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Europe's Growth Emergency

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Europe's Growth Emergency

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Europe's Growth Emergency

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Highlights:

- The European Union growth agenda has become even more pressing because growth is needed to support public and private sector deleveraging, reduce the fragility of the banking sector, counter the falling behind of southern European countries and prove that Europe is still a worthwhile place to invest.
- The crisis has had a similar impact on most European countries and the US: a persistent drop in output level and a growth slowdown. This contrasts sharply with the experience of the emerging countries of Asia and Latin America.
- Productivity improvement was immediate in the US, but Europe hoarded labour and productivity improvements were in general delayed. Southern European countries have hardly adjusted so far.
- There is a negative feedback loop between the crisis and growth, and without effective solutions to deal with the crisis, growth is unlikely to resume. National and EU-level policies should aim to foster reforms and adjustment and should not risk medium-term objectives under the pressure of events. A more hands-on approach, including industrial policies, should be considered.

Keywords: economic growth, deleveraging, productivity, convergence, economic adjustment, structural reform scoreboard, composition of fiscal adjustments, growth policy under constraints

JEL classification: E60, F43, O40

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Európa növekedési szükségállapota

Darvas Zsolt és Jean Pisani-Ferry

Összefoglaló:

A gazdasági növekedés középpontba helyezése az Európai Unióban még sürgetőbb lett, mert növekedésre lenne szükség az állami és magánszektor adósságának csökkentéséhez, a bankrendszer sérülékenységének mérsékléséhez, a dél-európai országok leszakadásának megakadályozásához és külföldi befektetők megnyeréséhez. A válság hasonló hatást gyakorolt a legtöbb európai országra és az Egyesült Államokra: tartós csökkenés a kibocsátás szintjében és lassulás a növekedési ütemben. Ez éles ellentétben áll az ázsiai és dél-amerikai országok tapasztalataival. A válság kezdetétől a termelékenység azonnal növekedésnek indult az Egyesült Államokban a munkaerő-elbocsátások miatt, azonban a legtöbb európai országban a foglalkoztatás csökkenése csak késve követte a termelés visszaesését, ezért a termelékenység késve kezdett el növekedni. A dél-európai országok alig alkalmazkodtak és elmaradásuk tetemes a strukturális reformok terén. Az euróövezet válsága és a gazdasági növekedés között negatív visszacsatolás alakult ki és a válság hatásos kezelése nélkül növekedés sem várható. A nemzeti és közösségi gazdaságpolitikának középpontba kell helyeznie a strukturális reformokat és az események nyomására hozott intézkedéseknek nem szabad veszélyeztetniük a középtávú célkitűzéseket. A növekedést ösztönző eszközök kiválasztásakor nagyobb nyitottság lenne indokolt, például iparági politikák is a megfontolás tárgyát képezhetik.

Tárgyszavak: gazdasági növekedés, adósságcsökkentés, termelékenység, konvergencia, gazdasági alkalmazkodás, strukturális reformok mércéje, költségvetési kiigazítás össze-tétele, korlátok közötti növekedési politika

JEL kódok: E60, F43, O40

1 INTRODUCTION

In the twentieth century it was common to joke that 'Brazil is a country of the future, and always will be'. In the same way it is tempting to say that growth is Europe's agenda for the future, and always will be. This goal has been emphasised as a priority at least since the 1980s, and it seems that each decade makes it even more elusive.

It was therefore bold for the Polish presidency of the EU Council to put economic growth at the core of its agenda (Polish Presidency, 2011), and it was brave for the World Bank to undertake an in-depth examination of the 'lustre' of European growth (Gill and Raiser, 2011). Both should be congratulated on their initiatives, because growth in Europe is both more important and more difficult to achieve than at any point in recent decades.

The reasons why restoring growth has become paramount are not hard to grasp. Until the global crisis, Europe's disappointing growth performance could be seen as a merely relative concern vis-à-vis more successful countries. It meant that the continent would not reach the US level of GDP per capita, but it enjoyed already high living standards, and benefited from longer holidays and earlier retirement. As Olivier Blanchard (2004) put it in a (controversial) paper, Europe's lower income per head was perhaps the result of a social choice. Furthermore, as pointed out in the World Bank report, Europe was successful in fostering the catching up of its least developed areas, where there was the most pressing need for growth.

The global crisis has however altered this benign landscape in three fundamental ways:

- First, growth is of utmost importance for both public and private deleveraging and for reducing the fragility of the banking sector. History shows that in addition to growth and fiscal consolidation, previous rounds of financial repression, inflation, and occasional default helped achieve the deleveraging of the public sector. Europe does not want to have to fall back on the latter three. Without growth, Europe is at risk of struggling permanently with debt sustainability and it is at the mercy of stagnation and a debt overhang. Without growth the sustainability of the (already precarious) European social model would be further brought into question.
- Second, the convergence machine has brutally stopped in the southern part of the EU – and has moved into reverse in Greece, Portugal and Spain, with little chance of short-term improvement. Italy, meanwhile, has been falling behind since the early 1990s.
- Third, the euro-area sovereign debt crisis may put Europe at risk of being seen by investors as a place where there are very few reasons to invest. This may trigger an accelerated weakening of its economic performance.

It is of the highest importance to assess the seriousness of these threats and the possible policy responses. With this goal in mind and with a focus on the medium term, this paper is organised as follows: in section 2, we explain why we think growth should now be given higher priority; in section 3 we investigate if the seeds of future growth have been sown during the recession; in section 4 we discuss the policy responses. Section 5 concludes.

To simplify matters, we use throughout this paper five country groups as the basis for discussion of the diverse challenges. The Appendix presents the classification.

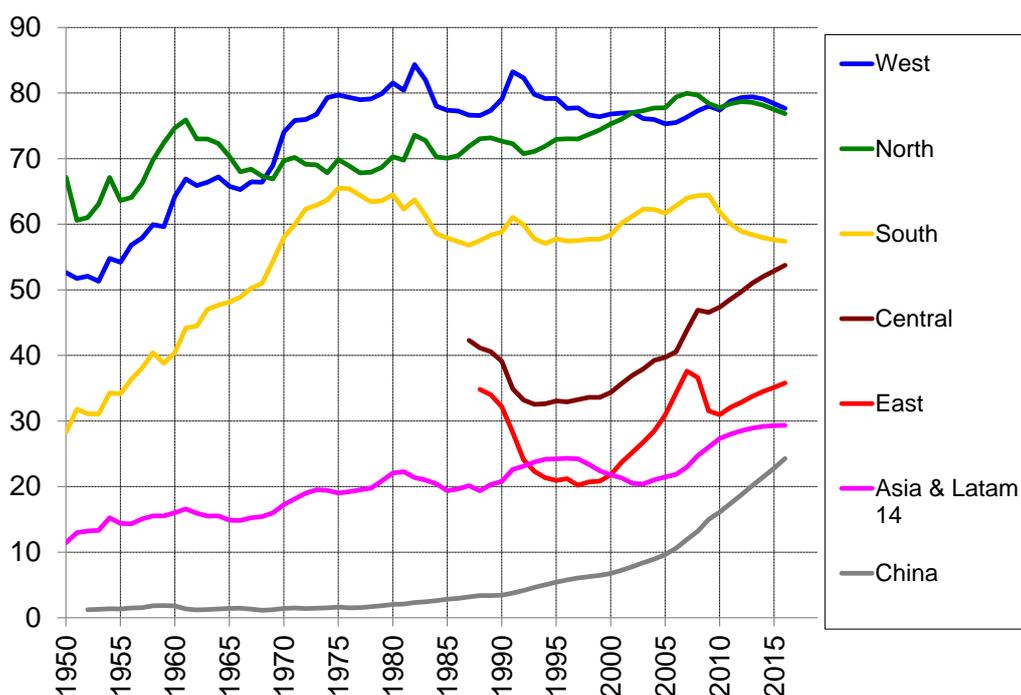
2 WHY GROWTH IS EVEN MORE IMPORTANT

2.1 OVERALL PERFORMANCE

After the second world war, European countries embarked on a rapid convergence with the US in terms of GDP per capita (Figure 1). This was in part based on the rebuilding of the capital stock lost during the war, in part on technological catching-up and in part on economic integration efforts.

