor is it absolutely necessary that all current account imbalances within the Euro Area be eliminated. In fact, the heterogeneity and persistence of imbalances within the Euro Area is a sign of economic efficiency, because it proves that resources are allocated according to comparative advantages. By contrast, the bureaucratic procedure proposed by European authorities to avoid macroeconomic imbalances could reduce the danger of peripherization, but only at the price of lower efficiency and lower aggregate welfare.

The described development model is sustainable only as long as the trade deficit contributes to raise productivity, for otherwise the loss of net worth and money will endanger economic growth. The periphery will hollow out with massive migration of labour and capital. Italy's *Mezzogiorno* and Germany's *neue Bundesländer* are examples of such developments. Hence, there is always a question of whether the unmitigated market logic is socially acceptable in Europe. The sustainability of the European Union may require a rethink about transfers from an equity point of view. However, in today's chauvinist atmosphere, there is little appetite for European solidarity and a Transfer Union. Fortunately, there is an alternative route for preserving the cohesion of the European Union: the removal of competitive distortions. We will now first look at competitiveness and trade, then establish a new measure of competitiveness and finally draw conclusions for economic policies.

2.2 Competitiveness and trade

Competitiveness is about the relations between firms seeking profit for their shareholders, embedded in social frameworks. The economic, social, political and legal conditions under which they operate will influence their profitability. If the return on capital is affected by policy measures taken at the level of EU member states, differences in profitability will determine the volume and allocation of investment and employment in Euroland regions. Over time, the incremental micro-decisions by firms will accumulate to macroeconomic imbalances. We will first look at this environment and then analyze how it has translated into the trade performance of member states in the European Union.

The embeddedness of Europe's competitiveness

There are many determinants driving productivity and competitiveness. The World Economic Forum's *Global Competitiveness Report 2010–2011* (2010:4) has pointed out that 'understanding the factors behind [the] process [that drives competitiveness] has occupied the minds of economists for hundreds of years, ranging from Adam Smith's focus on specialization and the division of labor to neoclassical economists' emphasis on investment in physical capital and infrastructure, and, more recently, to interest in other mechanisms such as education and training, technological progress, macroeconomic stability, good governance, firm sophistication, and market efficiency, among others.' In order to measure these factors, the Report has set up score indicators, which give a synthesized overview of the conditions of doing business in the world. Detailed data are collected in 12 pillars for institutions, infrastructure, macroeconomic environment, health and education, goods, financial and labour market efficiency, technology, market size, business sophistication and innovation. The Global Competitiveness Report lists 139 countries, with Switzerland leading at the top (score 5.63) and Chad at the bottom (score 2.73). Table 3 shows the results for EU member states.

It is clear that business conditions are more favorable in Europe's North and West than in the South and East. For the Euro Area, there is a significant difference between the 11 member states⁴⁴ that joined EMU back

44. Germany, Finland, Netherlands, France, Austria, Belgium, Luxembourg, Ireland, Spain, Portugal, Italy.

Table 3 EU27 Rankings, Global Competitiveness Index, 2010–2011

Economy	Rank	Score
Sweden	2	5.56
Germany	5	5.39
Finland	7	5.37
Netherlands	8	5.33
Denmark	9	5.32
UK	12	5.25
France	15	5.13
Austria	18	5.09
Belgium	19	5.07
Luxembourg	20	5.05
Ireland	29	4.74
Estonia	33	4.61
Czech Republic	36	4.57
Poland	39	4.51
Cyprus	40	4.51
Spain	42	4.49
Slovenia	45	4.42
Portugal	46	4.38
Lithuania	47	4.38
Italy	48	4.37
Malta	50	4.34
Hungary	52	4.33
Slovak Republic	60	4.25
Romania	67	4.16
Latvia	70	4.14
Bulgaria	71	4.13
Greece	83	3.99
Averages		
EMU 11	23.3	4.95
EMU 17	39.1	4.60
Opt outs	7.7	5.38
CEEU 7	54.6	4.32

Source: World Economic Forum (2010).

in 1999 and the latecomers.⁴⁵ The three opt-out countries (UK, Denmark, Sweden), which are highly industrialized economies, also perform well. Core Europe is in the world's top 10 percent league, the catch-up countries are only better than half of their global competitors. Greece is performing worst in the EU, mainly because of a bad macroeconomic environment (rank 123 out of 139) and inefficient labour markets (rank 125). However, as we will see below, these competitiveness indicators say little about a country's trade performance or relative cost advantages. For example, Sweden, Finland, Denmark, the UK, France and Ireland all have lost market shares within the European Union (see below Table 4 and Figure 11).

If anything, the Global Competitiveness Report reflects the level of economic development in the world. Developed countries are more competitive. In recent years, many peripheral countries with lower than average income have joined the European Union, because they hope this will accelerate development. A detailed study of the Report reveals also that being part of the EU and the Euro Area is an important component of member states' competitiveness, either because member states benefit from factors such as market size, legal framework and monetary stability, or because the EU facilitates structural reforms like better infrastructure, technological readiness, innovation and business sophistication. Thus, the idea that a country such as Greece could fare better outside the Euro Area is not supported by facts.

While the conditions listed in the Global Competitiveness Report determine the context for investing in particular member states, they say little about what causes the actual imbalances in the Euro Area. For this purpose, we need a narrower concept of competitiveness.

Trade within the European Union

As a first step and starting with the conventional approach, we can relate competitiveness to the net export performance of member states, although we will now distinguish between intra-EU and extra-EU trade. Extra-EU trade will be affected by a long list of factors, but the dominant variable is the exchange rate to other currencies; by contrast, intra-trade

45. Greece, Cyprus, Slovenia, Malta, Slovakia, Estonia.

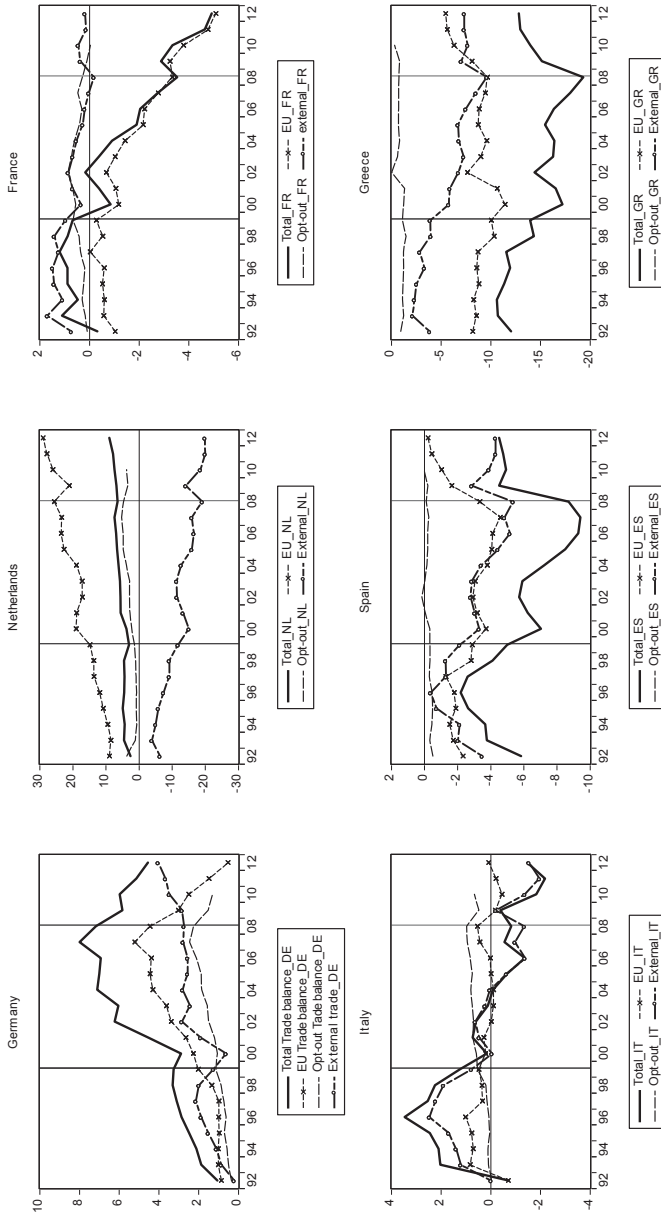
benefits from the removal of trade obstacles in the single market and from monetary stability in the Euro Area (Rose and Stanley, 2005).⁴⁶

Figure 10 shows the main member states' trade performance over time. There are huge differences in the pattern of external net exports and intra-EU trade balances. Given the emphasis in the Macroeconomic Imbalance Procedure, we also show current accounts. The correlation between net exports and the current account balance is not impressive. Only Germany and the Netherlands, and to a lesser degree Greece, have improved their net exports consistently *within* the European Union since Monetary Union was introduced. By contrast, Spain, Ireland, Finland and France have seen their internal position deteriorate. In Germany, this internal improvement is matched by *external* net export growth, but not so in the Netherlands. Opposing intra and extra trends can also be witnessed in Austria. However, in Finland, France, Ireland and Spain net exports fall both within and outside the European Union. This could be interpreted as evidence that Southern Europe suffers from lack of competitiveness, although Italy and Greece have kept their net exports within the EU stable and Portugal has managed to do the same in extra-EU trade.

Yet net exports could be a distorted indicator for competitiveness, as exports and imports do not only respond to relative prices, but depend also on domestic growth and foreign demand. Some of these effects are quasi-automatic as growth may affect a broad range of imports and exports. However, entrepreneurial skills can push exports beyond this average performance. It is then more significant for the evaluation of competitiveness to look at shifts in market shares of exporters. The export performance reflects the economy's product mix, that is, whether it supplies goods for which there is demand, and also its position with respect to the growth of external markets. We can, therefore, distinguish two demand effects, one resulting from focussing on the right product specialization and the other coming from conquering dynamic export markets. Competitiveness in a more narrow sense is then determined by cost and other supply-side factors, which allow firms to expand market share over and above these two demand effects. We can identify each of these factors by using constant market share analysis and applying it to intra-EU trade as we are primarily interested in intra-European imbalances.

46. We use the standard data provided by Eurostat. Ideally one would distinguish between the Euro Area and the European Union. However, the trade share of EU member states with volatile exchange rates is negligible.

Figure 10 European trade balances



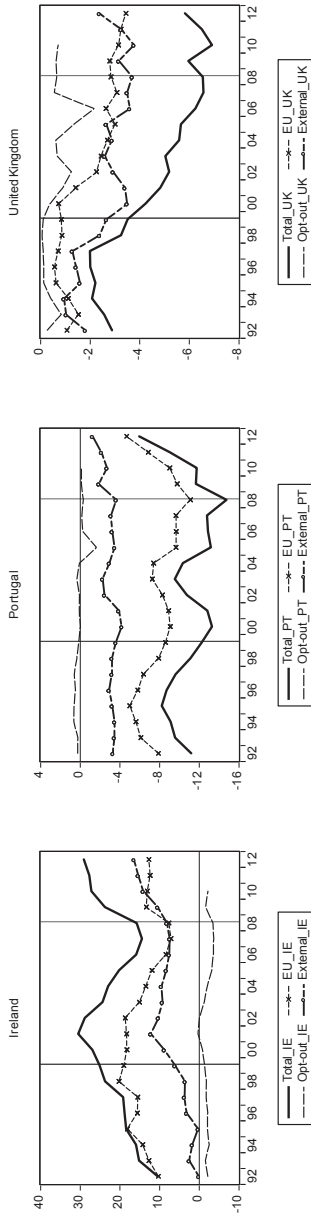


Figure 10 European trade balances (cont.)

