Chapter 5

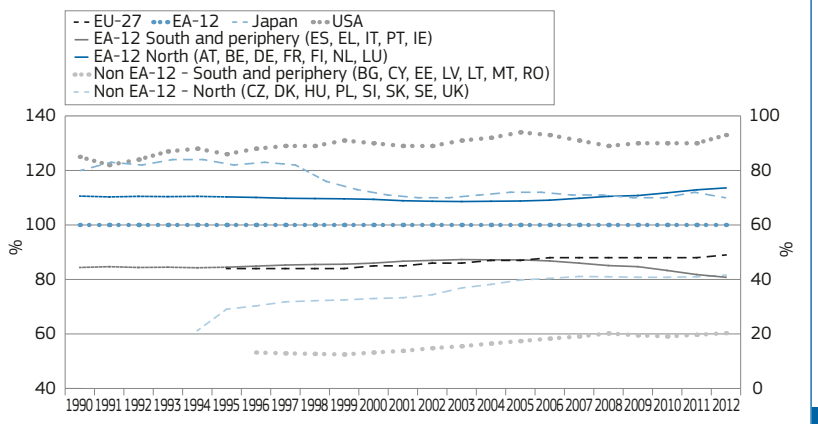
Convergence and divergence in EMU - employment and social aspects[1]

1. Introduction

One of the fundamental objectives of the EU is to improve the lives of its citizens by promoting convergence. This chapter reviews convergent and divergent socio-economic movements in the euro area since the beginning in 1999 of the third stage of Economic and Monetary Union (or EMU [2]), for a selection of the Member States who have been part of it since the early 2000s.

Over past decades, in line with the predictions of the Solow growth model (see Box 1), Europe had experienced convergence in GDP per capita as well as unemployment rates. It has become clear, however, that, since the onset of the economic crisis in 2008, the Union has experienced diverging trends.

Chart 1: GDP per capita in EU-27 and EA-12 (base 100), Japan and US



Source: Eurostat.

Notes: all values are expressed in relative terms to EA-12 average (100%). Averages weighted by groups - all values are on left scale except Non EA South and periphery (right scale). The two vertical bars represent the adoption of the Euro and the beginning of the economic crisis. Some missing data for 1990-95.

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In particular, the long-term trend of convergence and catching-up of GDP per capita (GDPpc) in the first decade of the euro (1999-2007) appears to have stopped and even, to some extent, reversed, as reflected in the substantial divergence of GDP per capita within the euro area between Northern and Southern euro-area Member States that had actually started around 2005 (Chart 1).

Since the onset of the crisis, Northern euro-area countries have further increased their GDP per capita levels compared to the EA-12 average, following a similar pattern to that observed in the US (while the levels in Japan stalled in the second half of the 1990s and have not grown much since then). However, Southern euro-area Member States have seen a significant downwards adjustment of their GDP per capita, which has more than cancelled out the convergence achieved since the adoption of the euro. Convergence in non-euro-area Member States which had been further reinforced before the crisis has essentially remained stable since.

These developments raise a number of questions with respect to employment and social experiences. How much did euro-area countries actually converge in employment and social terms over the period 1999-2007? Were there any signals of growing imbalances? What are the drivers behind the divergence observed since the onset of the financial crisis? Have imbalances accumulated before the financial crisis contributed to the post-2008 divergence? What are the key policy lessons for the design employment and social policies play in a monetary union?

(1) By Olivier Bontout and Guy Lejeune.

(2) The first stage of Economic and Monetary Union began on 1 July 1990. All 28 EU Member States are members of EMU, which implies that they are all expected to adopt the euro one day, with the exceptions of the Denmark and United Kingdom which have received an opt-out.

Box 1: Economic convergence and growth models

Economic growth has traditionally been attributed to the accumulation of human and physical capital, and increased productivity arising from technological innovation. The most basic growth model, the Solow model (also called the neoclassical growth model), emphasises the role of capital accumulation whereas technological innovations are taken as exogenous. The model assumes that capital and labour have diminishing returns.

The model implies that increasing capital relative to labour creates economic growth (since people can be more productive given more capital) and economies eventually reach a steady state, i.e. a point where any increase in capital no longer creates economic growth (because of diminishing returns to capital). A third implication is that poor countries with less capital per person grow, in general, faster (because of diminishing returns to capital, each investment in capital produces a higher return than rich countries with ample capital). This implies convergence in the levels of GDP over time. There is, however, no conclusive evidence to confirm all of the model's implications.

In the Solow model, GDP depends on the production factors capital (factories, machines, etc.) and labour (expressed in number of employees or hours worked), augmented with technology. Total factor productivity (TFP) is, by definition that part of the output increase which cannot be explained by changes in the input factors. Therefore this residual is seen as a measure of skill, knowledge and technical progress.

In empirical analysis, capital and TFP are not easy to separate. This is due to the fact that technical progress is often embodied in new capital goods. One would underestimate the effect of TFP when assuming that growth is the result of capital accumulation. Differences in TFP are seen as substantial to explain differences in income and growth between countries, particularly in the long run, when countries can overcome the steady state and continue growing by inventing new technology.