Figure 1

GDP per capita at PPP (US = 100), 1950-2016



Source: Bruegel using data from the IMF's World Economic Outlook September 2011, PENN World Tables and EBRD. Note: median values are shown.

By the late 1970s, however, convergence with the US has stopped in most countries of 'older' Europe – though with significant exceptions, such as Ireland. Countries in the North (Denmark, Finland, Sweden, Ireland, United Kingdom; see Appendix) and South (Greece, Italy, Portugal, Spain) groups in particular had apparently settled for levels corresponding to 80 percent and 60 percent of US GDP per capita. The central and eastern countries by contrast were catching up from the mid-1990s, though from a much lower base.

Figure 1 also shows IMF projections up to 2016 suggesting that the positions of the West and North country groups relative to the US should remain broadly stable, while southern Europe is expected to fall behind and the convergence of the Central and East groups is projected to continue (after the major shock of recent years in the latter case)¹.

Judging from Figure 1 it seems that the potential for natural catching-up with the US has been exhausted in three of the five groups, and the gap remains noteworthy. Only significant economic reforms and/or a change in social preferences would lead to a change in this diagnosis.

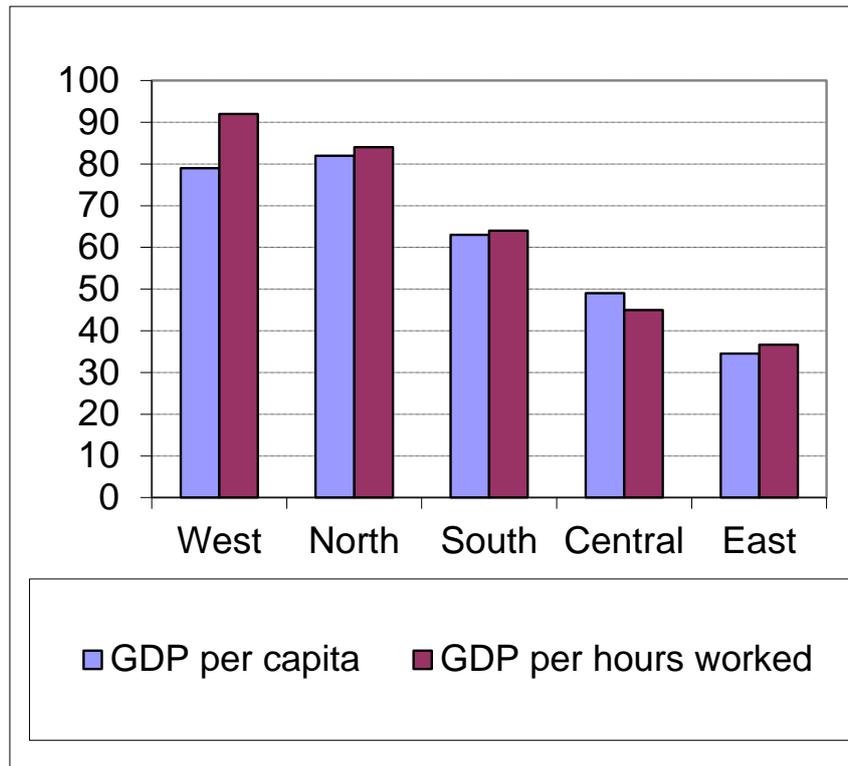
Europe should not only look at the US but also the new emerging powers. Figure 1 also underlines the extremely rapid development of China, and shows that smaller countries in Asia and Latin America are also converging.

But there is also some good news. As Figure 2 shows, western European countries are closer to the US in terms of GDP per hour worked, with Belgium and the Netherlands even at US level. From the North group, Ireland is only three percent below. Therefore, these European countries were able to catch-up with the US in terms of productivity; lower per capita output is in part a reflection of social preferences (more leisure), and in some cases higher unemployment. The four South group countries have mixed records in this respect: Spain and Italy are closer to the US than Greece and Portugal.

¹ By 2016, the relative position of the East group is forecast to reach only pre-transition level. Note that data for the late 1980s and early 1990s should be interpreted with caution given the differences in statistical methodology, changes in relative prices, and measurement errors.

Figure 2

GDP per hour worked and per capita at PPP (US = 100), 2010



Source: Bruegel using data from the OECD (all but GDP per hour for four Eastern countries apart from Estonia) and Eurostat (GDP per hour for four Eastern countries).

2.2 DELEVERAGING

The period in the run-up to the crisis was characterised by a rapid increase in private debt in several countries, such as the Baltic countries, Ireland, the Netherlands, Spain and the UK, while in many other countries, private debt accumulation was less pronounced, such as in Austria, the Czech Republic and Germany. In most of Europe, public debt ratios (as a percent of GDP) were generally stable or slowly declining. Some countries, such as Ireland, Spain and Bulgaria had even achieved sizeable debt reductions.

The post-crisis landscape is very different. Public debt ratios in the EU have increased by 20 percentage points on average, and in some cases they have reached alarming levels. At the same time market tolerance of high public debt has diminished severely, especially for the members of the euro area. The challenge of public deleveraging is therefore paramount. At

the same time, several European countries face the challenge of bringing down household or corporate debt.²

Let us start with public debt. Reinhart and Rogoff (2011) summarise five major ways in which high debt ratios were reduced in past episodes of deleveraging:

- i Economic growth;
- ii Substantial fiscal adjustment, such as austerity plans;
- iii Explicit default or restructuring of public and/or private sector debt;
- iv A sudden surprise burst in inflation (which reduce the real value of the debt);
- v A steady dose of financial repression³ accompanied by an equally steady dose of inflation.

Of these, economic growth is by far the most benign. There are three main channels through which it aids deleveraging in both the public and private sectors:

- First, higher growth results in higher government primary balances and higher private sector incomes – which can be used to pay off the debt.
- Second, higher growth results in a reduction of the relative burden of past debt accumulation. Other things being equal, a one percentage point acceleration of the growth rate reduces the required primary surplus by one-hundredth of the debt ratio. With the debt ratio approaching or in certain cases exceeding 100 percent of GDP, this is a meaningful effect.
- Third, by improving sustainability, higher growth makes future threats to solvency less probable and for this reasons it is likely to result in lower risk premia. It is not by accident that the potential growth outlook is often mentioned by market participants and rating agencies as a key factor in their solvency assessments.

Box 1 illustrates the point by decomposing factors behind the impressively fast reduction of the UK general government and the US federal debt ratios in the first three post-war decades. Growth and primary surpluses made sizeable contributions to deleveraging, and primary surpluses were partly the result of growth. There were several years with negative

² McKinsey (2010) assessed the likelihood of deleveraging in five EU countries (among others). Concerning the household sector, they found high probability for Spain and the UK, but low probability for Germany, France and Italy. In the case of the non real-estate corporate sector the likelihood of deleveraging is low in the UK and France, moderate in Germany and Italy, and mixed in Spain.

³ According to Reinhart, Kirkegaard and Sbrancia (2011), “financial repression occurs when governments implement policies to channel to themselves funds that in a deregulated market environment would go elsewhere”. At the current juncture, these authors and Reinhart and Rogoff (2011) foresee a revival of financial repression – including more directed lending to government by captive domestic audiences (such as pension funds), explicit or implicit caps on interest rates, and tighter regulation on cross-border capital movements.

real interest rates (and whenever the real interest rate was positive, it was small) which also helped deleveraging. As pointed out by Reinhart and Sbrancia (2011), financial repression was the major reason for low real interest rates.

Another reason why public debt deleveraging, and hence growth, is paramount is that without it the European social model is not sustainable. This was observed by Sapir et al (2004) and is a major reason why they advocated an agenda for a growing Europe.



BOX 1: DECOMPOSITION OF UK AND US POST SECOND WORLD WAR PUBLIC DEBT REDUCTION

In the UK and the US, the public debt ratio (general government for the UK, federal government in the US) fell rapidly after the second world war. In 1946, the public debt was 257 percent of GDP in the UK and 122 percent in the US. By 1976 it had been brought down to 52 percent and 36 percent, respectively. Table 1 shows average annual growth, interest rates and primary surpluses during these three decades. GDP growth was robust and both countries had primary surpluses (especially sizeable in the UK), but real interest rates were very low – always below the growth rate of GDP and even negative in several years.