Constant market share analysis is an old concept.⁴⁷ It decomposes the shifts in market share according to three effects.⁴⁸ The *product effect* describes the part of demand attributed to the commodity composition of the country's exports. It is positive, if exports are concentrated in sectors for which demand in the EU is growing above average. The *market effect* is the part of the variation attributed to the regional composition of the country's exports, net of the product effect. It is positive if demand in export markets is higher than what is expected given the product compensation. Finally, the *competitiveness effect* in a narrow sense is the residual, which captures the difference between the actual gain of market share and the growth that would have occurred, had the export shares in regions and products remained constant. This effect catches, therefore, a wide range of supply-side effects, from relative cost and price developments to environmental conditionings as measured by the Global competitiveness report. A positive value is always interpreted as an increase in competitiveness.

The table in Annex 2 shows that during the 12 years from 1999 to 2010, the most significant gains in intra-EU trade were made in the following product sectors: Mineral Fuels, Oils and Products of their Distillation; Bituminous Substances; Mineral Waxes (€+99.4 billion); Pharmaceutical Products (€+23 billion); Copper and Articles thereof (€+11.8 billion); Plastics and Articles thereof (€+10.2). The biggest losses occurred in the commodity groups of: Reactors, Boilers, Machinery and Mechanical Appliances; Parts thereof (€−90 billion); Vehicles other than Railway or Tramway Rolling-Stock, and Parts and Accessories thereof (€−65.7 billion); Other Products (€−30 billion); Electrical Machinery and Equipment and Parts thereof; Sound Recorders and Reproducers, Television Image (€−20.6 billion); Articles of Paper and Paperboard, Paper Pulp, etc (€−14.2). Thus, if a country had many specialized firms in the chemical sector (in a broad sense), its exports would have performed better than if it had had a large nuclear industry or car factories.

The second aspect is the demand coming from specific regional markets. Overall, trade within the European Union grew by 66.2 percent between

47. An early statement of the CMS methodology can be found in see Richardson, 1971. For alternative formulations and refinements of the methodology, see Milana, 1988.

48. The literature points out that when one calculates changes of market shares over time, there is an interaction term, which is usually small if the growth rates are not too high. We have accounted for this term in the residual.

1999–2010. For the Euro Area as a whole, demand for imports (60.9%) has risen slightly less than for exports (62.1%). Not surprisingly, the strongest demand for trade originates in the new member states; it has been three to four times as high as the EU in total. The growth rates of exports and imports for individual member states are shown in Table 4.

These data confirm our conjecture of a profound transformation of the European economy: the biggest growth opportunities are in the new member states regardless of whether they have joined the euro or not. They nearly tripled their exports and doubled their demand for imports from other member states. By contrast, the opt-out states – UK, Denmark, Sweden – have lost out on these opportunities. It is interesting to note that Denmark, which has a quasi-fixed exchange rate to the euro, did better than the UK, where exchange rate volatility is a handicap for trade.⁴⁹

The greatest stability in market shares has occurred in the Euro Area, which covers 79.4% of the intra-EU's exports and 77.4% of its imports. The new member states, however, have an export share of only 5% while they import 11.4%, marginally more than the opt-out countries (11.2%). In this environment, a member state would gain market share if its production system were able to respond to the fast growing demand for products or from import markets and would lose if its export industry were concentrated on stagnating sectors and markets. Finally, efforts to increase competitiveness are determined by local firms and by the framework conditions provided by member state governments. They are measured by what we call the *competitiveness effect*.

Table 5 gives the results of our constant market share analysis for the 1999–2010 period. While the Euro Area has made moderate losses in some market shares within the EU, the losses for the opt-out countries were more than twice as high in billions of euros. Relative to their GDP, the losses have been even more substantial. (See Figure 11.)

By contrast, the new member states have been the big winners in intra-EU trade. Overall, they have gained € 163 billion at the expense of the Euro Area (€ –49.2 billion) and the opt-out countries (€ –113.9 billion). If Slovenia and Slovakia were not counted as Euro Area members, the

49. For a theoretical model that would explain this outcome, see Collignon 2002.

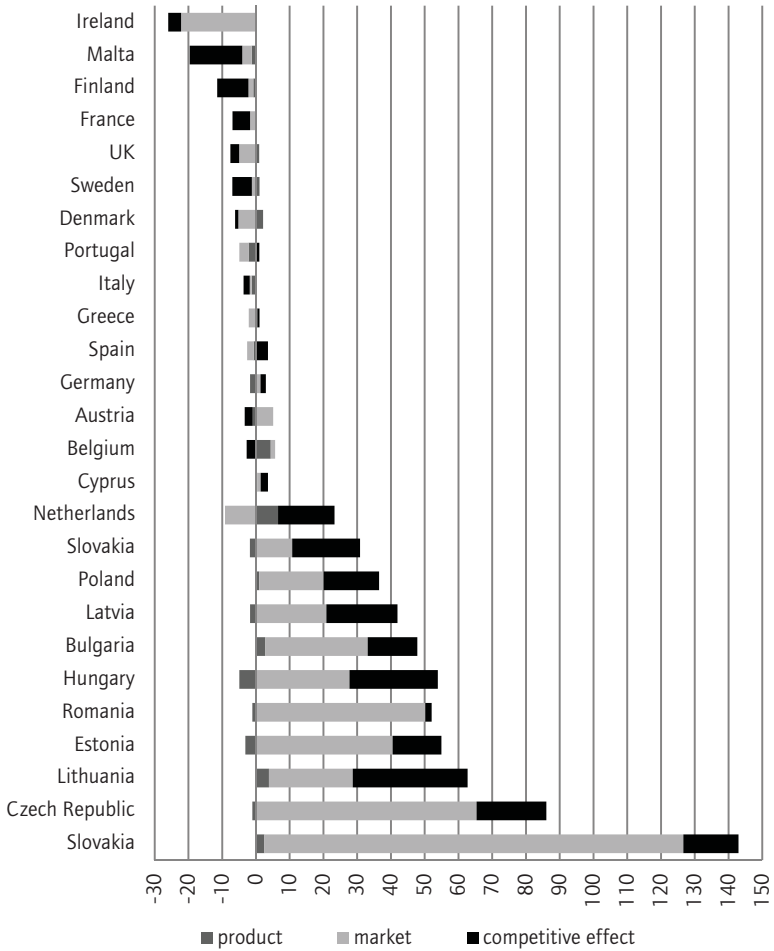
Table 4 Growth of export markets in % 1999–2010

Markets	Export growth	Import growth	Difference	Deviation from exports	Euro Area imports
Austria	73.6	83.6	-10.0	7.5	17.4
Belgium	71.9	77.3	-5.4	5.7	11.1
Cyprus	208.7	122.8	85.9	142.5	56.6
Germany	73.4	63.6	9.7	7.2	-2.5
Spain	74.2	45.4	28.8	8.0	-20.8
Finland	12.0	55.8	-43.8	-54.2	-10.4
France	19.8	55.4	-35.6	-46.4	-10.8
Greece	45.6	33.8	11.8	-20.6	-32.4
Ireland	14.0	21.7	-7.6	-52.2	-44.5
Italy	36.8	51.6	-14.8	-29.4	-14.6
Malta	-12.7	49.9	-62.6	-78.9	-16.3
Netherlands	98.7	60.2	38.5	32.5	-6.0
Portugal	42.2	36.1	6.1	-24.0	-30.1
Slovenia	167.8	97.5	70.3	101.6	31.3
Slovakia	386.3	349.8	36.6	320.2	283.6
Euro Area	62.1	60.9	1.2	-4.1	-5.3
Denmark	46.2	51.0	-4.8	-20.0	-15.2
UK	6.3	30.0	-23.7	-59.9	-36.2
Sweden	37.3	65.3	-28.1	-28.9	-0.8
Opt out	18.3	39.0	-20.6	-47.8	-27.2
Bulgaria	344.6	259.0	85.6	278.4	192.8
Czech Republic	286.1	232.5	53.6	219.9	166.3
Estonia	209.4	169.4	39.9	143.2	103.3
Hungary	179.8	119.1	60.7	113.6	52.9
Lithuania	407.3	222.3	185.0	341.2	156.1
Latvia	284.3	170.0	114.3	218.1	103.9
Poland	340.5	216.7	123.8	274.3	150.5
Romania	361.9	351.1	10.8	295.8	284.9
NMS	281.8	208.4	73.4	215.6	142.2
Total Intra-EU Trade	66.2				

Table 5 Market share gains and losses, 1999–2010

Billion €	Total	Product	Market	Competition
Austria	3.5	-1.9	10.1	-4.7
Belgium	7.6	11.3	3.4	-7.1
Cyprus	0.3	0.0	0.1	0.2
Germany	24.0	-35.3	26.8	32.5
Spain	5.8	-3.8	-11.2	20.8
Finland	-14.0	-0.9	-1.8	-11.3
France	-92.5	2.6	-24.0	-71.1
Greece	-1.4	0.6	-2.8	0.8
Ireland	-23.5	0.0	-20.0	-3.4
Italy	-41.5	-13.9	-6.7	-20.9
Malta	-0.7	0.0	-0.1	-0.6
Netherlands	54.4	25.4	-35.4	64.5
Portugal	-4.7	-2.6	-3.2	1.2
Slovenia	6.0	-0.4	2.2	4.2
Slovakia	27.4	0.5	23.8	3.1
Euro Area	-49.2	-18.4	-38.8	8.1
Denmark	-6.6	3.4	-8.5	-1.6
UK	-92.9	13.7	-69.8	-36.8
Sweden	-14.4	2.5	-2.9	-14.0
Opt out MS	-113.9	19.7	-81.3	-52.4
Bulgaria	5.9	0.3	3.8	1.8
Czech Republic	47.9	-0.6	36.9	11.7
Estonia	2.8	-0.2	2.2	0.8
Hungary	22.5	-2.3	12.8	12.1
Lithuania	6.5	0.4	2.6	3.5
Latvia	2.7	-0.1	1.4	1.4
Poland	57.5	1.5	30.0	26.0
Romania	17.2	-0.4	17.0	0.6
NMS	163.1	-1.3	106.5	57.9

Figure 11 Gain/loss of market share as percentage of member states' GDP in 1999



gains for new member states and the losses for the Euro Area were even bigger. These gains were mainly due to above average growth and demand in new member states and show that Central and Eastern Europe is a locally integrated growth pole. Not surprisingly, all these countries have improved the efficiency of their supply-side conditions. In fact, to achieve this is probably why they wanted to join the EU in the first place.

The Euro Area as a whole has also improved its supply-side marginally, with big differences between individual member states. However, the opt-out countries have lost competitive efficiency on the supply side and are badly oriented toward stagnating markets, while they have benefited somewhat from their product portfolio. Overall, the impression is that being a member of the Euro Area provides stability and benefits trade.