The chapter focuses on the trends observed since 1999 within the twelve Member States who have joined the euro in the period up to 2001 (the original eleven plus Greece that joined in 2001). It then reviews and compares dispersion trends in the euro-area countries over the period 1999-2007 with subsequent developments up to 2012 ([3]) for the main labour market and social aspects, against the given macroeconomic background in the EU as a whole and individual euro-area Member States (in terms of such factors as interest rates, inflation or price competitiveness). The main labour market dimensions considered are employment and unemployment, as well as wages. The main social dimensions considered are household incomes and debt, poverty and inequalities. The chapter reflects notably on the five key indicators aimed at detecting major employment and social challenges in the EU which are identified in the Communication on the strengthening of the social dimension of EMU (COM(2013) 690) and that the Commission put forward and analysed in the draft Joint Employment Report.

2. Functioning of Monetary Unions

2.1. Brief overview of theory of monetary unions

The so-called *optimum currency area* (OCA) theory identifies the costs and benefits (in terms of micro-economic efficiency and macro-economic stability) of adopting a common currency when countries decide to relinquish their monetary and exchange rate policy autonomy ([4]).

Regarding micro-economic efficiency, the main benefits are greater price transparency (fostering more competition) and a reduction in intra-area exchange rate uncertainty and in transaction costs (enhancing resource allocation). This has to be weighed against the changeover costs.

Regarding macro-economic stability, the main benefits are price stability and access to broader and transparent financial markets. This has to be weighed against the loss of control of monetary and exchange rate policy and constraints on fiscal policy ([5]).

The OCA theory also identified the conditions needed to fully reap these benefits of a currency union, including sufficient price and wage flexibility and factor mobility ([6]), integrated financial markets, coordinated fiscal policies and convergent inflation rates.

The conditions that make a currency union optimal can be endogenous to the formation of the area itself (Frankel and Rose (1997)). In other words, by joining a monetary union, countries trigger a process of deeper integration that may enhance the transformations needed to make an optimal currency area. However, because of path dependence in specialisation, these economies would be more prone to be hit by asymmetric shocks ([7]).

2.2. Specificities of the euro area; institutional comparisons with other monetary unions and with non-euro Member States

2.2.1. Specificities of the euro area

The euro adoption was made conditional on nominal convergence criteria established in the Maastricht Treaty ([8]). The idea was that adherence to nominal convergence would create a culture of stability and reform that would steer the euro area towards being an optimum currency area.

This subsection briefly discusses those features that can have relevance from a labour market and social perspective,

([3]) Slovenia, the thirteenth euro-area country, joined in 2007.

([4]) See the seminal contributions of Mundell (1961), McKinnon (1963) and Kenen (1969). See also Mongelli (2002) who provides an extensive survey of OCA literature presenting its evolution since the 1960s. See also Mongelli (2008) and Session 5 'Panel: optimal currency areas — an academic view' in European Central Bank (2009).

([5]) See 2.2 on the logic behind the constraints on Member States' fiscal policy in a monetary union.

([6]) The relevant production factors here are labour and capital.

([7]) See Krugman (1993) and Krugman and Venables (1996).

([8]) See Article 109 j of the Maastricht Treaty. The Maastricht criteria are about convergence in inflation, interest rates, exchange rate variability and fiscal variables. See Sapir's panel statement in European Central Bank (2009) on the economic and political reasons behind this choice.

namely price and wage flexibility, labour mobility and fiscal coordination ([9]).

In a monetary union, the absence of nominal exchange rate flexibility for an individual euro-area Member State shifts the focus to the flexibility of the real exchange rate, and, consequently, of prices and wages. However, price flexibility is low in the euro area. For example, Pisani-Ferry (2013) notes that, since 2008, in the hardest-hit Member States except for Ireland, "price adjustment is barely noticeable. Firms, especially in sectors sheltered from international competition, have retained market power and have increased prices in response to the rising cost of capital."

Low wage flexibility is also an important factor behind the lack of price flexibility ([10]). For example, the European Central Bank (2012) finds "some tentative evidence of downward wage rigidities in the euro area (i.e. a lower responsiveness of wages with respect to unemployment during downturns), although this result applies to all downturns and not just to the recent crisis period."

Evidently, measures that enhance wage flexibility have to take into account the institutional characteristics of the wage-setting mechanisms as well as the double role of wages to support both competitiveness and domestic demand.

Labour mobility remains limited in the euro area, in proportion of the labour force as well as in comparison to the US (see Box 2) even when mobility between regions inside Member States is taken into account. Many barriers have been identified such as country differences in language and culture, administration, taxation, social security systems and transferability of professional qualifications ([11]). Other obstacles to geographical mobility (including inside countries) that are quoted in the literature ([12]) include housing market regulations and the rise in home ownership, the lack of information about vacancies, as well as the prevalence of a dual-earner model in Europe.

While geographical mobility between EU-27 Member States has strongly increased over the last decade, this was mainly through post-enlargement mobility and not mobility between euro-area countries. This may be due to the fact that the main driver of mobility has been the differences in relative income levels ([13]), which have been quite limited in the euro area. However, unemployment as a push factor and rising mobility intentions could lead to increases in mobility from the most affected euro-area countries ([14]). Indeed, the recent crisis and its strong impact in terms of unemployment have substantially affected mobility flows towards, between and from euro-area countries ([15]). These changes have contributed, in some countries of origin, to partly offset the increase in unemployment ([16]).

Recent analysis ([17]) confirms the rising role played by mobility as an adjustment variable, notably in comparison to the US. For instance, mobility flows from Southern euro-area countries have strongly increased since the onset of the crisis ([18]). Nevertheless, this adjustment remains limited in comparison to the size of the labour force or the unemployed populations in Southern euro-area countries. Moreover, it has occurred mainly through changes in movements from/to Central and Eastern EU Member States and non-EU countries (reflecting both declines in inflows and increases in outflows through return migration) rather than through intra-euro-area movements (see Box 3).