Table 1

Average annual growth, interest rate and primary surplus in the UK and the US

	United Kingdom			United States		
	Real GDP growth rate (%)	Real ex-post interest rate (%)	Primary surplus (% GDP)	Real GDP growth rate (%)	Real ex-post interest rate (%)	Primary surplus (% GDP)
1947-56	2.3	-3.0	7.4	3.6	-1.5	2.0
1957-66	2.9	0.2	4.8	4.2	1.7	1.2
1967-76	2.4	-4.6	3.0	3.0	1.0	0.6

Sources: UK: HM Treasury (debt), Office of National Statistics (budget balance, interest payments, GDP from 1948), and measuringworth.com (GDP for 1946-48); US: White House Office of Management and Budget Historical Tables (debt, budget balance), Bureau of Economic Analysis, Table 3.1 Government Current Receipts and Expenditures (interest payments), and Bureau of Economic Analysis (GDP). Note. Ex-post real interest rate is calculated with the so called ‘implicit interest rate’ (ie interest expenditures in a given year divided by the stock of debt at the end of the previous year) and the change in the GDP deflator.

Our decomposition is based on the well-known, simple accounting identity for the change in the debt ratio:

$$d_t - d_{t-1} = \left(\frac{r_t - g_t}{1 + g_t + \pi_t} \right) d_{t-1} - s_t + sf_t \quad ,$$

where d_t is the gross public debt (% GDP), r_t is the real interest rate (%), g_t is the real GDP growth rate (%), π_t is the inflation rate (%), s_t is primary surplus (% GDP) and sf_t is a stock-flow adjustment (% GDP). Many of these variables are interlinked, for example, faster growth and higher surprise inflation improves the primary balance, which complicates a causal decomposition of the change in the debt ratio. Therefore, we use this simple accounting identity to decompose the changes, ie we report $(r_t/(1 + g_t + \pi_t))d_{t-1}$ under the heading 'real ex-post interest rate', $(-g_t/(1 + g_t + \pi_t))d_{t-1}$ as 'growth', $-s_t$ as 'primary surplus' and sf_t as 'stock-flow adjustment'. We calculate these values for each year and sum them up for each decade we consider, in order to get their cumulative impacts over decades.

As Table 2 indicates, growth was an important factor in bringing down debt and it has always more than counterbalanced the impact of the real interest rate, whenever the latter was positive. But the real interest rate was sometimes negative, which is labelled as financial repression by Reinhart and Sbrancia (2011).

Table 2

Contributions to UK and US post-war public debt deleveraging (% GDP)

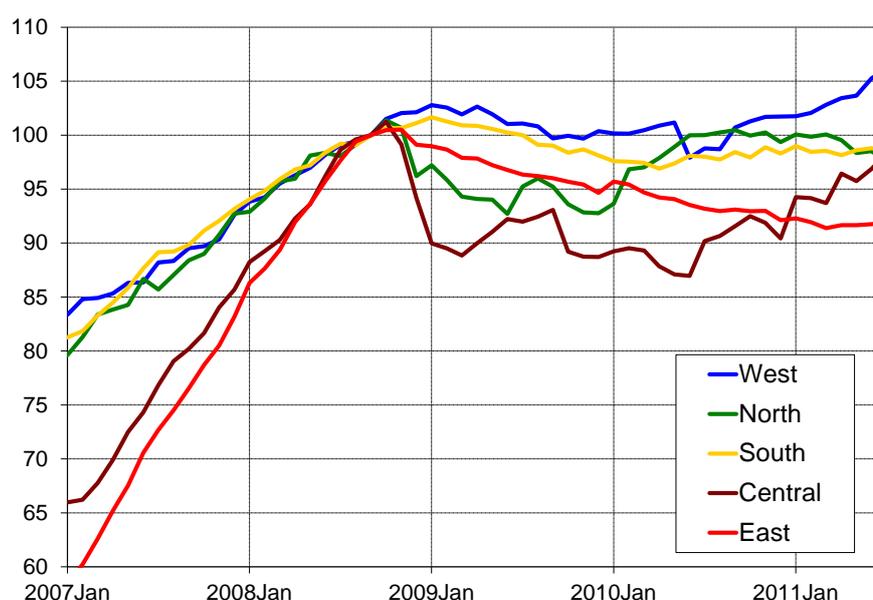
	Reduction in debt ratio	Real ex- post interest rate	Growth	Primary surplus	Stock/flow adjustment
United Kingdom					
1947-56	-128	-58	-37	-74	41
1957-66	-45	3	-29	-48	30
1967-76	-32	-22	-15	-30	35
United States					
1947-56	-58	-15	-28	-20	6
1957-66	-20	9	-21	-12	4
1967-76	-7	4	-11	-6	6

Source: Bruegel calculation based on data sources of Table 1. Note: see the explanation of the methodology and the interpretation of the numbers in the main text.

Turning to the private side, credit developments show that deleveraging has started: as a result of both credit demand and supply factors, credit aggregates have started to fall in several EU countries (Figure 3). These credit developments help private sector deleveraging on the one hand. But on the other hand, the simultaneity of public and private deleveraging is a major challenge that could hinder economic growth and could even lead to a vicious circle of lower growth and lower credit – even to those companies and households that are not overly leveraged.⁴ Furthermore, the banking sector in Europe is itself highly leveraged and will need to undergo sizeable corrections, not least because of the Basel III regulations.

Figure 3

**Outstanding stock of loans to nonfinancial corporations
(September 2008 = 100), January 2007 – July 2011**



Source: Bruegel calculation using ECB data. Note: median values.

⁴ There is a growing literature about ‘creditless’ recoveries (see Abiad, Dell’Ariccia and Li, 2011, and references therein), which finds that such recoveries are not rare, but growth and investment are lower than in recoveries with credit; industries more reliant on external finance seem to grow disproportionately less during creditless recoveries; and such recoveries are typically preceded by banking crises and sizeable output falls. But there are at least two important caveats in applying these results to Europe. First, financing of European firms is dominantly bank based and the level of credit to output is much higher than in other parts of the world. Therefore, lack of new credit or even a fall in outstanding credit could drag growth more in Europe than elsewhere. Second, the literature has not paid attention to real exchange-rate developments during creditless recoveries. But Darvas (2011) found that creditless recoveries are typically accompanied by real effective exchange rate depreciations, which can boost the cash-flow from tradable activities, thereby reducing the need for bank financing. But the southern members of the euro area and the eastern countries with fixed exchange rate cannot rely on nominal depreciation and hence this effect cannot work.

There are therefore major concerns both on the supply and the demand sides. On the supply side potential growth in the coming years could weaken further post the financial crisis; on the demand side the combination of public and private deleveraging may result in slow growth of private aggregate demand.

In this context, improving potential growth in the long run remains of paramount importance but at the same time policymakers cannot afford to ignore the interplay between supply and demand or between short-term and longer-term developments.

3 DEVELOPMENTS DURING THE CRISIS

Growth policies are generally and rightly regarded as medium-term oriented. However the impact of the Great Recession of 2009 and the current crisis in the euro area are more than mere cyclical phenomena that could be overlooked in a medium-term analysis. In this section we analyse and discuss the behaviour of European countries during this episode and assess implications for medium-term growth.

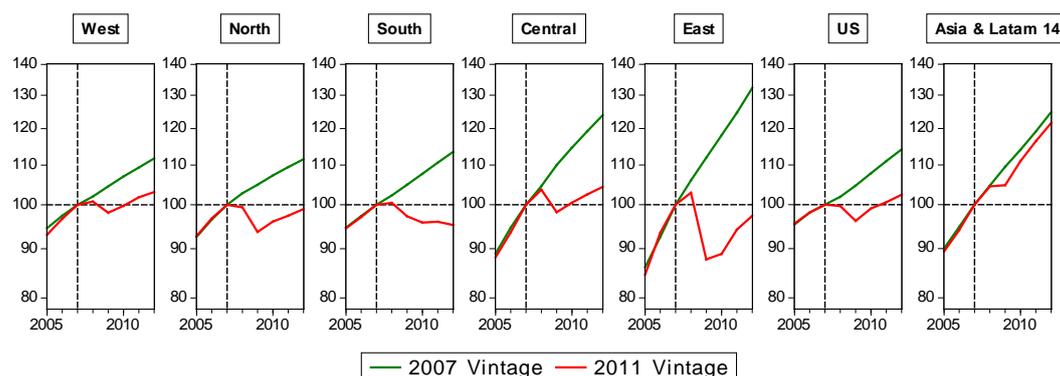
3.1 SHOCK AND RECOVERY

A telling measure of the economic impact of the crisis can be obtained by comparing pre-crisis and post-crisis forecasts. While forecasts certainly contain errors, they reflect the views about the future that are used for economic decisions. In Figure 4, we therefore compare forecasts to 2012 made by the IMF in October 2007 and September 2011.⁵

⁵ Our purpose is not to assess the IMF's forecasting ability, rather to use forecast changes as indicative of changes to economic perspectives. Comparison of forecasts by the IMF (2007), the European Commission (2007) and the OECD (2007) made in late 2007 indicate that the other two institutions gave broadly similar forecasts.