With respect to individual Euro member states, we discover that France is the biggest loser of trade shares and this loss is mainly due to deteriorating supply side conditions. Italy is the second worst performer, losing on all fronts. The biggest winners are the Netherlands, followed by Germany. Both countries have greatly improved their supply-side conditions. Interestingly, this is also true of Spain, although it has suffered from stagnating demand in export markets. This may be a sign that a booming non-tradable sector (Spain's real estate bubble) could actually improve supply-side conditions for the tradable sector. By contrast, changes in the competitive supply-side position of Greece and Portugal (both positive) and Ireland (negative) have remained small.

Among the opt-out countries, the UK has experienced the biggest loss of market share compared to all member states in the Union. This is due to an excessive positioning in stagnating markets and a serious deterioration in British supply-side competitiveness – despite all the talk about Anglo-Saxon market flexibility. Among the new member states, Poland is the clear winner. Although all new member states have improved their supply-side conditions, some have suffered from a stagnating product portfolio, especially the Baltic republics.

The absolute euro amounts of gains and losses presented in Table 5 bias the picture towards large economies. In Figure 11 we relate the gains to national GDP. Now, Ireland is the biggest loser, mainly because of the market effect, while Malta, Finland, France and Sweden experience a significant worsening of their supply-side conditions. By contrast, the Netherlands and all of the new member states have managed to bring about improvements in their supply side, with their biggest advantage resulting from open markets in the EU. Germany's competitive gains are much less impressive when they are related to GDP. By contrast, supply-side improvements in new member states are rather small relative to GDP, while the losses remain substantial for France, the UK and Italy. Thus, our constant market share analysis confirms the shifts in comparative advantages discussed above and the fundamental trans-

formation of the European economy explains the deindustrialization of France and Italy.

The narrow ‘competitiveness effect’ in the constant market share analysis catches all effects other than demand for products and markets. It relates to supply-side conditions, especially changes in costs and relative prices. We must now deepen our understanding of these cost conditions.

2.3 Measuring cost competitiveness

Conventional measures of cost competitiveness, as used by the European Commission, calculate real effective exchange rates. The next subsection summarizes the evidence. The problem with these indices is that they cannot measure the competitiveness gaps as levels but only as rates of change. In the following subsection we will, therefore, develop an alternative indicator based on unit labour costs and the return on capital that is an indicator for unit labour cost *level* divergence.

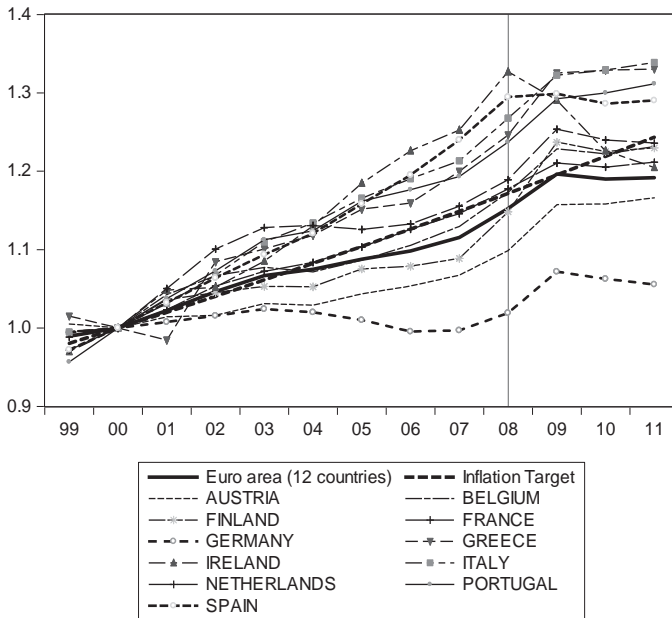
Real effective exchange rates

The most commonly used measure for competitiveness is an index of relative prices or relative inflation rates, which are usually based on some index starting at an arbitrary base year, often the year 2000.⁵⁰ The index will then show how annual changes in costs and prices build up over time. Such indices have also been constructed for unit labour costs (ULC), which signal differences in labour cost developments per output and are used for the score board in the *Excessive Imbalance Procedure*.

Figure 12 shows *nominal* unit labour cost indices in the Euro Area with the year 2000 as base. We also show the straight line, which indicates the ECB inflation target. Between Germany and Italy a cost gap of the order of 22% has developed and this is often interpreted as a sign of Italy’s losing competitiveness. Similar arguments apply to other Southern States. The discrepancy between these labour cost indices results from different wage bargaining behaviour: unit labour costs reflect the difference between nominal wage increases and labour productivity. Hence

50. Recently, Eurostat has re-defined some indices with a 2005 base year.

Figure 12 Nominal unit labour cost indices and inflation target



the rise in the Italian index is the consequence of wage increases above the rate of productivity growth. On the other hand, in Germany nominal unit labour costs fell, because wage restraint was keeping remunerations behind productivity improvements. During the recession in 2008–2009, productivity fell in most member states and ULCs started to rise, but since then a correction has started.

However, competitiveness is a relative notion. Real effective exchange rate indices provide more information about relative price changes or labour cost developments, because they take into account not only the home country but also the costs developments in, and the relative weight of, the country’s main trading partners. In the score board for the *Excessive Imbalance Procedure*, the European Commission (2011) has monitored Euro Area member states by looking at real effective exchange rates, which calculate the unit labour costs of a country relative to 35 trading partners.

Figure 13 Real effective exchange rates based on unit labour costs against EU15

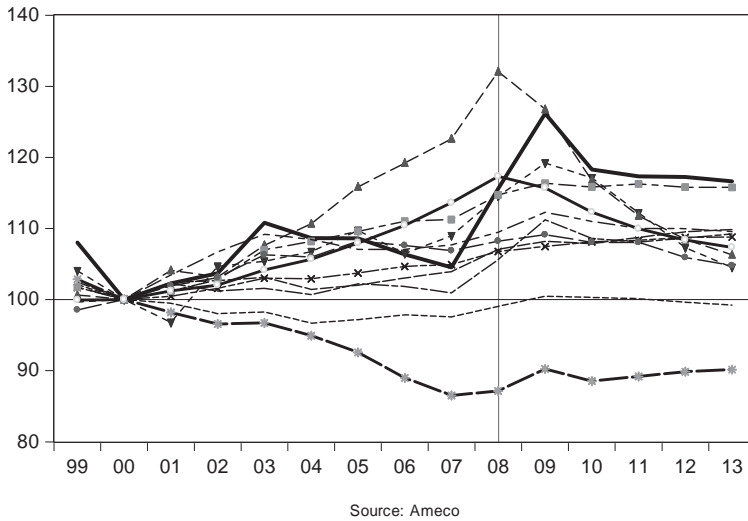


Figure 13 shows the development of *real effective exchange rates*, based on unit labour costs for the total economy relative to the rest of the former EU-15. An increase in this index reflects a loss in competitiveness. Given the relatively small variations in nominal exchange rates in the European Union, this index confirms the information of the nominal developments in Figure 12. However, it amalgamates intra-exports into the Euro Area with extra-exports in the rest of the world. The latter are subject to exchange rate variability, although this is less disturbing within the European Union than with the rest of the world, because most non-Euro Area member states seek exchange rate stability with the euro. Nevertheless, an index against 35 important trade partners, such as is used by the Alert Mechanism Report of the *Excessive Imbalance Procedure*, is easily distorted by exchange rate volatility, which is usually much larger than the changes in relative costs. Effective exchange rates

for the Euro Area member states are then largely driven by the euro-dollar rate and such an amalgam can hardly be an indicator for competitiveness *within* the Euro Area. The Commission's scoreboard does look at Euro Area indicators, but the data set is incomplete.

Another handicap of effective exchange rates is that they are based on some arbitrary base year and then measure *changes* over time. But cost competitiveness derives from *relative cost levels* and level discrepancies cannot be measured by these indicators. For example, the 22% gap between Italian and German ULCs does not necessarily mean that labour costs are that much higher in Italy, for it is possible that Italy was initially undervalued. We need therefore a different approach.

The profitability measure of competitiveness

What matters for competitiveness are *levels in relative costs* and these are determined by more than wages. Focusing on labour cost alone is not appropriate, even if wages make an important contribution to overall costs. Labour costs per unit of output depend on wages and productivity, but the other important factor in the total cost structure of an economy's production structure is the cost of capital. Hence, we need a standard of measurement where the competitiveness of firms reflects their *relative advantages with respect to labour and capital costs*.

Competitiveness should help firms make profits and thus is measured by rate of return on capital. We will follow standard theory and define *equilibrium levels* by assuming that in efficient markets the rates of return on capital are equalized. This does not mean that market dynamics will necessarily equalize returns on capital. We simply take profitability as the standard of measurement against which deviations from efficiency can be clearly asserted. Because arguably wage-setting and productivity are shaped by national debates and policies, we can use national macroeconomic data, and because we are interested in imbalances in the currency union, we will use the Euro Area average as benchmark. If the returns on capital in member states are higher than for the Euro Area, then the excess profits will indicate that the economy is more competitive than the rest. If returns are less, it means the economy lacks competitiveness.

We can calculate the return on capital for an economy as the operating surplus relative to the stock of capital, where the operating surplus is

the difference between GDP and the total wage bill. In other words, the return on capital is the profit margin (operating surplus divided by GDP) multiplied by average capital efficiency (ACE, that is, GDP divided by the aggregate capital stock of the economy). The operating surplus depends on prices (that is, GDP deflator) and on unit labour costs, which are determined by nominal wages and labour productivity. For a given level of unit labour costs, higher prices imply higher profit margins, hence larger operating surpluses and *ceteris paribus* higher returns on capital. This would imply that ULCs can rise until they reach the equilibrium of equal return on capital. From a neoclassical point of view, it may seem strange to see higher prices linked to higher competitiveness, but this is consistent with oligopolistic mark-up pricing and the fact that high profitability is considered a sign of high competitiveness.⁵¹ However, the overall return on capital depends also on the productivity of the aggregate capital stock (ACE) and therefore, as pointed out above, on relative factor prices. Given this analytical framework, we can calculate the return on capital by using national income statistics for calculating unit labour costs and the average efficiency of capital. We then compare an individual member state's return to the aggregate return for the Euro Area and derive the implicit unit labour costs. Thus, our competitiveness measure depends on prices, unit labour costs and average capital efficiency.

From the benchmark of equalized returns on capital, we calculate the *equilibrium unit labour costs*, which would be consistent with equal returns on capital. If actual unit labour costs are higher or lower than this theoretical equilibrium level, we will say that a country is over- or undervalued with respect to the Euro Area. Thus, in equilibrium, unit labour cost levels relative to the Euro Area would yield the same return on capital. Box 3 shows the calculation.⁵² When capital productivity is low, unit labour costs and the wage share must also be low *in equilibrium* in order to compensate for the low capital efficiency. But if capital productivity is high, unit labour costs can rise even if labour productivity is constant.

Figure 14 shows actual and equilibrium unit labour costs for some major member states of the Euro Area. The horizontal black line at the val-

51. The distinction is based on the fact that our model assumes equilibrium as given by perfect competition in capital markets, while unit labour costs are set by labour markets and prices are set as a mark-up. By contrast, the neoclassical model assumes perfect competition in product markets and therefore takes prices as given.