Therefore, mobility between euro-area countries has not played a large adjustment role until now in offsetting imbalances between euro-area countries ([19]) and this is thought to be unlikely to change significantly in the near future, even if divergence in unemployment rates and a progressive removal of institutional barriers do lead to some further increases in the mobility rate ([20]), given the inherent costs of geographical mobility (especially cross-border mobility) for the workers and their families, as well for the society as a whole ([21]).

EMU is a unique structure in that it combines a single monetary policy with national, but co-ordinated, fiscal policies. This co-ordination is needed in order to avoid imprudent fiscal policies in one Member State having negative spill-over effects on the rest of the monetary union. The co-ordination also encourages the working of automatic stabilisers to smooth the effects of the cycle. At the same time, however, the central EU budget is small (about 1 % of EU GDP) and is not intended to supplement the working of national automatic stabilisers.

In this respect, Mongelli (2002) points out that some smaller and more homogeneous monetary unions have been able to function proficiently with a very limited federal budget. Nevertheless, some claim that national buffers and common backstops are needed for a smooth functioning of a currency area ([22]) and that a supranational fiscal risk-sharing mechanism could play a complementary role to the national level ([23]).

([9]) Financial integration (the banking union) is beyond the scope of this chapter.

([10]) See also Jaumotte and Morsy (2012) on how price flexibility is influenced by labour market institutions.

([11]) See, for example, Mongelli (2002), Eurofound (2008) and Bonin *et al.* *(2008).*

([12]) See, for example, OECD (2012) and Zimmermann (2009).

([13]) See European Commission (2011a).

([14]) See EPC (2013).

([15]) See European Commission (2013e).

([16]) See Deutsche Bank (2011).

([17]) See Jauer *et al.* (2014).

([18]) See European Commission (2013d).

([19]) ECB (2012) also pointed out that, contrary to conventional wisdom, mobility across euro-area countries could only play a limited role in alleviating the (rising) skills mismatches since this is mainly a structural problem, not particularly related to a lack of mobility. It says that the proportion of skills mismatched 'that could potentially be solved with perfect mobility of workers across countries has fallen in recent years, suggesting a high degree of integration between national labour markets'.

([20]) See EPC (2013).

([21]) See notably Eurofound (2008), European Parliament (1998) and Mongelli (2002). These costs can be of diverse nature such as: retraining costs; risk of over-qualification among movers and resulting 'brain waste'; long-run impact in the origin countries on demography, human capital and sustainability of social security systems; distributional impact of mobility inflows in destination countries.

([22]) IMF (2012).

([23]) See Allard *et al.* (2013).

Box 2: Is geographical mobility playing a larger role in adjustment in the US? Some recent evidence

Lower mobility rates in the EU/euro area, even when taking inter-regional mobility into account

The US is often considered as an example of how geographical mobility contributes to offset economic imbalances between the states. Estimations by the OECD ([1]) confirmed that the annual mobility rate ([2]) between the US States (2.4%) was, in 2010, much higher than between EU Member States (0.29%). This gap was even larger a few years ago when post-enlargement mobility had not yet boosted the rate in the EU ([3]).

However the comparison is biased by the use of States as a unit of comparison. Some US States are rather small ([4]), while the population in the EU is quite concentrated in a few very large countries ([5]) inside which mobility also takes place. It has been estimated ([6]) that, in 2006, 85% of EU's internal labour mobility was due to movements between regions of the same country ([7]) and, according to Zimmermann (2009), these movements help to reduce regional imbalances in labour markets.

However, even at the inter-regional level, mobility in the EU is less developed than in the US ([8]). When grouping the 50 US States in four main regions, OECD (2012) estimated that the US annual mobility rate decreases to 1.24%. The gap with the EU rate is therefore reduced by half but remains substantial. Moreover, even if inter-regional mobility in the EU ([9]) is taken into account – which increases the EU mobility rate to almost 1% - this is still much below the US interstate rate.

Finally, while some studies ([10]) have argued that the high rate of interstate mobility in the US was not necessarily related to employment concerns but rather linked to housing, this seems to be mainly due to the inclusion of small-distance moves (e.g.: inside a county) in the calculations. In terms of inter-state mobility, employment is clearly the main driving factor, as evidenced in recent data on self-declared reason for moving ([11]): in 2012, 49% of the moves were motivated by employment reasons, 24% by family reasons and 23% by housing.

Larger obstacles to mobility in the EU

The substantial gap between US and EU mobility rates (even when taking into account the differences in the geographical scale) is due to many factors, above all language ([12]) and cultural differences between EU Member States that do not exist between US states, as well as costs or uncertainties induced by differences in administration, taxation and social rights ([13]). Other factors include housing regulations and taxes on property transactions combined with a rise in home ownership (which tends to reduce labour mobility) as well as a lack of information about job vacancies in other regions ([14]). While some studies point to an intrinsic lack of interest in mobility in the EU, Eurofound (2006) has argued that Europeans may simply be more likely to consider both the negative and positive sides of mobility and to attach more value to achieving a balance between their work and private life as well as social ties ([15]). Finally, due to the costs of cross-country mobility in Europe, OECD (1999) noted that it is an unlikely response to economic shocks in the short-term as it is rather permanent and motivated by other factors.