Figure 4

GDP forecasts to 2012: October 2007 versus September 2011 (2007=100)



Source: Bruegel calculation using IMF (2007) and IMF (2011d).

Figure 4 shows that the crisis had a moderate impact on West group countries. There, as in the US, output fell and recovered at a broadly unchanged pace, therefore not closing the gap created by the recession. The impact on the North group was more significant, owing to the greater trade openness of the countries of this group, but the recovery pattern is similar. The situation is much worse in the South group where the recession was mild in 2009, but output decline has continued and is forecast to last at least until 2012. This widening gap is very worrying. Finally, central European economies (with the exception of Poland) also suffered significantly from the crisis, and those of the East group suffered a major shock in 2009, from which they have started to recover but which leaves a major gap amounting to more than 30 percent of the 2007 GDP trajectory.

European developments are similar to those in the US but contrast sharply with the experience of the 14 emerging countries of Asia and Latin America (see Appendix), where the impact was mild. In China (not shown in the figure), pre- and post-crisis growth trajectories are almost identical. These emerging countries were primarily impacted by the global trade shock, but did not suffer from a financial crisis and started to recover when global trade recovered.

3.2 ADJUSTING TO THE SHOCK

At the time of economic hardship, firms relied on different strategies to survive and to sow the seeds of future growth. The strategies depend on initial conditions (firms that were not competitive enough before the crisis had no choice but to improve), credit constraints (liquidity-constrained firms had no choice but to cut costs), expectations about future growth (firms looking forward to recovery had an incentive to hoard labour), economic policies

(such as Kurzarbeit, a scheme financed by the German government to support part-time work and keep workers employed during the recession⁶) and other factors, such as exchange rate changes (countries that experienced depreciation faced less pressure to adjust).

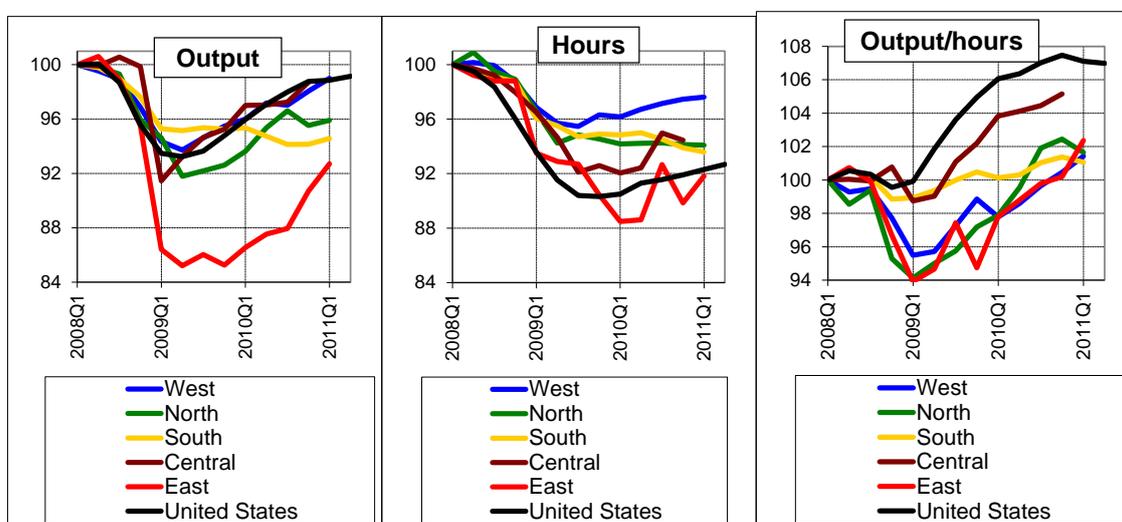
To get a better picture of productivity developments in the private sector, we exclude construction and the public sector from GDP and compare patterns of adjustment across countries. The reason for excluding construction is that it is a highly labour-intensive and low-productivity sector that suffered heavily in some countries. The shrinkage of construction may therefore give rise to a misleading improvement in productivity data, whereas it is entirely due to a composition effect.

Figure 5 shows output (at constant prices), hours worked, and the ratio of these two indicators, average productivity.

Figure 5

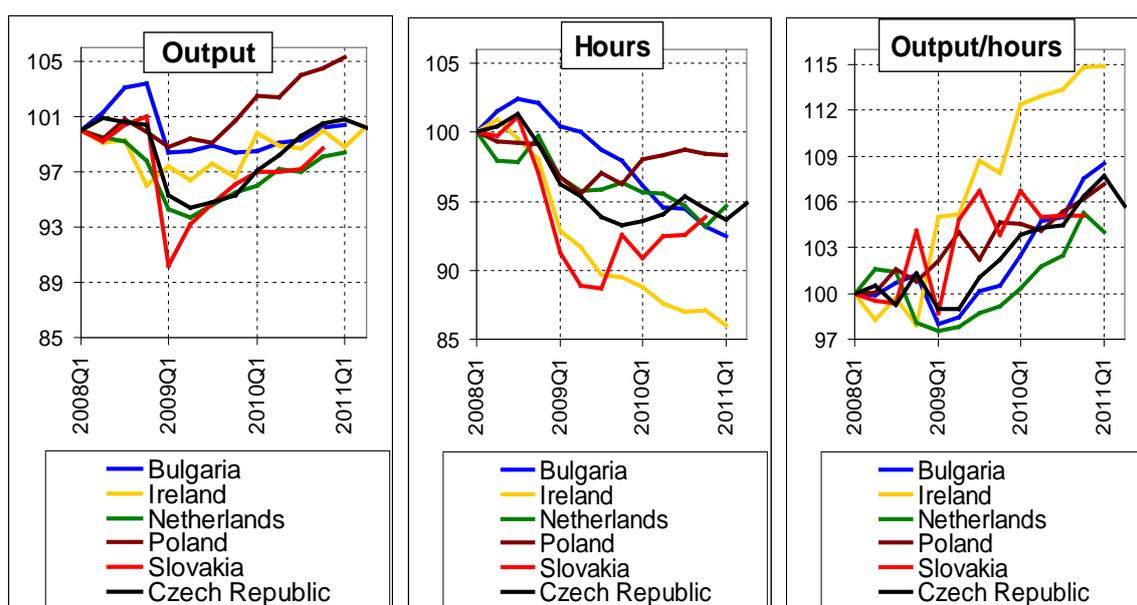
Output, hours worked, and productivity in the non-construction business sector (2008Q1 = 100)

Panel A: EU groups and the US



⁶ See Brenke, Rinne and Zimmermann (2011).

Panel B: Best performing EU countries



Source: Bruegel using data from Eurostat, OECD and US Bureau of Labor Statistics.
 Note: median values in Panel A; US data is for the whole business sector.

It is interesting to observe that there was a prompt and significant productivity surge in the US – as a result of reducing labour input by more than the output fall. In western and northern Europe by contrast productivity initially fell while employment did not, which is evidence of labour-hoarding. Only after a lag did productivity start to recover, but only to a level barely above the pre-crisis level. In central Europe productivity started to improve from mid-2009 and the gains are impressive. In southern Europe the fall in output and labour input went broadly hand in hand. Productivity essentially remained flat for the group as a whole.

Interpreting these differences is not straightforward. The broad evidence is that the supply side was more damaged in Europe than in the US, at least if one assumes that the largest part of US unemployment is cyclical. Labour hoarding by European firms seems to have resulted in lasting effects on aggregate output per hour.