52. I have developed this approach first in the context of several reports of Centro Europa Ricerche, Rome.

Box 3 Defining equilibrium unit labour costs

The rate of return is the operating surplus (net profit) per unit of capital. If we abstract from capital depreciation and taxes, it is

$$3.1 \quad R = \frac{Py - wL}{P_k K}$$

If we call the Average Capital Efficiency (ACE) the nominal output produced by one unit of capital at current prices, that is:

$$3.2 \quad \text{ACE:} \quad k = \frac{Py}{P_k K}$$

we get the rate of return as the product of the profit share and ACE

$$3.3 \quad R = k\sigma_k = k(1 - \sigma_w) = \frac{Py - wL}{Py} \frac{Py}{P_k K} = \left(1 - \frac{w}{P} \frac{1}{\lambda}\right) k = \left(1 - \frac{ULC}{P}\right) k$$

Where $\lambda = y/L$ is labour productivity and the profit share σ_k is the complement of the wage share

$$3.4 \quad \sigma_k = \frac{Py - wL}{Py} = 1 - \sigma_w$$

Because of (3), the return on capital R improves when the average efficiency of capital and/or the profit share improve. The average efficiency of capital rises with the technological productivity of capital (y/K) or when prices for capital goods are less than the GDP deflator (P/PK). The profit share rises when the wage share falls, which implies that real wages rise less than labour productivity.

Equilibrium relations

Assuming efficient markets, R should converge in different countries. Thus, for country A and B we have

$$3.5 \quad R_A^* = R_B^* \Leftrightarrow \left(1 - \frac{ULC_A^*}{P_A}\right) k_A = \left(1 - \frac{ULC_B^*}{P_B}\right) k_B$$

$$\text{Or:} \quad \sigma_{KA}^* = \sigma_{KB}^* \frac{k_B}{k_A}$$

Hence, in equilibrium the differences in wage shares must reflect the relative value productivities of capital and the equilibrium path for ULC is

$$3.6 \quad ULC_A^* = \frac{k_B}{k_A} \frac{P_A}{P_B} ULC_B^* - \left(\frac{k_B}{k_A} - 1\right) P_A$$

This formula allows also identification of the impact of price developments. Assuming the average efficiency of capital to be identical in the two economies, the ULC-gap would have to offset the inflation gap in order to maintain equal ROC

$$3.7 \quad \frac{ULC_A}{ULC_B} = \frac{P_A}{P_B}$$

A deviation of actual from equilibrium ULCs implies different rates of return on capital:

$$\frac{ULC_A}{ULC_B} < \frac{P_A}{P_B} \Rightarrow ROC_A > ROC_B$$

ue 1 indicates parity between unit labour cost levels in a member state with respect to the Euro Area as a whole. Economists often assume that this line represents some form of economic equilibrium (Dullien and Fritsche 2008), but in a capitalist economy this is wrong, because labour cost parity ignores capital productivity. Our benchmark is the return on capital. The punctuated line shows our level of *equilibrium unit labour costs* at which the return of capital between Germany and the Euro Area would be equalized. The solid line shows the *actual unit labour cost* of Germany relative to the Euro Area. Hence the difference between the equilibrium and the actual line indicates the degree of over- or undervaluation of a member state's unit labour costs.

Over the past two decades, persistent overvaluations for Austria, Spain and Greece, and undervaluations for Belgium, Finland, Ireland, Italy, Luxembourg, Netherlands and Portugal can be observed. France and Germany are exceptions: France moves from undervaluation to overvaluation and Germany does the opposite. We note that the equilibrium level of unit labour costs is neither constant nor necessarily close to parity. The reason is, of course, that capital productivity has changed and/or inflation differentials have modified profit margins. From Figure 8 we know that ACE has fallen in Europe's Southern member states and risen in the North. Ceteris paribus this should have translated into higher equilibrium unit labour costs in Belgium, Germany, Greece, Luxembourg and the Netherlands, and into constant levels in Austria and possibly Finland where the effect was minor. It should also have lowered them in the other Southern states. However, we see such a drop in the equilibrium level only in France and Ireland, and a rise only in Belgium, Greece,

Luxembourg and the Netherlands. Most importantly, in Germany and Italy the equilibrium level remained constant after 2000, and in Ireland, Portugal and Spain it was rising instead of falling. These abnormalities must be explained by inflation differentials. In Germany, inflation (measured by the GDP deflator) was below the Euro Area average, in Italy, Portugal, Spain and Ireland, it was above. These price increases have provided a temporary relief for Southern countries, for capital seemed to yield a decent return despite a deterioration of the relative cost position. The interesting case is Greece. GDP-inflation was only marginally below the Euro Area average in 2007, while capital productivity had improved by 18.5 percent. Thus contrary to other Southern economies, Greece was on the right track before it was hit by the financial crisis.

These data modify the competitiveness picture painted by the simple indices used by the Commission for the *Excessive Imbalance Procedure*. A quick way to see the changes in competitiveness level positions is by taking the difference between the actual and equilibrium unit labour costs relative to the Euro Area. Figure 15 shows the thus constructed *Competitive Index*.⁵³ The zero line indicates that the return on the capital stock in a given member state is equal to the Euro Area. An *index number* above the zero line represents an overvaluation. For example, 0.1 means that the ULCs of a member state are 10% above equilibrium. An increase in the index is equivalent to a loss of competitiveness.

We noticed that since the start of European monetary union, most Southern European member states have lost competitiveness, while the North has improved it. Interestingly, France behaves as a Southern economy and Greece, which has improved ACE, has followed the German pattern. In most member states, the immediate impact of the financial crisis seems to have inverted these dynamics in the heat of the crisis, but most countries are now returning to the long-run trend. However, the value of this competitiveness indicator over the more familiar base-year indices lies in the fact that it shows the absolute levels of unit labour cost positions. Remarkable changes have occurred: most dramatically, in Ireland the index rose from an undervaluation close to -30% in 2002 to -5% in 2007. In the Netherlands, it went from zero to -10% and in Germany from $+10\%$ to -5% . Greece has improved from $+21\%$ in 2000 to $+7\%$ in 2007, but this was not enough to eliminate the overvaluation. Italy has

53. The index was first published by CER 2011.

Figure 14 ULC relative to Euro Area: actual and equilibrium

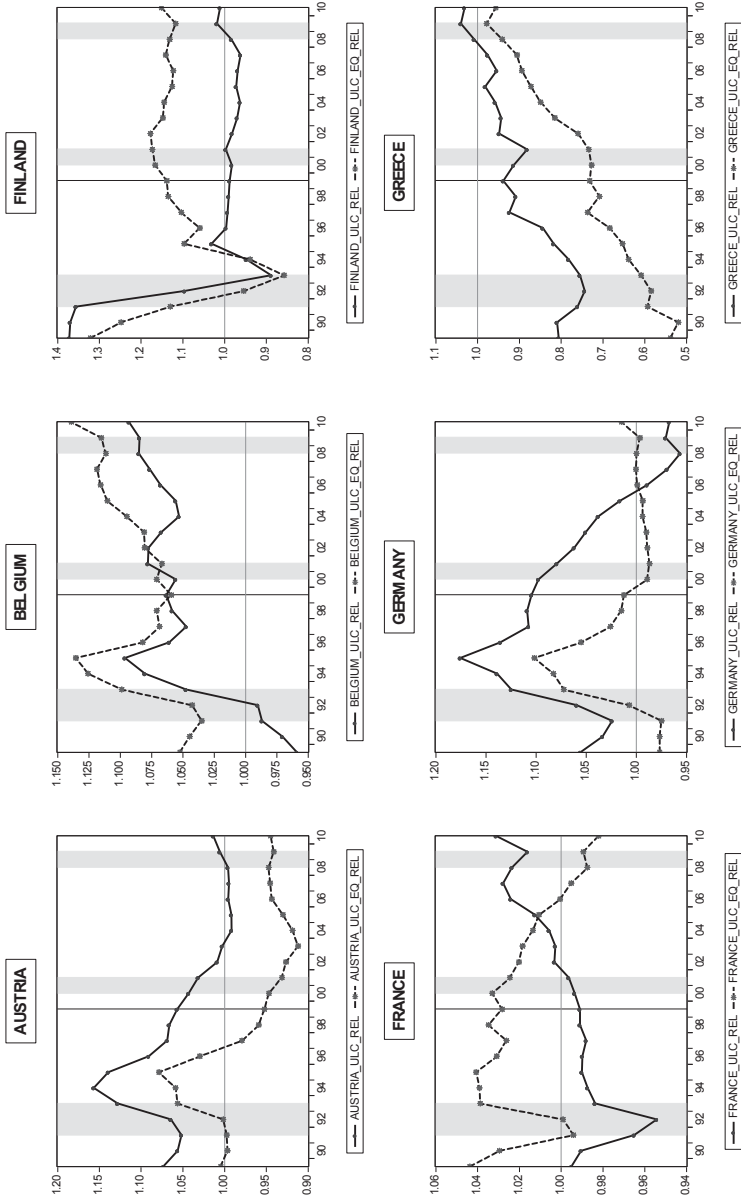


Figure 14 ULC relative to Euro Area: actual and equilibrium (cont.)