A minor role of adjustment for labour mobility in the euro area...

The lower rate of mobility in the EU compared to the US, between both regions and countries/states, has been seen from the very beginning of EMU ([16]) as problematic in terms of being able to adjust to any asymmetric shock, given that instruments such as monetary policy, exchange rates or fiscal transfers are no longer available to national governments under EMU.

This was already evident twenty years ago. While Blanchard and Katz (1992) found that local US labour markets adjusted relatively rapidly to asymmetric shocks, with migration playing a key role in this process, Decressin and Fatás (1995) found that labour adjustments through migration across 51 regions of the EU-15 were less important than they were in the US ([17]).

([1]) OECD (2012), Figure 2.1.

([2]) The annual mobility rate is the share of the population which changed their region/country of residence within the year.

([3]) According to European Commission (2008a), the mobility rate between EU countries was around 0.14% in 2005-06.

([4]) For instance, it does not require a long distance to move out of the State of Washington DC and to become an 'intra-US mover'.

([5]) The six largest EU Member States accounted for 70% of the EU active population in 2012.

([6]) See European Commission (2008).

([7]) Nevertheless, Puhani (1999) pointed out that there are large differences across the EU with levels of interregional mobility in Germany, France, the Netherlands and the UK more than twice higher than in Italy and Spain.

([8]) See European Parliament (1998) and Natixis (2011).

([9]) Between NUTS1 regions in EU-15.

([10]) See Theodos (2006) and Eurofound (2008).

([11]) Calculations made by Migration Policy Institute on the basis of US Census data.

([12]) The OECD (2012) estimates regarding Canada confirm that the mobility rate between the 10 provinces/territories is much higher (0.98) than mobility between French-speaking Quebec and the 9 other provinces/territories (0.39).

([13]) See Eurofound (2008).

([14]) See OECD (2011).

([15]) "The decision not to move, therefore, does not necessarily indicate an unwillingness to move, but probably reflects institutional and cultural factors, as well as the influence of networks and individual life-course trajectories and assessments."

([16]) See European Parliament (1998) and Puhani (1999). More recently, Natixis (2011) has pointed to the rising dispersion of unemployment rates across euro-area countries ('far higher than what it was at the time of the introduction of the single currency') compared to the US and argued that it was due to 'the insufficient mobility of the labour factor within the Union'.

([17]) In the EU, shocks to regional labour demand are mainly absorbed (in the short-term) by changes in labour market participation rather than by changes in net migration, contrary to the US.

Puhani (1999) confirmed this by pointing out that *'a high degree of factor mobility within Euroland is required to compensate for the loss of the exchange rate as an adjustment mechanism in the face of asymmetric shocks between Euroland's nation states'*. On the other hand, he also showed that, based on the situation in three large euro-area countries (France, Italy and Germany), the *'accommodation of a shock to unemployment by migration takes several years'*, concluding that labour mobility is extremely unlikely to act as a sufficient adjustment mechanism for asymmetric shocks in the euro area. This conclusion was similar to other reports, such as European Parliament (1998) ([18]), OECD (1999) and Mongelli (2002).

...but a rising role in recent periods, relative to the US...

L'Angevin (2007) has analysed the labour market adjustment dynamics and the labour mobility in both the euro area and the US in the period 1973-2005. While the comparison confirmed that labour mobility in response to asymmetric labour demand shocks is lower in the euro area, the estimates based on a shorter, more recent period (1990-2005) indicated that the gap has been reduced (i.e. reactions of labour markets to asymmetric labour demand shocks in the euro area have become closer to those observed in the US). However, the author considers that the increased migration response to shocks in the euro area may be driven more by a greater inflow of immigrants from outside the euro area than by flows between euro-area Member States ([19]).

...though mainly due to post-enlargement mobility and external migration...

A major contribution to the debate regarding the adjustment role of mobility in the EU/ euro-area area (and relative to the US) is Jauer *et al.* (2014) which compares *'pre- and post-crisis migration movements at the regional level in both Europe and the United States, and their association with asymmetric labour market shocks'*. Similar to previous studies, the paper investigates the statistical relationship between migration (approximated by population changes) and lagged regional unemployment and non-employment differentials (i.e. relative to the overall rates in the free-mobility area). It concludes that, while the migration response to labour market shocks prior to the crisis was stronger in the United States (in line with previous results in the literature), recent evidence suggests that migration in Europe has reacted quite strongly to changes in labour market conditions – more so than in the US, where internal mobility seems to have declined. However, the adjustment is mainly due to the post-enlargement mobility and no significant effect is found at euro-area level.

Moreover, part of the adjustment comes from changes in migration among third-country nationals ([20]), and not intra-euro-area movements. This is confirmed by the main empirical findings presented in Box 3 regarding recent in/outflows of workers in euro-area countries.

....and a relative fall of the adjustment role of mobility in the US

While mobility has increased at EU level, it has decreased in the US since the 1980s ([21]), resulting, according to some authors ([22]), in a rise in long-term unemployment compared with the past.

However, while there is a consensus on the decline of the inter-state mobility rate (even if partly due to a statistical bias ([23]), there is no agreement on the drivers of this change. The main factors cited are economic factors and housing, as well as the rise of dual income couples and tax rates.