There are significant variations within our groups as well. Panel B of Figure 5 shows data for the six best performing EU countries, most of which outperformed the US in terms of the cumulative productivity increase in the last three years. The sharp increase in Irish productivity is remarkable and suggests a brighter growth outlook.⁷ Bulgaria ranks second, followed by three central European countries (the Czech Republic, Slovakia, and Poland) and the Netherlands.

⁷ Note that total economy Irish GDP fell by 10 percent between 2008Q1 and 2009/2010, and recovery started in 2011, but the non-construction business sector shown on the figure fell only by three percent and the recovery started in 2010.

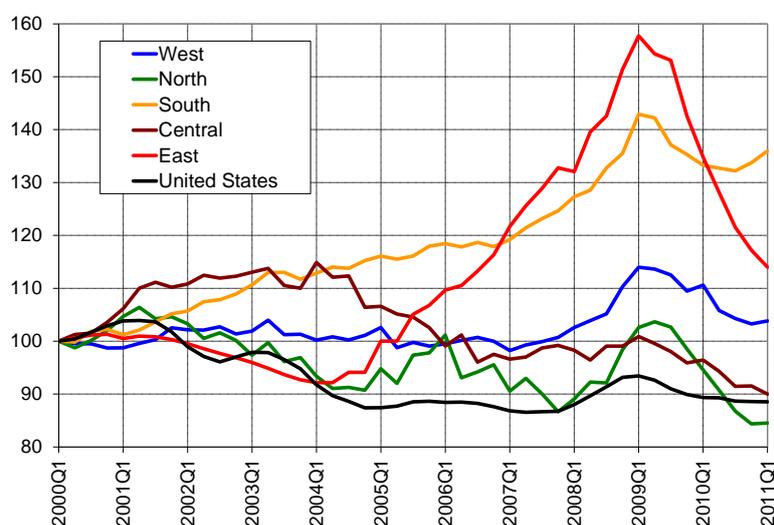
The worst performers in terms of productivity increase are from all regional groups. These are Greece from the South group, Romania from the East group, Hungary from the Central group, the UK from the North group, and Germany from the West group. Hungary, Romania and the UK have floating exchange rates that depreciated in 2008-09 and have remained weak since then, which improved external competitiveness. However, Poland, another floater that benefited from an exchange rate depreciation, was among the best performers in terms of productivity increase. German firms were already highly competitive before the crisis and weak productivity developments to date are not necessarily worrying. What is much more worrying is the weak performance of Greece as its real overvaluation would call for major improvements.

Concerning manufacturing unit labour costs (ULC), there was prior to the crisis a surge in the South and the East groups, but not in the other three regions (Figure 6). Post-crisis, there is almost no adjustment in the South group, but the adjustment is impressive in the East group. In the West and North groups, after a temporary increase in 2008, ULC has fallen. Ireland again is the best performer: ULC fell by 25 percent from 2008Q1 to 2011Q1.

Finally, another major aspect of the adjustment is the impact on external accounts. Figure 7 shows that there was an abrupt adjustment in the East group, due to a sudden stopping of capital inflows, but that the adjustment in the South group is slow. Private capital also stopped flowing into southern European countries. The main reason for the lack of faster adjustment is the massive European Central Bank (ECB) support to southern European banks, which has offset the sudden stop in private capital flows and contributed to financial stability. But at the same time, ECB financing has made it possible for these countries to delay the adjustment, as noted by Sinn (2011).

Figure 6

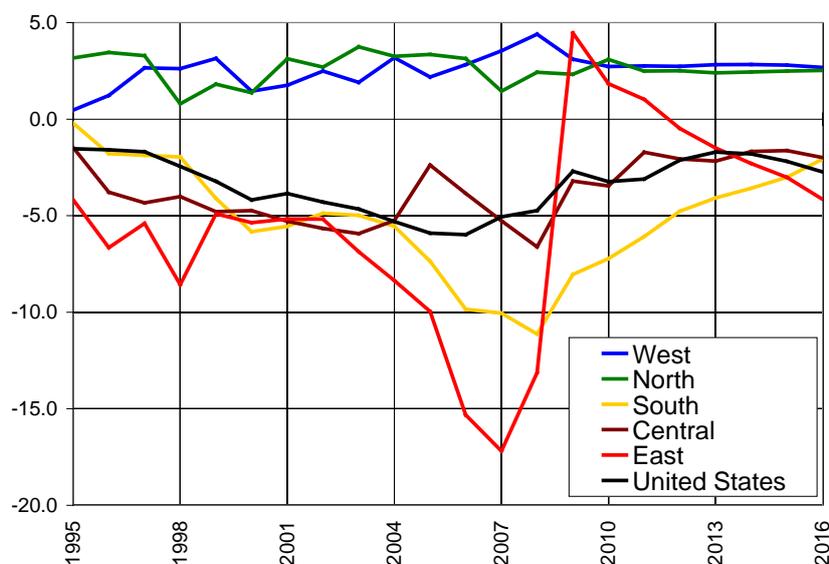
Unit labour cost in manufacturing (2000Q1=100), 2000Q1-2011Q1



Source: Bruegel using OECD and Eurostat data. Note: median values.

Figure 7

Current account (% of GDP), 1995-2016



Source: Bruegel using IMF (2011d) data. Note: median values.

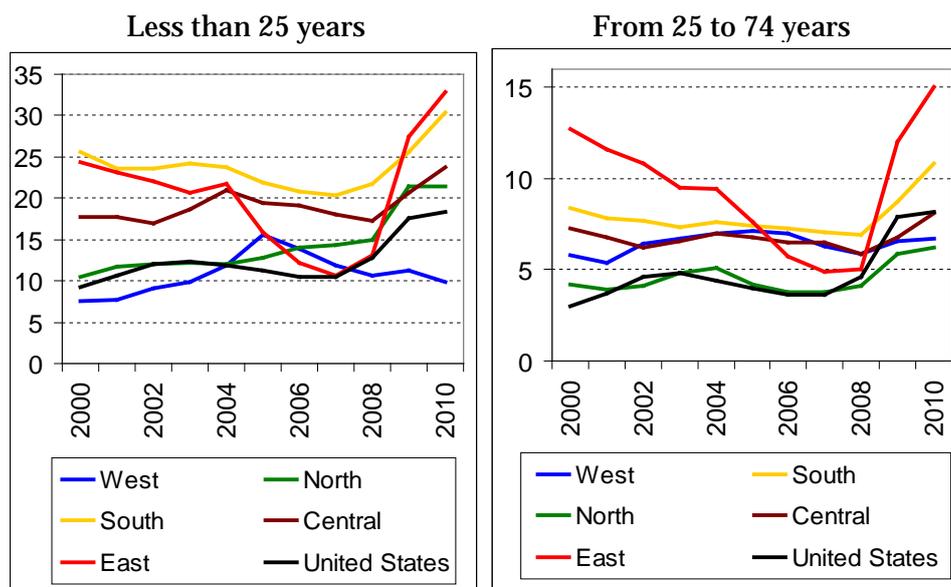
3.3 THE SPECIAL CHALLENGES OF SOUTHERN EUROPE

The evidence presented thus far confirms that southern European countries face special challenges. Their economic convergence has reversed, their unit labour costs have failed to improve following a steady rise in the pre-crisis period, and their current account deficits have hardly improved. Most southern European countries are under heavy market pressure and face a vicious circle of low and even worsening confidence and weak economic performance. This and the market pressure necessitate a greater fiscal adjustment, which again leads to a weaker economy, thereby lowering public revenues and resulting in additional fiscal adjustment.

The social consequences of fiscal adjustment and the weaker economy make it more difficult to implement the adjustment programmes and escape the vicious circle. Figure 8 shows that unemployment has increased, especially youth unemployment (which is also very high in the East group). Such a high youth unemployment rate is already leading to widespread frustration and the rise of anti-EU political movements.

Figure 8

Unemployment rate (%), 2000-10



Source: Bruegel using Eurostat data. Note: median values.