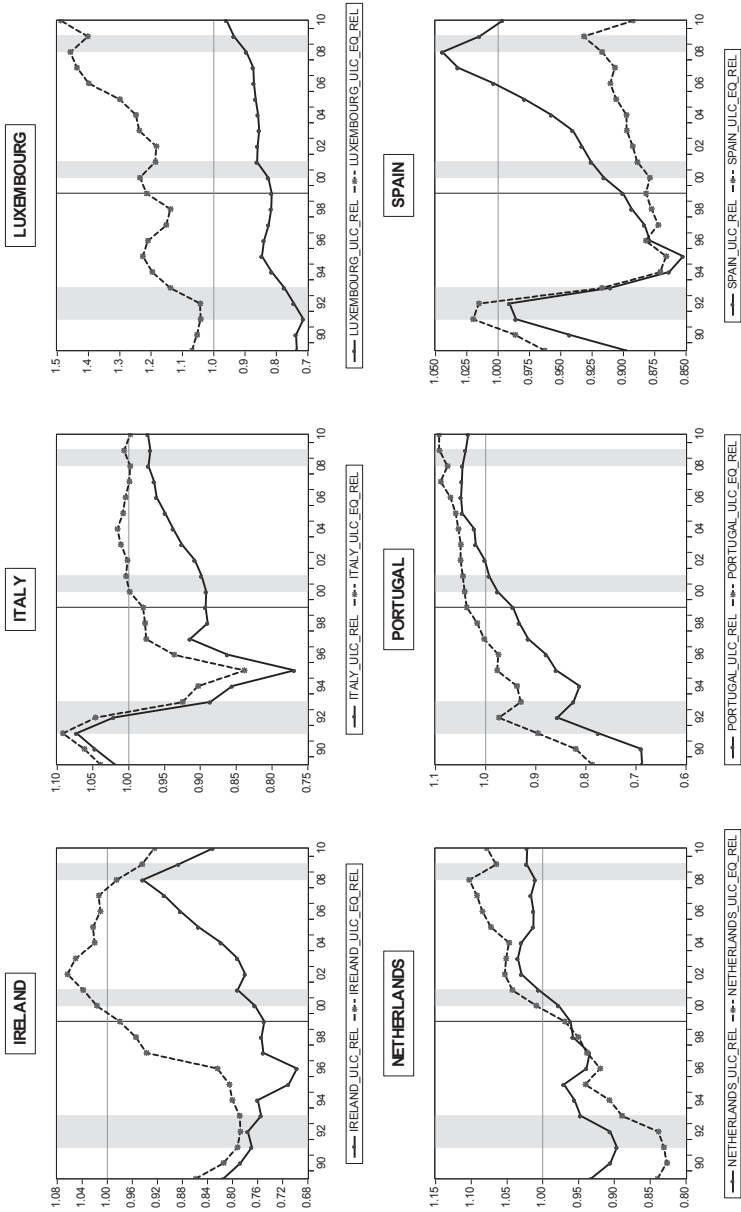


Figure 15 The Competitive Index

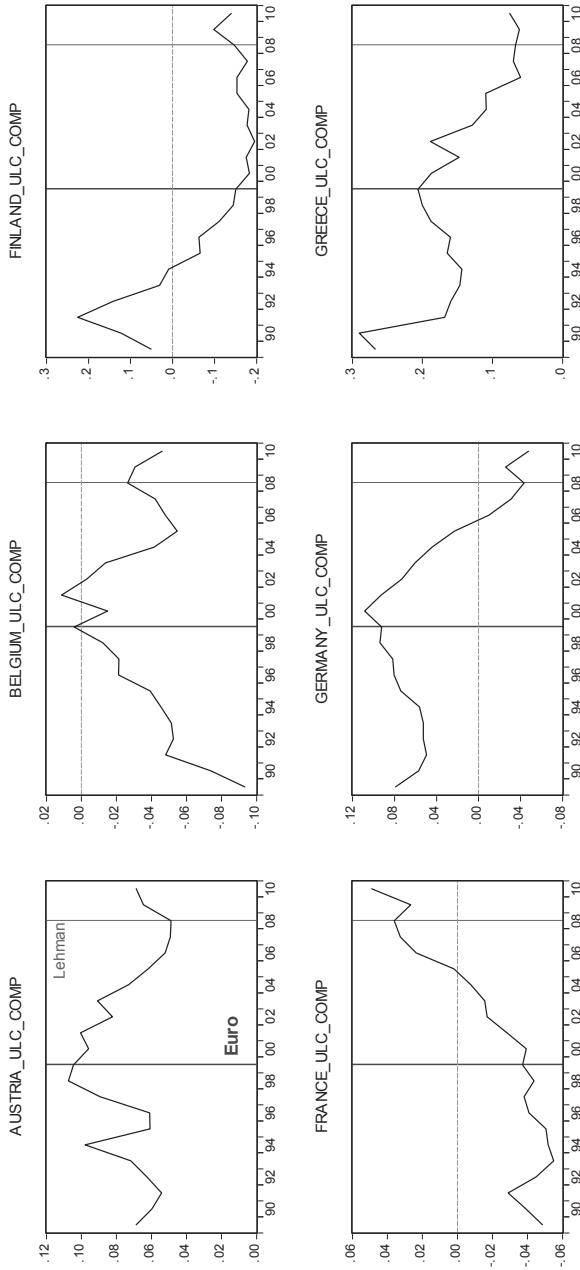
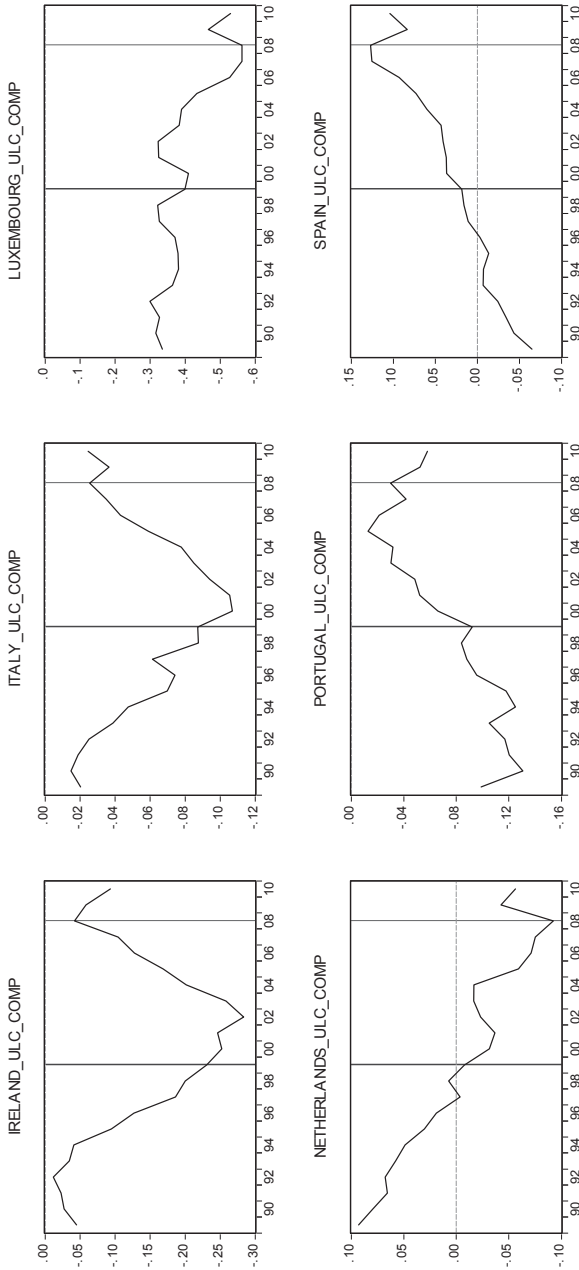


Figure 15 The Competitive Index (cont.)



continually lost competitiveness from -11% to -2.5% ; it is, however, still weakly competitive. Finland has reduced its advantage from -20 to -10% , and Spain has increased its disadvantage from 2% to 12% . France is another sad story: the advantages of competitive disinflation of the 1990s have been lost with a swing of 8 percentage points that has pushed the economy into overvaluation.

These observations are in line with what the theory of relative factor prices would lead us to expect. They also conform to the constant market share estimates of supply-side competition. Hence, our Competitive Index performs well and would be a good policy tool for assessing the underlying causes of macroeconomic imbalances in the Euro Area.

2.4 Competitiveness and economic policy

Now that we have a measure for competitiveness, we can analyse the consequences for economic policy in the EU. First we look at how competitiveness can be affected by policy, and then at what are the consequences for growth and fiscal policy.

Competitiveness and wage-setting

We have argued that macroeconomic imbalances cannot be measured and evaluated by holistic concepts which are familiar from national accounts. Instead, they are the consequences of firms' management decisions that respond to competitive advantages and disadvantages and aggregate to macroeconomic data. Some of these advantages are firm-specific; some are dependent on institutional arrangements; some on direct government decisions. What matters in the end is how these conditions affect the return on the stock of capital in a society. In a single currency area, however, the credit risk of each firm or investor or debtor needs to be evaluated as an individual risk. This is why comparing returns on capital is important. If returns are insufficient, investment will slow down; if firms or households or governments cannot service their debt, defaults and bankruptcies will follow. If such developments are cumulated in specific regions, the fall in asset values could generate a liquidity crisis as described above.

While the elimination of the exchange rate risk has eliminated the country risk, national policies may still affect the economic environment through a range of economic policies, which contribute to the determination of price and cost relations. We have seen how changes in relative factor prices due to European monetary union have shifted the incentives for the accumulation of capital. Other factors such as research and development, staff training, tax policies, etc., are also important. Yet in the long run, productivity will be the main driver for comparative advantages. In the short run wage-setting is the variable that can shift incentives. The two are nevertheless linked, because the long run always consists of a series of short-run events. This makes wage bargaining a key for avoiding excessive imbalances and rotating slumps and booms. The problem is that Europe has no tools for coordinating wage policies. The European labour market is neither atomised such that each worker receives a wage equal to his marginal contribution, nor is it centralised so that macroeconomic externalities could be internalised. We will now look at the implications of our analysis for wage bargaining and then at how competitiveness may influence economic growth and fiscal policies in member states.

With respect to wage bargaining, our measure of competitiveness suggests an interesting modification of traditional policy rules. If one accepts that unit labour cost developments anchor inflation in a currency area, there exists a simple rule for wage-setting: nominal wages should increase at the rate of labour productivity growth plus inflation, or rather the inflation target of the ECB. This is the famous '*Golden Rule*' or distribution-neutral wage formula. It ensures that the wage share stays constant in the long run and that the ECB can realise its primary objective of maintaining price stability. This is why it has been frequently reiterated by Europe's Macroeconomic Dialogue between social partners and European authorities (Commission, 2005; Koll, 2005).

However, while the Golden Rule is a good benchmark for determining how wage-setting can support price stability in the overall economy, it is insufficient to prevent competitive distortions between firms, sectors, and regions, because it ignores capital productivity. If we measure competitiveness by the relative returns on capital (or their equality to the Euro Area average), the profit margin should be adjusted downward and wages upward when the average capital efficiency improves: because the return on capital is the profit margin multiplied by the average efficiency of capital and the profit margin is the inverse of the wage share (in other

words, real unit labour costs), wages should increase by more than the sum of productivity and inflation if ACE improves as it did in the North. Inversely, if ACE slows down as it did in the South, real wage increases must remain below labour productivity improvements. This does not mean that real wages must not grow at all, for remember that if interest rates come down labour productivity will improve; but we need to keep in mind that, in a competitive environment, the margin of wage increases is constrained by capital productivity as well. *Hence the 'Golden Rule' has given the wrong policy recommendation to wage bargainers in Europe: because the rule stabilises profit margins, it has contributed to loss of competitiveness in the South and excessive gains in the North.* By not considering the externalities of relative factor price developments and ignoring capital efficiency, the Golden Rule will create competitive distortions, which translate into macroeconomic imbalances. In monetary union, these imbalances are financed by transfers in money balances, which will then cause a deterioration in the economic environment for growth and employment. This deterioration can be gradual (Portugal) or sudden (Greece, Ireland, Spain), but it will always have a mirror image in booming regions in the monetary union.

Uncoordinated wage bargaining is unlikely to prevent competitive distortions and macroeconomic imbalances, especially in European monetary union, where wages are determined in a predominantly national framework and the non-tradable sector is often a trend-setter. In this context the incentives for national wage settlements are inconsistent with the requirements of macroeconomic balances between member states. Because capital and labour productivities respond to relative factor prices, capital efficiency will slow down when interest rates come down and *despite an increase in labour productivity more wage restraint would be required to remain competitive. But this is unlikely to be the wage bargainers' response*, because the accommodating monetary policy will contribute to faster growth, higher employment and therefore a tightening in the labour market. This development will exert pressure for wages to go up.⁵⁴ Thus, the long-run trend of lower interest rates, which used to prevail in the South, is likely to have caused the lasting deterioration of relative cost competitiveness. This is precisely what we observed in most Southern European member states including

54. European labour markets generally respond to the Phillips curve dynamic. See European Commission 2011.

France. On the other hand, wage restraint shifts incentives in favour of labour accumulation, so that labour productivity slows down and capital productivity increases. That is what has happened in Germany and the Netherlands, where competitive positions have improved dramatically, and to a lesser degree in Austria and Belgium. Thus, even if the cost of capital is in principle (abstracting from debtors' default risks) the same in all member states of monetary union, collective bargaining has remained at national level and that gives member states an instrument to affect comparative advantages.⁵⁵ *Thus wage bargaining is important, but the Golden Rule can be counterproductive for rebalancing macro-economic disequilibria.*

This is an unconventional result. It shows that the adjustment by peripheral countries to the stability standards of European monetary union has long-term consequences ignored by policy makers. Orthodox policy recommendations may generate economic and social tensions. It is the paradox of our time that monetary union was supposed to create a 'stability union', but the ignorant policies pursued by member states have effectively destabilized the Euro Area. What is needed instead are new and unconventional approaches that make the transition to a stable long-run equilibrium in the Euro Area politically acceptable. Unfortunately, the scoreboard proposed by the European Commission falls short. The answer is either some form of solidarity in a Transfer Union, or implementing ambitious programs for increasing productivity and restraining wage rises in countries which suffer from overvalued unit labour costs.