Focusing on the most recent period of crisis, the adverse situation of the housing market is presented as an explanatory factor ([24]) (i.e.: when house prices decline significantly, households in negative equity may be unable to refinance their mortgage in order to move to a more prosperous region or may be unwilling to sell their home at a loss). However, Molloy *et al.* (2011) point out that the decline has been widespread across demographic and socio-economic groups and they found only *'limited roles for the housing market contraction and the economic recession in reducing migration recently'*.

Also seeking to understand the long-run decline in interstate migration in the US, Kaplan and Schulhofer-Wohl (2013) point to the importance of economic factors, such as the *'decline in the geographic specificity of returns to occupations, together with an increase in workers' ability to learn about other locations before moving there, through information technology and inexpensive travel'*. Finally, Molloy *et al.* (2013) suggest that it is related to a *'downward trend in labour market transitions - i.e. a decline in the fraction of workers moving from job to job, changing industry, and changing occupation - that occurred over the same period'*.

([18]) The European Parliament (1998) has pointed out that, in Europe, "the costs of large-scale labour movement generally outweigh the advantages" and therefore, that even if "labour mobility might be marginally increased by the removal of artificial barriers caused by differences in tax and social security systems, residence restrictions, nationality limitations on recruitment in the public sector, inflexible housing markets, ...", it would be "unlikely to form a major mechanism of adjustment to asymmetric shocks within the euro area".

([19]) L'Angevin pointed out notably that the net migration rate of the euro area as a whole, relatively to the US, had strongly increased since the beginning of the 1990s.

([20]) This is in line with Von Weizsäcker (2008) who argues that mobility between euro-area countries is relatively low but that external immigration could help assure the labour market adjustment process within the euro area.

([21]) See, for example, Molloy *et al. (2011).*

([22]) For example Katz (2010).

([23]) Kaplan and Schulhofer-Wohl (2011) argues that interstate mobility was probably overestimated in the past and that the change in data-handling procedures explains nearly half of the reported decrease in interstate migration between 2000 and 2010.

([24]) See for instance OECD (2011), Chapter 4: "Housing and the Economy: Policies for Renovation".

Box 3: Recent trends in labour mobility between euro-area countries

A relatively low level of mobility between EU countries - which has however increased in the last decade due to enlargements…

Many studies have indicated that geographical labour mobility between EU countries is limited both in terms of the labour force and in comparison to other economic blocks (see Box 2) despite the right to free movement of workers and continuous policy actions at EU level to remove barriers to mobility. At the end of 2012, EU mobile citizens (of all ages) represented around 2.8% of the total population in the EU ([1]), much below the share taken by third-country nationals (4%).

The extent of intra-EU mobility of citizens and workers has changed in-depth over the last decade, however. The number of EU mobile citizen has increased by more than 50% since the end of 2003, when they represented only 1.6% of the total EU population. Part of this increase may be attributed to the progressive reduction in obstacles to mobility, thanks to coordinated action at EU level. However, there is no doubt that the main drivers of the surge in intra-EU mobility in the last decade have been the 2004 and 2007 enlargements which boosted the inflows of citizens from Central and Eastern Member States towards EU-15 ([2]) Member States. Indeed, mobility from EU-12 countries represented around ¾ of the overall net increase in the 'stock' of EU mobile citizens ([3]).

…while mobility between euro-area countries has been limited since the end of the 1990s…

While most recent studies on mobility at EU level have focused on the EU-27 and the impact of post-enlargement mobility, the rising divergence between euro-area countries has generated a number of papers on the (need for) mobility at the euro-area level ([4]). Nevertheless, concrete figures on intra-euro-area mobility remain scarce, with most studies measuring the size of the adjustment through labour mobility (i.e.: quoted in Box 2) using approximations of net migration flows (i.e.: population changes). Using recent data from the EU-Labour Force Survey, the following patterns emerge concerning mobility between euro-area (EA-12) countries:

- In 2012, 2.6 million EA-12 ([5]) workers were residing in another EA-12 country, representing 1.7% of the overall EA-12 active population, compared to 2.0% for the other EU mobile workers (0.3% for the three other EU-15 countries ([6]), 1.7% for EU-12) and 5.8% for third-country nationals. Moreover, most of the EA-12 mobile citizens have been established in their current country of residence for a long time ([7]).
- Consequently, EA-12 mobile workers made up around 47% of the whole population of EU mobile workers – much below the overall weight of EA-12 countries in the EU-27 active population (64%)- and at the same level as the share taken by EU-12 citizens (46%);
- Since the start of the third stage of EMU (1999), the number of economically active 'EA-12 mobile citizens' has increased from around 2.2 million in 1999 to 2.6 million in 2012 but their share of the overall active population of EA-12 has been rather stable (from 1.6% in 1999 to 1.7% in 2012).
- Moreover, Chart 2 confirms that the main changes in mobility in EA-12 countries over the last decade have been the increases due to enlargements (rising share of EU-12 citizens in the euro-area active population from 0.6% in 2004 to 1.7% in 2012) and external migration (i.e.: from non-EU countries).

Most of the increase in mobility across EU Member States recorded over the decade occurred in an East to West direction and if labour mobility **between EU countries** is said to be limited, it is in fact even more the case as far as mobility **between euro-area countries** is concerned. Several papers have pointed out that relative income levels seem to have been key push factors behind intra-EU mobility and that unemployment rates (in the countries of origin) have played a rather limited role ([8]). This could explain why most mobility flows in the EU occurred in the East-West direction – while flows between EA-12 countries (with smaller differences in terms of GDP per capita) remained limited, at least until recently. OECD (1999) also pointed out the income convergence and reduced wage differentials across euro-area countries as having lowered the incentives to migrate, compared to the 1950s and 1960s when large flows from Southern to Northern Europe had occurred.