Table 3

Programme assumptions and recent forecasts for Greece and Ireland

	Date of forecast	2009	2010	2011	2012	2013	2014	2015
GREECE								
GDP	May-10	-2.0	-4.0	-2.6	1.1	2.1	2.1	2.7
% change	Sep-11	-2.3	-4.4	-5.0	-2.0	1.5	2.3	3.0
Gross public debt	May-10	115	133	145	149	149	146	140
% GDP	Sep-11	127	143	166	189	188	179	165
Budget Balance	May-10	-13.6	-8.1	-7.6	-6.5	-4.8	-2.6	-2.0
% GDP	Sep-11	-15.5	-10.4	-8.0	-6.9	-5.2	-2.8	-2.8
IRELAND								
GDP	Dec-10	-7.6	-0.2	0.9	1.9	2.4	3.0	3.4
% change	Sep-11	-7.0	-0.4	0.6	1.9	2.4	2.9	3.3
Gross public debt	Dec-10	66	99	113	120	125	124	123
% GDP	Sep-11	65	95	109	115	118	117	116
Budget Balance	Dec-10	-14.4	-32.0	-10.5	-8.6	-7.5	-5.1	-4.8
% GDP	Sep-11	-14.2	-32.0	-10.3	-8.6	-6.8	-4.4	-4.1

Sources: Greece – May 2010 projections, IMF (2010a); the three more recent projections, IMF (2011d), IMF (2011e) and IMF (2011e), respectively. Ireland – the December 2010 projections are from IMF (2010b), and the three more recent projections are from IMF(2011a), IMF 2011a) and IMF (2011e), respectively.

It is interesting to contrast South group countries with Ireland, because the latter seems to have been able to avoid this vicious circle through a greater flexibility to adjust to the shock by improving competitiveness and unit labour costs. The fundamentals of the Irish economy, which are much better than the South group countries (see Darvas et al, 2011), have likely played important roles in this development. The Irish programme is broadly on track (Table 3), but the outcomes and recent forecasts for Greece are significantly worse compared to the May 2010 assumptions of the initial programme.

4 WHAT SHOULD BE DONE?

The European growth agenda traditionally focuses on horizontal structural reforms that have the potential to improve potential output growth. Much of this agenda is indisputable, but policymakers must also reflect on whether it is still enough. In particular, two issues deserve attention in the policy discussion: the pace and composition of fiscal adjustments, and the potential for more active policies.

4.1 REVISITING THE EU2020 AGENDA

Against the background presented in the previous sections, what can be said of the EU2020 agenda? Most of it clearly still makes sense. Education, research, and the increase in participation and employment rates are perfectly sensible objectives in the current context, and the goals of ensuring climate-friendly and inclusive growth are also appropriate.

Implementing this agenda requires a significant stepping-up of efforts. Progress so far is very uneven within the EU. While indicators related to the five main EU2020 targets are readily available (eg Eurostat), in Table 4 we construct a scoreboard, based on the methodology of IMF (2010c) which was also used in Allard and Evaraert (2010), which assesses the various structural indicators in 2005 and currently. These indicators do not relate to all five main EU2020 targets, but to certain aspects of growth that could be improved with structural reforms. In its progress with structural reforms, the North group is unsurprisingly much further ahead than the West group and, especially, the South group, which is severely lagging on all criteria. While countries under a programme face very strong external pressure to reform, the main challenge is to foster improvements in countries such as Italy, that are performing poorly, but are not under IMF/EU programmes.

4.2 COMPOSITION OF FISCAL ADJUSTMENTS

The vast majority of European countries are facing major fiscal challenges. Assessments of the details vary, but concur in considering that reaching sustainable budgetary positions will require exceptionally large and sustained adjustments amounting to more than 10 percentage points of GDP in Greece, Ireland, Portugal, Spain and the UK (IMF, 2011). A large number of European countries are expected to need adjustments of the order of 5 to 10 percent of GDP.

There is a broad consensus that these adjustments should be as growth-friendly as possible. This implies, first, striking the right balance between revenue-based and spending-based adjustments; and second, selecting from revenue and spending measures the least detrimental to growth. Although there is no ready-made general metric to design growth-friendly adjustment packages, it is widely accepted that revenue measures tend to involve more adverse supply-side effects than spending measures; that tax measures that broaden the tax base or do not directly distort incentives to work and invest are preferable; and that spending cuts should preserve public investment in infrastructure, education and research.

These simple criteria can be used to assess the measures planned and implemented in EU countries. An appropriate starting point is a late 2010 IMF survey of country exit strategies conducted for G20 members and a group of countries (including Greece, Ireland, Portugal and Spain) facing exceptionally high adjustments (IMF, 2010d). This comprehensive survey suggested that virtually all countries facing medium-scale adjustment (between 5 and 10 percent of GDP starting from 2009 positions) were planning expenditure-based adjustment whereas countries facing large-scale adjustments (above 10 percent of GDP) were relying more on mixed strategies. Interestingly, no country was planning a revenue-based adjustment. Second, most countries were envisaging structural reforms of the government sector aimed at reducing the size of the public service and limiting the growth of social transfers. Overall, cuts in public investment amounted to about one-seventh of total spending cuts. Third, planned tax measures gave priority to broadening tax bases as opposed to increasing taxes, especially in the field of direct taxation of labour and capital, and to increased consumption taxes. This was *prima facie* evidence of the governments' intention to make fiscal adjustment as growth-friendly as possible.

The worsening conditions on government bond markets changed the course of events completely. Under increasing pressure, governments had to front-load planned measures, or even to adopt emergency measures in an attempt to meet markets' apparently insatiable demand for fiscal consolidation. The belt tightening was not limited to programme countries

(Greece, Ireland and Portugal) but also extended to Italy, Spain and France, which all approved extraordinary fiscal consolidation measures in August and September.

Table 5 provides evidence on the composition of the recent consolidation measures. It is apparent that giving priority to growth has often given way to expediency. In all countries surveyed, recent adjustments are either mixed or revenue-based. It is probable that they are also markedly growth-friendly in the choice of detailed measures.

Evidence thus indicates that the growth-adverse impact of the precipitous adjustment plans that are being implemented in response to market strains are likely to go beyond standard Keynesian effects and also result in potentially adverse supply-side effects. This is in part unavoidable. But good intentions are of little help if they are reneged on under the pressure of events. Whereas there is no magic bullet to address this problem, at least a close monitoring of national plans within the context of the ECOFIN Council is called for.

Table 5

Composition of recent fiscal adjustments in selected euro-area countries

Greece	Original version of IMF/EU Programme (May 2010)	11.1% GDP	
		47.8% expenditure	36% revenues 16.2% structural reforms (*)
	Reinforced Medium Term Fiscal Strategy (June 2011)	12% GDP (on top of what already <u>implemented</u>)	
		52.50% expenditure	47.50% revenues
2 nd emergency round (September 2011)	1.1% GDP (Property tax on electricity-powered buildings)		
	--	100% revenues	
Portugal	IMF/EU EFF Programme (May 2011)	10.6% GDP	
		67% expenditure	33% revenues
	Emergency measures due to fiscal slippages (August 2011)	1.1% of GDP	
--		100% revenues	
Spain	Emergency measures (August 2011)	0.5% GDP	
		~50% expenditure	~50% revenues
	Emergency measures (September 2011)	0.2% GDP	
		--	100% revenues
Italy	Fiscal Consolidation Package (August 2011)	3.6% GDP	
		<50% expenditure	>50% revenues
France	August 2011	0.6% of GDP	
		--	>80% revenues

Source: Bruegel based on IMF (2010a, 2010d, 2011a, 2011b), Greek Ministry of Finance (2011), ECB (2011), Spanish Ministry of Finance (2011a, 2011b), and news reports in Financial Times, Sole24Ore and LaVoce.info. Note. (*) In the case of Greece, in addition to direct revenue and expenditure measures, IMF (2010a) included a third category called Structural reforms, which comprise lower expenditures resulting from improvements from budgetary control and processes and higher revenues due to improvements in tax administration.