Some of these measures are, of course, part of the EU policy recommendations to member states. The problem is the priority given to current account adjustments. For example, the European Commission (2011:82) argues: 'In light of the overarching priority to ensure the rebalancing of EU economies, the Annual Growth Survey includes recommendations on wages, reflected where necessary in Country Specific Recommendations in the framework of the BEPGs and Employment Guidelines. 'Strict and sustained wage moderation, including the revision of indexation clauses in bargaining systems' were recommended for

55. The reference to member states does not necessarily mean governments. For example in Germany, wage bargaining is institutionally separated from government interference (*Tarifautonomie*). What matters is how the general legal, social and political framework contributes to outcomes of wage-setting.

countries characterized by large current account deficits.’ The consequence of this one-sided effort of reducing ‘excessive’ current account imbalances is *excessive austerity*. The focus is on wage moderation, while the Commission does not take into account the need for wage *increases* in the North which would not only rebalance competitive advantages but more importantly also generate higher consumption and demand for Southern products in the North. Who protects European citizens against these excesses?

European authorities have recommended that adjustment in ‘countries characterized by protracted recessions or stagnation (e.g. Greece, Spain, Portugal) would imply recovery via net exports and a correction of current account deficits accumulated in the past’ (European Commission, 2011:85). But who is to buy these net exports in the future? The Commission seems to believe that the necessary adjustment can be achieved by shifting the relative prices and wages for non-tradable goods in favour of tradables, primarily by cutting wages in the non-tradable sector. In other words, the South must become more competitive than the North. However, Table 5 has shown that Greece, Spain and Portugal all have marginally improved their supply-side competitiveness in the Euro Area, while their biggest disadvantage was lack of demand from their major export markets. No doubt our competitiveness indicator reveals scope for further improvements in cost competitiveness, but an important dimension would be increases in labour and capital productivity due to higher growth and economies of scale. If the non-tradable sector is large, as in Greece, the policies recommended by European authorities will lower domestic demand and therefore slow down economic growth. This is the last thing Southern European member states need at this stage and the recommendations are clearly counterproductive. Instead, all sources of economic growth, whether they are located in the tradable or non-tradable sector, should be mobilized to solve the Euro-crisis. The policy recommendations by the Commission make sense only if one believes that monetary union works like a fixed exchange rate arrangement. We have shown that this is not the case and that growth in the non-tradable sector can contribute as much to economic growth as foreign trade.

If uncoordinated wage bargaining is unlikely to be able to prevent competitive distortions and macroeconomic imbalances, how could better coordination be achieved? European wage settlements are the result of market forces and collective wage bargaining and not of government

decisions; that being the case, what can be done to improve economic performance?

There is a huge literature on optimal wage bargaining institutions.⁵⁶ Following the line first explored by Calmfors and Driffil (1988), it is often argued that highly centralized and highly decentralized wage-setting systems are superior to intermediary systems in terms of macroeconomic outcomes. However, there are different methods of measuring centralization. One is the degree of *bargaining coverage*, in other words, the extent to which employees are covered by collective bargaining. Another is the *coordination* across bargaining sectors in terms of ‘wage leadership’ and ‘pattern bargaining’. Finally, the strength of trade unions in terms of *union density* matters. Several indicators have been constructed to gather empirical evidence, of which, according to the European Commission (2011: 94), the database compiled by Visser (2009) is the most systematic and comprehensive. To find some clues about the relation between wage bargaining and competitiveness, I have plotted the Visser data against the CER competitiveness index and our constant market share analysis. Table 6 shows the correlation coefficients for different variables from the Euro Area. The second line below the coefficients indicates the probability that the evidence cannot reject the null hypothesis of zero correlation.

We find highly significant correlations (within the conventional 5% confidence interval) between wage bargaining institutions and competitiveness: the relation is strong for the average level of the CER index (over- or undervaluation) and union density, and for wage coordination and shifts in market share. A weaker correlation (within the 10% range) exists for bargaining coverage and the product effect and for wage coordination and the narrow competitiveness effect in the Constant Market Share analysis. There are also some interesting dynamics between the competitiveness measures themselves. Not surprisingly, deterioration in unit labour costs lowers a country’s capacity to gain market shares and supply-side improvements increase overall market share. However, it is also interesting that the product effect and the market effect of export demand are negatively correlated. There is also weak evidence, even if it is statistically not significant, that overvaluations of labour costs are negatively correlated with changes in the competitive position, which

56. For an overview see European Commission, 2011.

Table 6 Correlations between labour market indicators and market share

Correlation Probability	CER avg	Bargaining coverage	Coordination	Union density	Global	Market	Product	Competition	CER 99_2011
CER avg	1								

Bargaining coverage	0.187945	1							
	0.6031	-----							
Coordination	-0.205339	0.05481	1						
	0.5693	0.8805	-----						
Union density	-0.656385	0.2526	0.560213	1					
	0.0393	0.4814	0.0921	-----					
Total CMS	-0.072516	-0.292736	0.66288	0.084836	1				
	0.8422	0.4118	0.0367	0.8158	-----				
Market	0.121527	-0.298745	0.383919	0.296349	0.164272	1			
	0.7381	0.4018	0.2734	0.4057	0.6502	-----			

Table 6 Correlations between labour market indicators and market share (cont.)

Correlation Probability	CER avg	Bargaining coverage	Coordination	Union density	Global	Market	Product	Competition	CER_99_2011
Product	-0.071142	0.588379	-0.005494	0.038104	0.153148	-0.754549	1		
	0.8452	0.0736	0.988	0.9168	0.6727	0.0117	-----		
Competition	-0.107464	-0.438116	0.548152	-0.066645	0.956525	0.030208	0.092967	1	
	0.7676	0.2054	0.1009	0.8549	0	0.934	0.7984	-----	
CER 1999-2011	-0.21358	0.042544	-0.534957	0.012293	-0.556974	-0.34084	-0.017568	-0.441947	1
	0.5535	0.9071	0.1111	0.9731	0.0944	0.3352	0.9616	0.201	-----

Note:

Sample (adjusted): 1 11

Included observations: 10 after adjustments

Balanced sample (listwise missing value deletion)

means that in the long run cost distortions will be corrected. Thus, the evidence from these correlations and the sign of the coefficients⁵⁷ send a clear and coherent message: *more centralized wage bargaining by coordinating wages across sectors, extending collective bargaining and strengthening trade unions improves competitiveness within the Euro Area*. In other words, the deepening of the European social market philosophy, which assigns an important role to social partners, can make an important contribution to the improvement of competitiveness within the European Union. In this context, it is also interesting that the UK, where the role of trade unions and social partners has been reduced since the Thatcher years, has had the largest losses of market share in the European Union. Thus, the concept of wage flexibility, as promoted by European authorities, has an ideological twist that increases the risks of macroeconomic imbalances.

Competitiveness, growth and fiscal policy

The philosophy behind the Excessive Imbalances Procedure proposed by the European Commission assumes that loss of competitiveness influences economic growth in member states' economies. It also assumes that deteriorating competitiveness is one of the causes of the European debt crisis. The link between competitiveness and budget positions is economic growth. But how important is it? Economic growth is a complex concept and competitiveness is at best one of many variables that cause differences in growth rates. Economic theory has emphasised the role of physical and human capital accumulation for long-run growth, and of macroeconomic policies for the short-run cyclical dynamics. At least since David Ricardo we also know that comparative advantages in trade will influence productivity and growth. In order to find out how much an improvement of competitiveness could improve economic growth, we estimate a regression of economic growth on private investment, public investment, the yield curve (which catches the cyclical component of growth) and our competitiveness index. Our purpose is to isolate the influence of competitiveness and the yield curve, which catches monetary policies under EMU. Table 7 shows the results. We

57. Because the CER index measures overvaluation and loss of competitiveness with a positive sign, an improvement in competitiveness requires a negative sign. By contrast an improvement in market share has a positive sign.

Table 7 Effect of public and private investment on GDP growth in Europe

	1971–2010		EU15 Pre-EMU				EMU		NMS 1993– 2010
$\Delta \ln \text{GDP}_{t-1}$	0.136 (1.27)	0.283* (1.95)	0.525*** (3.79)	-0.054 (-0.30)	-0.090 (-0.41)	0.310 (1.20)	0.100 (0.81)	0.672*** (3.74)	0.025 (0.20)
$\Delta(\text{Govl}/\text{GDP})_t$	-0.003 (-0.32)	-0.011 (-1.01)	-0.009 (-0.85)	-0.002 (-0.20)	-0.003 (-0.31)	0.001 (0.12)	0.018 (1.12)	0.003 (0.20)	0.049** (2.01)
$\Delta(\text{Privl}/\text{GDP})_t$	0.008*** (3.98)	0.008*** (3.62)	0.005** (2.53)	0.009*** (3.53)	0.009*** (3.41)	0.006** (2.16)	0.015*** (5.89)	0.013*** (4.50)	0.016*** (4.04)
Δyield_t		-0.002*** (-2.66)	-0.002*** (-2.63)	-0.002*** (-2.57)	-0.002*** (-2.57)	-0.001 (-1.48)	-0.003 (-1.16)	-0.003 (-1.16)	-0.004** (-2.23)
$\Delta \ln \text{Comp}_t$			-0.308*** (-6.28)			-0.253*** (-3.54)			-0.438*** (-8.32)
Time dummies	no	no	no	no	no	no	no	no	no
R ²	0.380	0.425	0.493	0.335	0.341	0.410	0.483	0.642	0.338
N	511	456	456	315	274	274	196	182	152
Under id.	33.8***	29.7***	30.7***	13.9***	15.1***	9.3***	10.7***	10.2***	9.7***
Weak id.	15.5***	12.1***	12.5***	5.5**	5.5**	3.1*	4.7**	4.9**	4.4*

Note: Fixed Effects Instrumental Variables estimates. T statistics in parenthesis; * significant at 10% level; ** significant at 5% level; *** significant at 1% level. Instrument used: lag 1 of $\Delta \ln \text{GDP}$, lag 2 of govl/GDP and privl/GDP . For under identification and weak identification we report the Kleibergen-Paap rk LM and Wald statistics.

Source: AMECO annual macroeconomic database.

find that private investment drives economic growth in the Euro Area, while public investment is not significant. However, competitiveness and the yield curve (monetary policy) have become highly significant in European monetary union.