([1]) DG EMPL estimates based on Eurostat migration statistics and the EU-LFS, same method used as in European Commission (2011a), Chapter 6, Tables 3 and 4.

([2]) 'EU-15' refers to the EU Member States before 2004, 'EU-10' to those having joined the EU in 2004, 'EU-2' to those having joined the EU in 2007 (Bulgaria and Romania) and 'EU-8' to 'EU-10' without Cyprus and Malta.

([3]) From 7.7 million at the end of 2003 to 14.1 million at the end of 2012 (DG EMPL estimates based on Eurostat migration statistics and the EU-LFS).

([4]) See, for example, Natixis (2011), Deutsche Bank (2011), European Commission (2013d), Jauer *et al. (2014), see also Box 2.*

([5]) Defined as those EA-12 citizens residing in an EA-12 country other than their own and being economically active. This definition therefore excludes mobility of non-EA-12 citizens such as other EU citizens or third-country nationals.

([6]) Those EU-15 countries not belonging to the euro area, i.e.: Denmark, Sweden and the UK

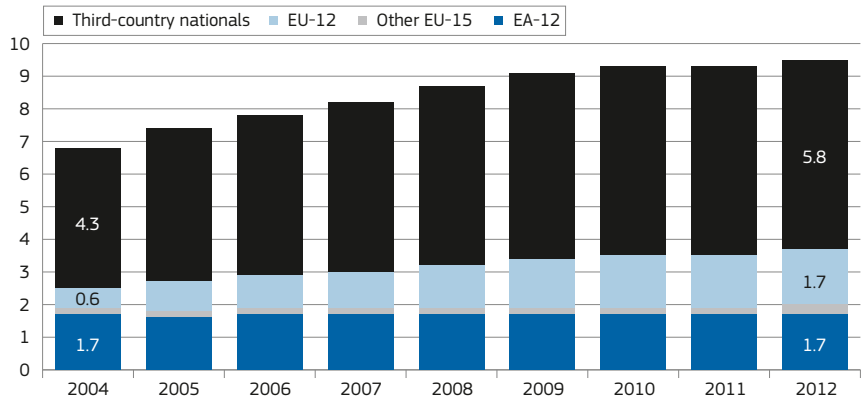
([7]) Around half (53%) of the overall stock of 2.6 million intra-EA-12 movers had been established for 10 years or more and a further 15% were even born in their current residing country - on the contrary, two thirds of EU-12 citizens had been there less than 10 years.

([8]) See for instance European Commission (2008b) and European Commission (2011a).

...and no substantial increase since the crisis, despite rising divergences inside the euro area

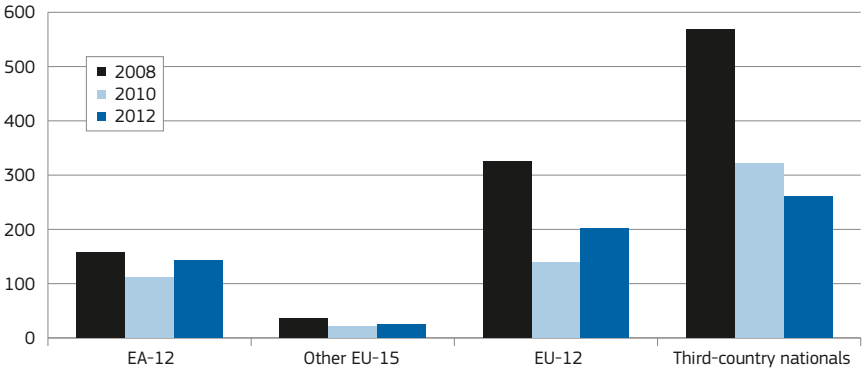
The current share of EA-12 mobile citizens in the total EA-12 active population is similar to that in 2008 (1.7%) suggesting that the crisis did not generate more mobility between euro-area countries, at least among euro-area citizens. As indicated in other recent analyses ([9]), mobility and migration flows towards EU countries have rather declined with the crisis, especially in the first period (2009-10) when most destination countries were affected by the economic recession. In contrast, the most recent period has seen a partial recovery in intra-EU mobility flows and some changes in the distribution across origin and receiving countries, in line with the asymmetric economic developments ([10]).

Chart 2: Economically active foreigners residing in EA-12 countries, by group of citizenship, as % of overall active population in EA-12



Source: DG EMPL calculations based on Eurostat, LFS.

Chart 3: Economically active foreigners, residing for less than 2 years in an EA-12 country (in thousands), by group of citizenship



Source: DG EMPL calculations based on Eurostat, LFS (BE not included as a destination country due to problems with the variable 'Years of residence').

In terms of **flows**, the main lessons that can be drawn from the analysis of EU-LFS data for the EA-12 countries are the following:

- In 2009-10, EA-12 countries saw large decreases in inflows, especially from EU-12 (-43%) and non-EU countries (-57%), see Chart 3;
- Intra-euro-area flows have also decreased but recovered somewhat in the recent period (+28%). As a consequence, intra-euro-area movers in 2012 represented 40% of the recent EU movers (to euro-area countries), compared to 30% before (2007-2008). Nevertheless, EU-12 citizens still constituted the majority (55%) of recent EU movers to euro-area countries.
- The most recent period (2011-12) has been characterised by uneven changes across EA-12 countries due to the varying labour market impacts of the crisis with flows from Southern EA-12 countries affected by the crisis having increased. For example, mobility flows to other euro-area countries increased quickly in the case of Spain (+36%) and Greece (+109%).