4.3 GROWTH POLICY UNDER CONSTRAINTS

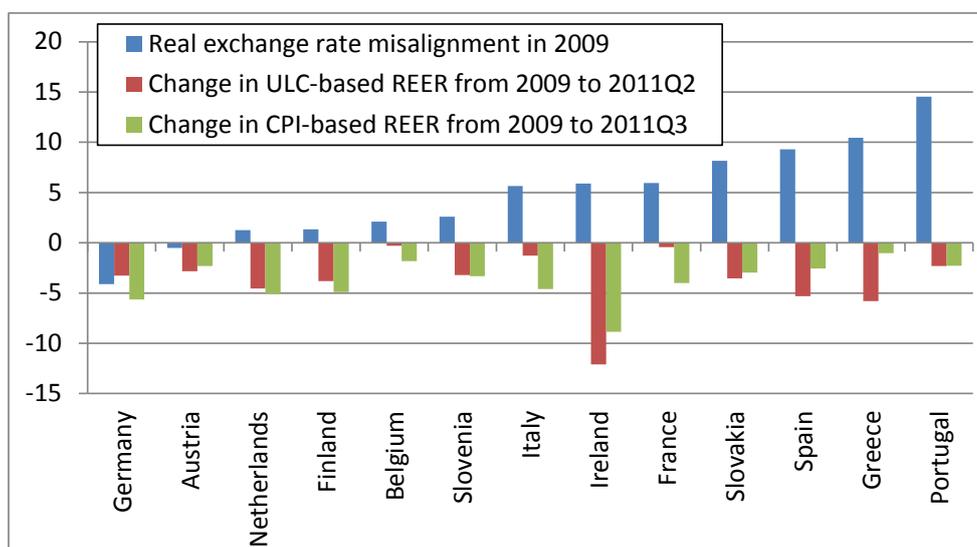
A key challenge for several euro-area countries is how to implement growth strategies in the context of 'wrong' prices. When prices perform their economic role they convey information to agents about the profitability of working or investing in various sectors; this in principle leads to socially optimal choices. In this context the main task of policies is to boost the supply of labour and capital and to create a level playing field for employees and firms.

Things are different, however, when prices are 'wrong',⁸ which is particularly relevant in the European context because of real exchange-rate misalignments within the euro area and in countries in a fixed exchange-rate regime. Countries that experienced major domestic demand expansion in the first ten years of EMU must reallocate capital and labour to the traded-good sector in spite of a still overvalued real exchange rate. Without policy-driven incentives, private decisions are likely to lead to suboptimal factor allocation in this sector, ultimately hampering growth.

Figure 9 gives European Commission (2010) estimates of real exchange rate misalignments in the euro area for 2009 – the latest available estimate – and the changes in real effective exchange rates since then. The figures presented for the misalignment are the average of two measures, one based on current account norms and the other based on the stabilisation of the net foreign-asset positions. Estimates for 2009 provide lower misalignment than estimates for 2008, so we are erring on the side of caution. What is apparent is that significant misalignments prevail, because the real depreciation from 2009 to mid-2011 in the most overvalued countries (except Ireland) was limited and broadly similar or less than the depreciation in Germany, the biggest euro-area country that already had an undervalued real exchange rate in 2009. Real exchange rate misalignments result in meaningful distortions in private decisions.

⁸ This traditionally happens when they fail to take account of externalities. Environmental costs here are a well-known example but there are other externalities, either positive (when firms contribute to knowledge) or negative (when they fail to take into account the impact of individual decisions on aggregate financial stability). In this type of context more hands-on policies, including industrial policies, can be advisable, as argued in Aghion *et al* (2011).

**Real exchange rate misalignments of euro-area countries
in 2009 and adjustment since (%)**



Source: Bruegel calculation using data from European Commission (2010) on misalignment and ECB data on real effective exchange rate (apart from the ULC-based exchange rate of Portugal, which is from the Eurostat and available only till 2010Q4).

Furthermore, the correction of these imbalances is exceedingly slow. In the previous section we looked at the evolution of unit labour costs and concluded that with the exception of Ireland, correction has barely started. The persistence of inadequate prices is bound to be detrimental to efficient capital accumulation and to weigh on potential output growth.

In this context policies that help correct distortions are an integral part of the growth agenda. Such policies may involve:

- Product and labour market reforms (ie improvements in several areas assessed in Table 4) that increase the responsiveness of the wage-price system to market disequilibria and help bring about the required correction in relative prices;
- Tax-based internal devaluations that foster an adjustment in relative prices;
- Temporary wage/price subsidies or tax breaks targeted at the traded good sector that help restore competitiveness;
- Industrial policy measures such as sectoral subsidies that favour accumulation in certain sectors.

EU-IMF sponsored adjustment programmes in Greece and Portugal include structural components, some of which include some of the measures listed above. However in the context of heightened bond-market tensions the focus of policymakers' attention tends to be budgetary consolidation. Growth will only return, however, if the structural agenda is given sufficient weight and if means are mobilised to support it. In countries that benefit from

Structural Funds, especially Greece and Portugal where they are sizeable, we follow Marzinotto (2011) and advocate temporary reallocations to support the growth and competitiveness aspects of the programmes. Examples of growth-friendly policies that could be supported through this channel include credit for SMEs and temporary wage subsidies aiming at restoring competitiveness.

5 CONCLUSIONS

In this paper we have revisited the European growth issue in the light of recent developments. We agree with the World Bank (Gill and Raiser, 2011) that Europe can build on its past achievements, but we emphasise that it cannot afford to remain complacent about its recent and current economic performance. For most of the continent, business-as-usual policies are likely to deliver insufficient growth to ensure the viability of the social model, which is in any case under threat because of ageing populations. The challenge of reviving growth is heightened by the deteriorating performance of southern Europe and the very limited, or even disappointing, adjustment these countries were able to achieve during the last three years. The single most remarkable success of the EU, its ability to foster convergence, is under threat. In 'new Europe' convergence is still happening, but it should be strengthened.

On this basis our main policy conclusions are:

- The growth agenda is of paramount importance in the current context. The Polish EU presidency should be commended for having selected it as a priority and the detailed proposals in Polish presidency (2011) should be considered seriously;
- The EU2020 agenda remains broadly appropriate, but its governance should be improved to achieve more rapid progress on structural reform in countries that are under threat of falling behind, making use of the new instruments embodied in the European Semester⁹; structural reforms in general, and reforms of product and labour markets in particular, are of paramount importance especially in countries with weak scores and overvalued real exchange rates;
- Tax-based internal devaluations, temporary wage-price subsidies or tax breaks could help restore competitiveness;
- The EU should urgently speed up the reallocation of Structural and Cohesion Funds in countries under programme to support growth and competitiveness, for which a general

⁹ See an assessment of the first European Semester in Hallerberg, Marzinotto and Wolff (2011).

political will may be there, but action is lacking. Special legislation is needed to turn principles into swift action;

- The proposals for issuing 'European project bonds' by the Commission or increasing the capacity of the EIB, to fund investment throughout Europe, should be considered and implemented;
- The growth agenda needs to be put in context. It is of little use to set objectives for the medium term if governments depart from them under the pressure of events. The composition of fiscal adjustments is a case in point in this respect;
- The policy toolkit should be broadened to include policies that help direct resources to the traded goods sectors in a situation when prices give inadequate signals to economic agents. This implies a more hands-on approach, including industrial policies, than under the traditional agenda.

Europe is so integrated that domestic measures may not be sufficient to restore growth in particular countries when the rest of the EU is sinking, even when supported by EU-level initiatives. The euro area's lingering sovereign debt and banking crisis is the most important factor in driving confidence down, even in those countries where fiscal sustainability has not been questioned. There is a negative feedback loop between the crisis and growth, and without effective solutions to deal with the crisis, growth is unlikely to resume.