It follows that the lower interest rates in the South at first caused a boom by accelerating investment, but that the subsequent reduction in capital efficiency and the deterioration in competitiveness caused by the shift in relative factor prices have structurally reduced the long run growth potential in the South, while the excessive wage restraint in the North has improved it. Hence, the profound restructuring in the European economy does not have consequences for today alone, but also for the future.

This observation poses interesting questions for the interaction between wage-setting and monetary policy. Lower interest rates generate an income effect through the investment multiplier; but they also cause a substitution effect, which lowers long term growth because the higher capital accumulation reduces capital productivity. It then becomes clear that accelerated economic growth is in the long run sustainable only if low interest rates are complemented by wage restraint, so that the substitution effect is neutralised. In order to avoid excessive imbalances, economic governance should therefore focus on creating greater integration of wage bargaining institutions, rather than telling member states to reduce demand and avoid current account deficits. This logic applies to any currency area, regardless of whether it is a monetary union or a nation state. Thus, the 'one size does not fit all' argument is not applicable to the economic problems described here.⁵⁸

We conclude that in member states where growth is lagging behind the Euro Area average, improving competitiveness can make an important contribution toward stimulating growth, employment and other macroeconomic variables. However, assuming that capital and labour productivity respond to relative factor prices, there are not many policy instruments available to increase competitiveness. In the long run, improvements of Total Factor Productivity by technological innovation, R&D, education and the accumulation of human capital will raise growth rates. But in the short run, the main policy variable for influ-

58. For example, one may argue that the severe regional disparities in the UK have been sharpened since collective bargaining was abolished by the Thatcher governments.

encing growth differentials is wage restraint. Between the short and the long term, the restructuring of productive sectors and the specialised focus on sectoral comparative advantages will accelerate the adjustment process. For example, Greece has improved efficiency in tourism, Germany in manufacturing, but France and Italy have lost out in industry. Unless governments take counter-acting measures, these deteriorations will turn into persistent disadvantages and create a permanent economic periphery. Fostering economic growth and real convergence is more important than suppressing current account deficits. A purely market-induced process of social transformation will lead to the hollowing out of the economic periphery and will therefore not be politically sustainable. No doubt, economic policies aimed at improving competitiveness can support a more acceptable form of industrial restructuring and social cohesion, although European policy makers have so far focused mainly on competitiveness and paid less attention to social policies (Fischer and Hofmann 2011). Unfortunately, the *Excessive Imbalance Procedure* designed by the European Commission will not help to reduce social and economic tensions for the reasons we have discussed in this paper. Instead, Euroscepticism and chauvinist populism are fuelled by severe austerity programs, which will neither sustain growth, nor create jobs, nor improve Europe's debt problems. If there is one lesson to be drawn from the Greek adjustment experience, it is that austerity has overstepped the limits of the reasonable. It should be a warning to all European policy makers.

This brings us to the link between competitiveness and public debt. With the emergence of the European debt crisis, much attention has been given to the topic of how competitiveness might not only remedy 'external' imbalances but also improve budget deficits and lower public debt. The transmission mechanism from competitiveness to budget deficits can take three forms. (1) Competitiveness may raise economic growth, and therefore tax revenue, and this would contribute to lower budget deficits. (2) Improving competitiveness could also lead to lower revenue if the improvement is caused by lower taxes on wages. (3) If governments raise expenditure in order to subsidize firms, higher competitiveness would also cause budget balances to deteriorate.

In order to assess the impact of competitiveness on fiscal policy in the Euro Area, we simulate budget positions in the following way. We estimate separately revenue and primary expenditure functions dependent on external and internal demand in member states and on our competi-

tiveness indicator. Taking the difference between estimated revenue and primary expenditure gives us the *expected structural primary budget position*. Primary surpluses sufficient to service the debt are necessary to ensure debt sustainability (Collignon and Mundschenk 1999). We want to know whether improvements in competitiveness and growth can yield expected structural primary budget surpluses sufficiently high to service the debt. For this purpose, we have assumed three scenarios: the first scenario assumes the same growth rate and same competitiveness that has prevailed over the recent years. The second scenario assumes higher growth and half a percentage point improvement of competitiveness per annum. Finally, the negative scenario assumes lower growth and half a percentage point of competitiveness loss. Thus, the 'high' scenario is a highly optimistic view of growth and competitiveness, the 'low' scenario a very depressed view.

The following figures show the performance. Spain in Figure 16 is a typical case. One observes the dramatic loss of income after the Global Financial Crisis in 2008 which has turned primary surpluses into deficits. Under normal conditions, our estimates expect that primary surpluses will not return for approximately another five years. What about the sustainability of Spanish debt? The punctuated horizontal line indicates the primary surplus required to service the debt under conditions prevailing in 2010. Our chart shows that Spain will not be able to reach a position sufficient to service its debt under the moderate growth and competitive scenario. In fact, in the pessimistic scenario it will even take 10 years for Spain to return to a balanced primary budget, which means that public debt will rise substantially. However, with the improvement of economic growth and competitiveness, public debt would become sustainable and would stabilize in the early 2020s.

France is a worrisome case, as may be seen from Figure 17. Even with the medium scenario this country will not return to positive primary surpluses, and in fact under the low-growth low-competitiveness scenario they will even deteriorate further. But even if France were to improve its growth and competitiveness as stipulated by our model assumptions, this would not be sufficient to bring French debt dynamics under control. Hence, one has to be concerned about the capacity of France to sustain its public debt position.

Figure 16 Spain

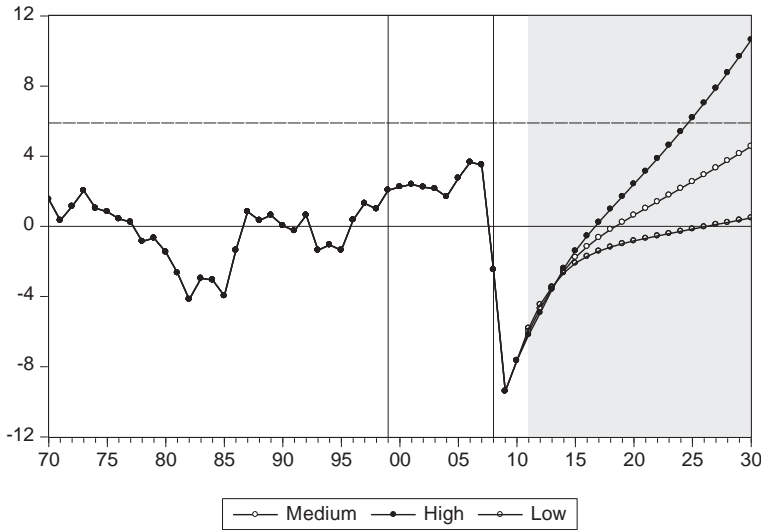


Figure 17 France

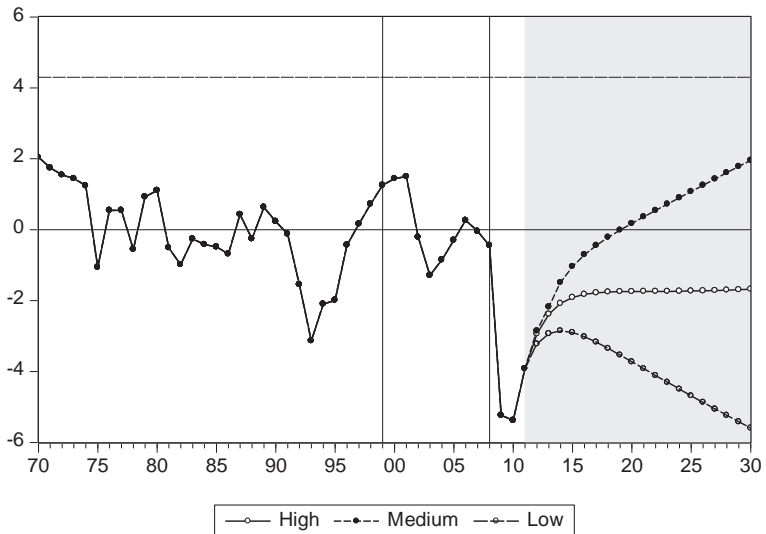
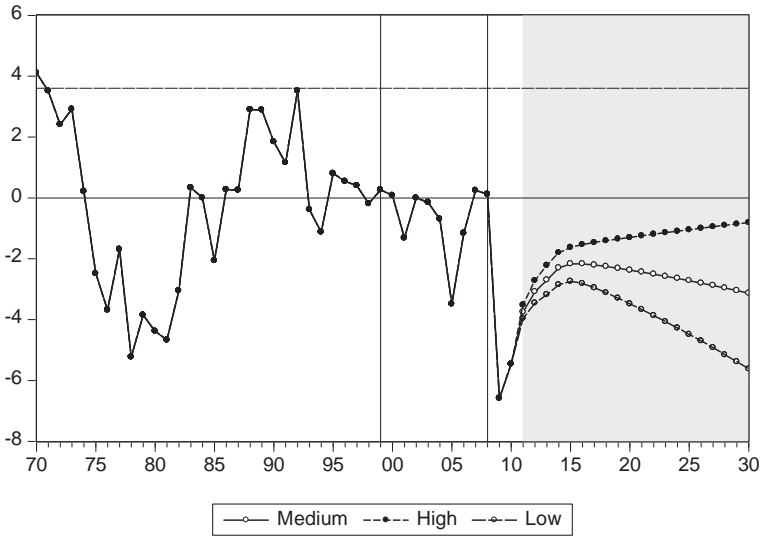


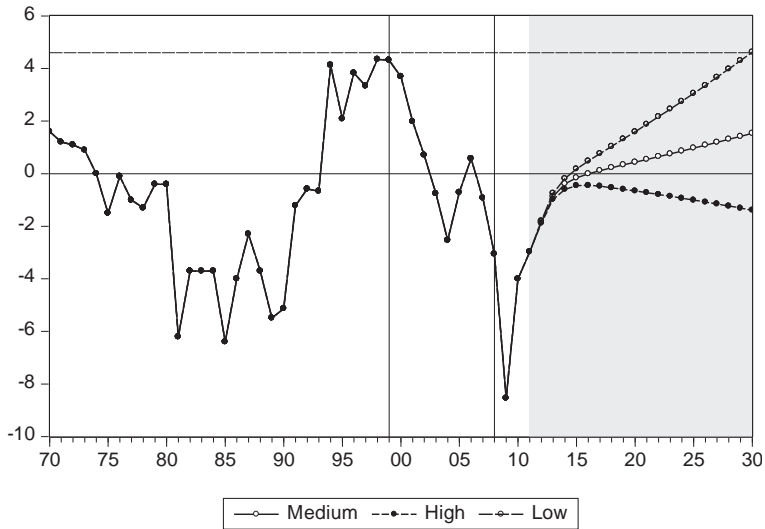
Figure 18 Portugal



Portugal is in a worse condition. In Figure 18, even the most positive scenario will not bring the primary budget position back into surplus, which means that Portuguese public debt is unsustainable.

Finally, Greece (Figure 19) is a weird case. The ‘high’ scenario performs worse than the ‘low’ scenario. There is a negative relation between competitiveness improvements and tax revenue, presumably because competitiveness is dependent on cutting taxes on wages. As a consequence, Greece could improve its competitiveness by keeping wages low or by cutting taxes on labour. On the other hand, Greece could also reach a primary surplus through taxing wages to a larger extent than is the case at present, but this would cause a deterioration of competitiveness. Thus, there is a perverse effect which indicates that the structure of the tax system in Greece will need a profound restructuring. In fact, the emphasis on VAT that has been requested under the adjustment programmes from the IMF and European Union has moved in the right direction in this respect.