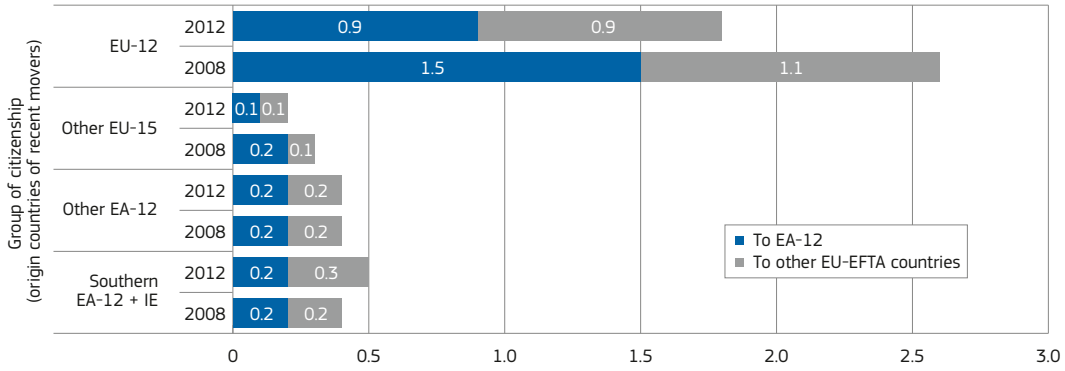
([9]) See International Organisation for Migration (2010), EPC (2013).

([10]) See Chapter 6, 'Intra-EU labour mobility and the impact of enlargement' in European Commission (2012c) and European Commission (2013d).

However, the increase in flows has been much greater towards non-euro-area countries ([11]) which attracted 61% ([12]) of recent flows from Southern euro-area countries (+ Ireland) compared to 47% before the crisis. This demonstrates that, in euro-area countries affected by high unemployment, adjustments through increased mobility have occurred chiefly through increasing flows to non-euro-area countries.

- Moreover, in proportion to the labour force in countries of origin (see Chart 4 ([13])), mobility outflows from Southern euro-area countries (+ Ireland) to other euro-area countries stayed at the same low level (0.2%) as before the crisis (and were similar to the level for other euro-area countries). In contrast, mobility to **non-euro-area countries** increased slightly (from 0.2 to 0.3%). Overall, even when considering all EU-EFTA destination countries, 'mobility rates' from euro-area countries (both Southern and Northern) were around 0.4-0.5%, much below those recorded from EU-12 countries (around 2%).

Chart 4: Mobility rates to EA-12 and other EU-EFTA countries, by group of citizenship (number of economically active recent movers (<4 years) as% of labour force in *countries of origin*)



Source: DG EMPL calculations based on Eurostat, LFS (BE not included as a destination country due to problems with the variable 'Years of residence').

Note: Southern EA-12: ES, EL, IT and PT; other EA-12: BE, DE, FR, LU, NL, AT and FI, other EU-15: DK, SE and UK. EU-EFTA: EU-27 Member States + CH, IS and NO.

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The main trends described above are confirmed by analyses ([14]) of administrative data for Germany, the main destination country in the euro area of movers from the Southern euro-area countries affected by unemployment ([15]). While there has been a rise of almost +20% in the number of citizens from Southern Member States working in Germany over the period 2010-2013, the increase in absolute terms is limited, especially compared to the overall unemployed population in Southern Member States (a ratio around 0.7%, with variations from 0.2% in Spain to 2.0% in Greece). In other words, until now, mobility to Germany has played a relatively minor role in relieving the pressure of unemployment for those countries ([16]).

To sum up, evidence from the EU-LFS and other data ([17]) points to the fact that, as a result of the crisis that has affected euro-area countries since 2008, there has been an adjustment in the euro area through mobility/migration, but it has been limited in terms of the% of active population of origin or destination countries. Moreover, while outflows from euro-area countries have increased, those to non-euro-area countries have increased even more.

The main adjustments through mobility occurred through changes in flows from/to EU-12 countries and non-EU countries (decrease in the overall inflows, increasing outflows through return migration and changes in the distribution across destination countries) and not through intra-euro-area movements. These conclusions are in line with the recent OECD analysis ([18]) which compares the size of the labour market adjustment through mobility/migration in the EU and the US over the recent crisis (see Box 2).

Transnational labour mobility has been playing only a very limited role as far as adjustments to asymmetric shocks in EMU are concerned.

([11]) Including the EFTA countries (Norway, Iceland, Liechtenstein and Switzerland) as they can be considered as part of the European area of free movement of workers, even if the legal rules governing free movement of workers vary. Overall, in 2011-12, the main non-euro-area recipient countries of recent (<2 years) movers from the euro-area countries affected by the crisis (Southern euro area + Ireland) were the United Kingdom, and, to some extent, Switzerland.

([12]) 67% of flows from Spain, 54% for Greece, 89% from Ireland, 55% for Italy and Portugal.

([13]) These mobility rates are calculated over a four-year period as one measure for a given year, the number of economically active foreigners established for less than 4 years (Variable 'Years of residence').

([14]) See European Commission (2013d).