REFERENCES

- Abiad, Abdul, Giovanni Dell'Ariccia, and Bin Li (2011) 'Credit-less Recoveries', Working Paper, Volume 58, International Monetary Fund
- Aghion, Phillipe, Julian Boulanger and Elie Cohen (2011) 'Rethinking Industrial Policy', Policy Brief 2011/04, Bruegel
- Allard, Celine and Luc Everaert (2010) 'Lifting Euro Area Growth: Priorities for Structural Reforms and Governance', Staff Position Note 10/19, International Monetary Fund
- Becker, Torbjorn, Daniel Daianu, Zsolt Darvas, Vladimir Gligorov, Michael A. Landesmann, Pavle Petrović, Jean Pisani-Ferry, Dariusz K. Rosati, Andre Sapir and Beatrice Weder di Mauro (2010) Whither growth in central and eastern Europe? Policy lessons for an integrated Europe, Blueprint Volume XI, Bruegel
- Blanchard, Olivier (2004) 'The Economic Future of Europe', Working Paper No. 10310, NBER
- Brenke, Karl, Ulf Rinne and Klaus F. Zimmermann (2011) 'Short-Time Work: The German Answer to the Great Recession', Discussion Paper No. 8449, CEPR
- Darvas, Zsolt (2011) 'Growing without credit', mimeo, Bruegel
- Darvas, Zsolt, Christophe Gouardo, Jean Pisani-Ferry and Andre Sapir (2011) 'A comprehensive approach to the euro-area debt crisis: background estimates', Working Paper 2011/05, Bruegel
- ECB (2011) Monthly Bulletin, September
- European Commission (2007) 'Economic forecast, autumn 2007', European Economy 7/2007
- European Commission (2010) 'Surveillance of intra-euro-area competitiveness and imbalances', European Economy 1/2010
- European Commission (2011) 'Europe 2020', http://ec.europa.eu/europe2020/targets/eutargets/index_en.htm, accessed on 04/10/2011
- Gill, Indermit and Martin Raiser (2011) 'Golden Growth: Restoring the Lustre of the European Growth Model', World Bank, Europe and Central Asia (forthcoming)
- Greek Ministry of Finance (2011) Greece, Medium-term fiscal strategy 2012-2015
- IMF (2007) World Economic Outlook
- IMF (2010a) Greece: Staff Report on Request for Stand-By Arrangement
- IMF (2010b) Ireland: Request for an Extended Arrangement – Staff Report, staff supplement, staff statement, and press release on the Executive Board Discussion
- IMF (2010c) Cross-Cutting Themes in Employment Experiences during the Crisis, prepared by the Strategy, Policy, and Review Department, <http://www.imf.org/external/pp/longres.aspx?id=4499>
- IMF (2010d) 'A Status Update on Fiscal Exit Strategy', Working Paper 10/272
- IMF (2011a) Ireland: Third Review Under the Extended Arrangement – Staff Report
- IMF (2011b) Regional Economic Outlook 2011 Europe
- IMF (2011c) Portugal: Request for a Three-Year Arrangement Under the EFF
- IMF (2011d) World Economic Outlook, September

- IMF (2011e) Fiscal Monitor, September
- Marzinotto, Benedicta (2011) 'A European fund for economic revival in crisis countries', Policy Contribution 2011/01, Bruegel
- Hallerberg, Mark, Benedicta Marzinotto, and Guntram B. Wolff (2011) 'How effective and legitimate is the European semester? Increasing the role of the European parliament', Working Paper 2011/09, Bruegel
- OECD (2007) 'OECD Economic Outlook', Volume 2007/2, No. 82
- Polish Presidency (2011) 'Towards a European consensus on growth', Report of the Polish Presidency of the Council of the European Union, Warsaw, Poland
- Reinhart, Carmen M. and Kenneth Rogoff (2011) 'A Decade of Debt', Working Paper No. w16827, NBER
- Reinhart, Carmen M., Jacob F. Kirkegaard and M. Belen Sbrancia (2011) 'Financial Repression Redux', Finance & Development, June 2011, p 22-26, International Monetary Fund
- Reinhart, Carmen M. and M. Belen Sbrancia (2011) 'The Liquidation of Government Debt', Working Paper No. 16893, NBER
- Sapir, Andre, Philippe Aghion, Giuseppe Bertola, Martin Hellwig, Jean Pisani-Ferry, Dariusz Rosati, Jose Vinals (2004) An agenda for a growing Europe: The Sapir Report, Oxford University Press
- Sinn, Hans-Werner (2011) 'The ECB's stealth bailout', VOXEU, June
- Spanish Ministry of Finance (2011a) Additional Austerity Measures August 2011
- Spanish Ministry of Finance (2011b) Nota de Pruensa: El Gobierno aprueba la recuperacion delgravamen del Impuesto de Patrimonio, September

APPENDIX: COUNTRY GROUPS

Pre-crisis developments, current difficulties and prospects vary widely across EU countries. To simplify matters, we define five major groups, which we name according to the cardinal points, and discuss the diverse challenges along these five groups:

- **West:** Austria, Belgium, France, Germany, Netherlands;
- **South:** Greece, Italy, Portugal, Spain;
- **North:** Denmark, Finland, Sweden, Ireland, UK;
- **Central:** Czech Republic, Hungary, Poland, Slovakia, Slovenia;
- **East:** Estonia, Latvia, Lithuania, Bulgaria, Romania.

We leave aside the three least populous EU countries, Luxembourg, Cyprus, Malta, because they have some unique futures and do not fit well to our groups. To control for relative sizes, we use medians for each country group.

Certainly, our groups are heterogeneous. For example, Ireland faces different challenges to Sweden, and more generally the Scandinavian and Anglo-Saxon economic and social models are different. Yet the North group countries share similarities, such as good governance indicators and low structural reform gaps (see Table 4). These countries were also impacted harder by the initial phase of the crisis than countries in our West group, before bouncing back faster (Figure 10).

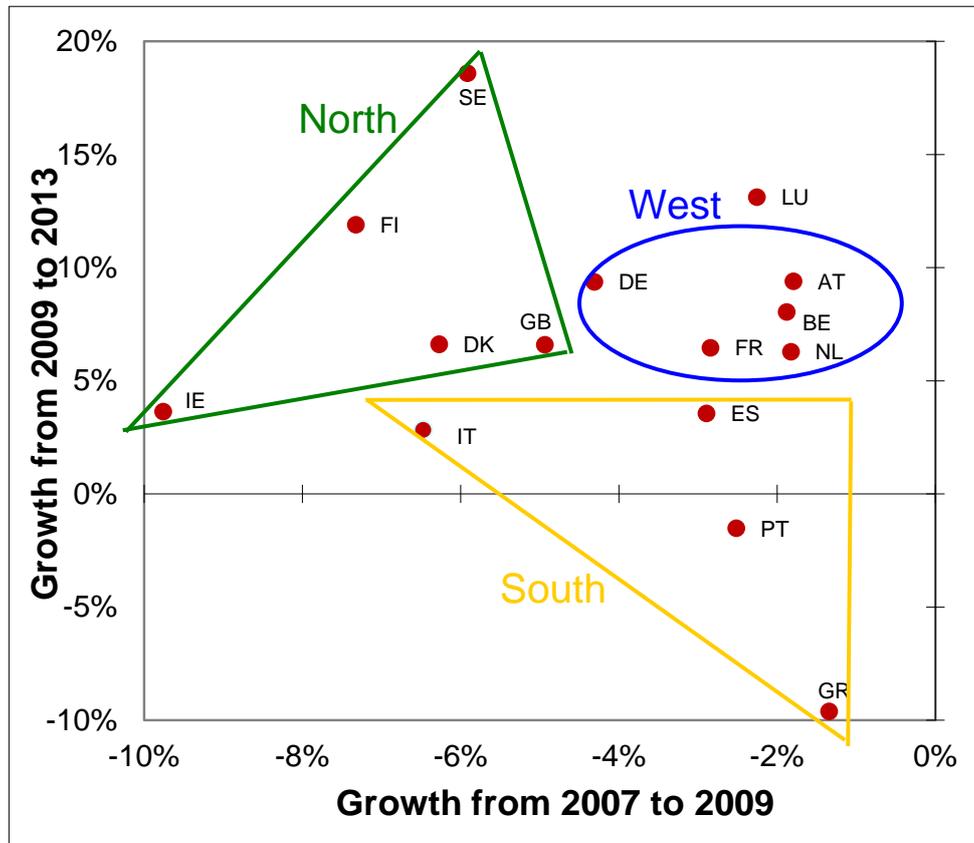
The countries that joined the EU in 2004-07 are also heterogeneous. But by analysing in the detail their growth model in Becker *et al* (2010) we came to the conclusion that the five central European countries had developments remarkably different from the three Baltic countries, Bulgaria and Romania and their challenges also differ.

For comparison, in some figures we also show data for the US and China, and for a group of 14 countries from Asia and Latin America (not including China and India):

- **Asia and Latin America 14:** six countries from Asia (Indonesia, Korea, Malaysia, Philippines, Taiwan and Thailand) and eight from Latin America (Argentina, Brazil, Chile, Columbia, Ecuador, Mexico, Peru and Uruguay).

Figure 10

GDP growth from 2007 to 2009 and from 2009 to 2013 in EU15 countries



Source: Bruegel using data from the IMF (2011d).

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