Figure 19 Greece



These simulations of debt sustainability are, of course, no predictions. They show how improving competitiveness by lowering unit labour costs would affect structural primary budget positions, given the conditions and structure of fiscal policy that have prevailed over the last decade. The debt crisis has highlighted the need for budget consolidation and there is no doubt about the need for fiscal adjustment, although how this is best achieved should be subject to a critical European-wide debate and not confined within the closed circles of policy makers. The widely prevailing *pensée unique* of budget cuts and austerity is not the only solution. Greece demonstrates that balancing budgets is impossible without sufficient demand and GDP growth. In the end, a fundamental reform of the Euro Area's Stability and Growth Pact may be necessary to produce better results. However, our analysis is a warning against expecting miracles in fiscal consolidation as a consequence of improved competitiveness. Imposing the *Excessive Imbalance Procedure* on top of the *Excessive Deficit Procedure* and the Stability and Growth Pact without matching fiscal discipline by a coherent strategy of long term supply-side improvements and a short term balanced demand management could have devastating consequences for peripheral countries in the European Union.

Conclusion

Imbalances matter in monetary union, but not in the way they are portrayed by European authorities. Imbalances matter because they generate inequalities in wealth, income, jobs and skills; they condemn regions to a permanently peripheral status.

The Commission's *Excessive Imbalance Procedure* and its first *Alert Mechanism Report* focus on the correction of current account deficits (but hardly on surpluses) and external indebtedness, but these are concepts which have no significance in a monetary union. Current accounts are important in the relations between economies with different currencies, because deficits build up debt in foreign currency, which needs to be paid back by future earnings in foreign currency, generating future surpluses. The intertemporal budget constraint therefore correctly states that today's external debt must be equal to the sum of future discounted current account surpluses. In a monetary union, this logic does not hold, because today's debt is repaid in the same currency. The intertemporal budget constraint is therefore simply stating the obvious solvency rule that present debt must be paid back by future income and it does not matter where the income is generated. Revenue earned in the tradable sector has the same status as revenue earned in the non-tradable sector. This makes the current account statistics within monetary union redundant, although they retain their importance in the international context between the Euro Area and the rest of the world.

However, the policy focus on current account statistics is dangerous as it could lead to mistaken policy responses. The most dangerous interpretation is related to the so-called TARGET2 imbalances in the ECB's payment system. We have seen that these imbalances are the result of dysfunctional interbank markets that are a consequence of the financial crisis and widespread distrust regarding the solvency of banks. They do not necessarily reflect imbalances in the real economy. However, the European payment system is the nervous system of monetary union. Suppressing or limiting TARGET2 balances is equivalent to abolishing monetary union. Yet the fact that credit creation and collateral for monetary policy may become overly concentrated on debt from peripheral regions of the Euro Area does increase liquidity and default risks. The appropriate policy responses to deal with these risks are better financial supervision at the European level to avoid agency capture and a pooling of government debt, for example in the form of Union Bonds

(Collignon 2011a and 2011b), in order to strengthen the ECB's asset structure.

In a monetary union all debts are repaid in the same currency; current accounts and payment flows between regions and member states redistribute money balances across the Union. This redistribution is the real economy adjustment mechanism in the long run. It works through a monetarist channel, whereby the relative reduction in money balances generates a relative reduction in demand that translates into lower prices, less growth, rising unemployment and falling wages. Left to market forces alone, this adjustment will be slow and generate long drawn out regional recessions and social hardship. There are, however, policy options to reduce this painful process, although the focus on current accounts in the *Excessive Imbalance Procedure* is likely to make things worse.

It is important to understand the causes behind the emergence of macroeconomic imbalances over the last decade. Internal imbalances in the Euro Area are a market result rather than a consequence of government failure. Labour and capital are allocated according to their comparative advantages in an integrated single market with a single currency. Following the adoption of the euro, the convergence of interest rates to German levels has shifted the relative costs for capital and labour in the South and this has had profound consequences for the economic transformation of the Euro Area. It has accelerated capital accumulation in the South and, because of diminishing returns, lowered capital productivity relative to the North. The consequent reallocation of resources in the euro Area is a sign of the efficiency and not of dysfunctionalities of monetary union. It is important not to distort and inhibit the potential efficiency gains of the large European economy. The logic of the European single market and single currency can lead to long lasting current account imbalances, which would be desirable if they support real convergence in the EU. They are cause for concern only if they slow down economic growth. In any case, they are technically sustainable, because the intermediation of banks and financial institutions allocates savings and investments across the currency union. In that respect, the Euro Area works like any other large country.

A different question is whether these imbalances are desirable from a social equity point of view. This is a political question. The broad picture emerging from our analysis shows a fundamental structural reallocation

of labour and capital in Europe, which is creating gains and losses, winners and losers. In a social market economy, governments must correct such distortions in the common interest. In the interest of welfare and in line with art. 3 of the Treaty on European Union, the issue of Transfer Union deserves a more serious and mature debate than political agitation permits in the EU today. Such a debate should clarify to what an extent a Transfer Union is desirable, how it could be legitimized, and how it could be implemented in practice. However, how to answer these questions cannot be left to member states' governments, because nation states have, by definition, a chauvinistic bias in favour of the familiar, which may impede reaping the benefits of European integration. Economists describe this situation as Nash equilibrium, where every government takes decisions that are best for them individually, given what the others do, although the welfare of all would be improved if they changed their strategies collectively. Such a change is unlikely to occur in Europe, because policy makers are bound to national constituencies, while the collective welfare has a European constituency for which no agent or government exists. There are hard choices waiting for Europe. But the choice of a social model, in other words, between a liberal or a social Europe, must be decided by all European citizens jointly because the choice has a consequence for each citizen individually. Ultimately, the policy debate must take place in the European Parliament and citizens must choose through elections to the Parliament, for there is no other forum where they could deliberate and decide together.

In the economic field, competitiveness depends on more than wage-setting, although wages are a crucial variable in the adjustment process. While the link between wages and productivity has often been emphasized by academic researchers as well as by policy makers, the distribution-neutral 'Golden Rule' is insufficient as it neglects the important contribution of the average efficiency of the capital stock in European member state economies. As the efficiency of capital improves, unit labour costs can rise without loss of competitiveness. On the other hand, imbalances may need to be corrected by coordinated wage policies: overvalued member states must lower their unit labour cost position relative to the Euro Area; wages in undervalued economies can increase faster. In other words, Europe needs more coordination of wage-setting strategies. However, technological progress may be the most important variable to improve competitiveness in the long run. Yet improving TFP in the European Union has been a disappointing policy objective since the Lisbon Strategy and there is no reason why the *Euro 2020 Strategy*

will do any better, because the coordination failures generated by the intergovernmental system of governance in the Euro Area have not been overcome. One way to overcome the collective action problems inherent in Europe's economic governance could be to set up a European Treasury, as Jean-Claude Trichet has suggested, and to design a European industrial strategy that would be implemented – in the hopefully not too distant future – by an Economic Government.

Macroeconomic imbalances are not only a matter of relative costs and competitiveness. They also depend on aggregate demand and economic growth. While markets will always respond to incentives, governments must set up strategic orientations and ensure that the market incentives reflect these options. In this context, it may be useful to set up a *European Economic Holding*, or *European Institute for Economic Reconstruction*, which would assist on a day-by-day basis with the implementation and management of an integrated Europe-wide growth strategy. It could, for example, undertake big European investment projects for infrastructure improvements, such as fast trains, alternative energy networks, etc. In the United States, President Obama has called for a *National Infrastructure Bank* with similar intentions,⁵⁹ although in Europe the European Investment Bank (EIB) fulfills this function already. The European Economic Holding would differ from the EIB insofar as it would not operate as a financial intermediary, but as a European holding company that would own assets or shares of national companies that governments need to sell in order to raise finance and reduce their debt. The holding would seek to increase the efficiency of these companies by integrating them into a fully integrated strategy in the Single Market. In the past, proposals for Europe-wide infrastructure were often not realized because collective action problems blocked the implementation of coordinated policies between member states. This is also a handicap suffered by Commission President Barroso's 'Europe 2020 Project Bond Initiative'. By empowering a European agency to help Southern Europe to regain economic growth and combining this objective with a coherent and fully integrated economic-industrial strategy, the gridlock and mutual blockages of national governments could be overcome. Such an Economic Government would be far superior to the bureaucratic *Excessive Imbalance Procedures*, which coordinate nothing but civil servants, and produce little but mountains of paper. All of Europe would benefit.

59. See: http://thf_media.s3.amazonaws.com/2011/pdf/wm3235.pdf [Accessed 01.03.2012]

This report on macroeconomic imbalances has been critical of some of the policies and actions envisaged or already taken by European authorities. While I do not doubt that these policies are inspired by good will to overcome Europe's problems, I am convinced that confused thinking and in particular misunderstandings of how European monetary union works can create even more damage. The spirit in which this critique is offered has been formulated in a different context by Sulak Sivaraksa (1998): '*Loyalty demands dissent!*'

Annex Table 1

Cointegration vector				
Estimation method Dynamic OLS (4 lags and 4 leads)				
Dependent variable Relative HICP				
Relative M3	0.130**			
	[0.053]			
Relative GDP	-0.049*			
	[0.027]			
Constant	0.191			
	[0.201]			
Short-run dynamics	OLS-FE	OLS-FE	IV-FE	IV-FE
Error correction t-1	-0.063**	-0.060**	-0.075**	-0.065**
	[0.026]	[0.025]	[0.032]	[0.031]
$\Delta(\text{Relative HICP})_{t-1}$		0.220	0.084	
			[0.415]	[0.350]
$\Delta(\text{Relative M3})_t$	0.055**	0.053**	0.062**	0.056**
	[0.019]	[0.016]	[0.021]	[0.019]
$\Delta(\text{Relative M3})_{t-1}$	-0.015	-0.012	-0.026	-0.016
	[0.016]	[0.015]	[0.026]	[0.022]
$\Delta(\text{Relative GDP})_t$	-0.002	-0.001	-0.005	-0.001
	[0.011]	[0.009]	[0.011]	[0.008]
$\Delta(\text{Relative GDP})_{t-1}$	0.005	0.005	0.005	0.005
	[0.009]	[0.008]	[0.008]	[0.007]
Constant	0.014**	0.014**		
	[0.006]	[0.005]		
Time dummies	No	Yes	No	Yes
R2	0.068	0.126	-0.072	0.085
N	609	609	609	609
Under identification 1			21.903***	28.297***
Weak identification 2			17.892***	21.418***

Standard errors in brackets; * significant at 10% level, ** significant at 5% level, *** significant at 1% level. 1 Kleibergen-Paap rk LM statistic; 2 Kleibergen-Paap rk Wald F statistic;

Variables:

relative M3= $\log M3_i - \log M3_{i-1}$ i=AT, BE,, SK;

relative HICP= $\log HICP_i - \log HICP_{i-1}$

relative GDP= $\log GDP_i - \log GDP_{i-1}$