([15]) In 2012, 48% of recent (<2 years) movers from Southern euro-area countries to other euro-area countries were established in Germany.

([16]) Elsner and Zimmermann (2013) also conclude on the basis of a descriptive overview of migration flows to Germany and economic conditions, that while there has been an increase in immigration from countries hardest hit by the crisis, the flows in question are too small to have a large impact on reducing unemployment in origin countries.

([17]) See European Commission (2013d).

([18]) Jauer *et al.* (2014).

2.2.2. Theoretical comparisons with other monetary unions and with adjustments in non-euro Member States

The obvious candidate for a theoretical comparison of the euro area with another monetary union of similar size is the US ([24]).

The US is a political union, a federal state, with a federal government, a federal parliament and a federal budget. The history of development of the monetary unions in Europe and the US is different: while the creation of EMU is part of the process of economic integration and spurred under the initiative of the EU Member States, monetary institutions in the US have evolved in response to specific needs, in particular following the financial crises of the early 1900s.

The second main difference is the banking union in the US (supervision, deposit insurance and backstop are all at the federal level) which avoids the lethal feedback loop between banking and sovereign problems seen in the euro area ([25]).

The third main difference is the mandate of the central bank. The Federal Reserve (the US central bank) has a dual mandate of maximum employment and stable prices ([26]). Recently, the Federal Reserve has tied its monetary policy to a numerical target for the unemployment rate (and price stability).

The task of the European System of Central Banks (ESCB), as laid down in the Treaty, is to maintain price stability. Without prejudice to price stability, the ESCB supports the general economic policies in the Union with a view to contributing to the achievement of the objectives of the Union, as laid down in Article 3 of the Treaty, namely sustainable development based on balanced economic growth and price stability, and a highly competitive social market economy, aiming at full employment and social progress.

Consistent with its mandate, the 'ECB's monetary policy stance continues to be geared towards maintaining the degree of monetary accommodation warranted by the outlook for price stability' ([27]). Through its announcement of the 'Outright Monetary Transactions' (OMT) in summer 2012, the ECB supported overall confidence, while creating the incentives for governments to pursue prudent economic policies.

In the EU, fiscal policy is the responsibility of Member States as set out in the Stability and Growth Pact, and subject to the provisions of the Treaty. The US fiscal system is very different, with a federal level collecting about two thirds of all taxes and bringing significant cyclical stabilisation, while the State level generally abides by self-imposed, pro-cyclical balanced budget rules ([28]).

The US federal level also has no obligation to bail out States, which protects taxpayers from moral hazard risk ([29]). The States' balanced budget rules are the natural counterpart to the assumption of these stabilisation roles by the federal level. These rules vary in strictness ([30]) and enforcement and imply a pro-cyclical effect, which counteracts (partially) the cyclical stabilisation from the federal level. As the rules are self-imposed and self-enforced, the fiscal behaviour of one State has no influence on the behaviour of another (contrary to what happened with the Stability and Growth Pact). There is, at the same time, significant cyclical stabilisation from the federal level, whether discretionary ([31]) or automatic (through social security, unemployment benefits, but also the variation in taxes paid to the federal level). However, compared to the EU, the US has much less widespread public social protection ([32]).

3. Labour market and social convergence in 1999-2007

3.1. Introduction

This section addresses labour market and social developments in the first nine years of EMU. The basic evidence is first presented in the form of scatter diagrams plotting changes between 1998 and 2007 against the initial position in 1998 ([33]). In terms of convergence, the observations would be expected to show a negatively sloped trend-line, with Member States with the lowest initial levels catching up most ([34]).

The focus is on the 12 Member States who adopted the euro up to 2001 ([35]), with the analysis focused on the period 1999-2007. No comparison is made concerning the situation before the adoption of the single currency. Most comparisons with other EU Member States and with non-EU countries are made in sections 2.2 and 4.2.

Even after fixing the time and space constraints of the analysis, convergence analysis can still take different forms: convergence in levels (Beta-convergence) or in variability (Sigma-convergence) - see Box 4. A final distinction is between nominal and real convergence. Entry into the euro is conditional on fulfilling the Maastricht criteria, which can be seen as nominal convergence (convergence in inflation, interest rates, exchange rate variability and fiscal variables). In the context, the euro is nevertheless intended to support real convergence, defined in terms of per capita GDP, by fostering economic integration (see European Commission (2008c)).

([24]) An empirical comparison with the US can be found in section 4.2.

([25]) See Mongelli (2013).

([26]) In fact, the mandate is wider, as the Federal Reserve should "promote effectively the goals of maximum employment, stable prices and moderate long-term interest rates." (Federal Reserve Act)

([27]) Draghi (2013).

([28]) See HM Treasury (2003), O'Rourke and Taylor (2013) and Henning and Kessler (2012) on which the following is based.

([29]) Over time, States have been through fiscal distress and even default (O'Rourke and Taylor (2013)).

([30]) For example, overly optimistic macro-economic forecasts can allow for an ex-ante balanced budget forecast. Note also that the rules generally allow borrowing for long-term public investment.

([31]) Such as through the 'American Recovery and Reinvestment Act' of 2009.

([32]) In counterpart, the US has much higher private health expenditures, see Bontout and Lokajickova (2013).

([33]) 1998, the last pre-euro-area year is considered as the base year; the focus is on changes *during* 1999-2007.

([34]) As the scatter diagram has only 12 or 13 observations and also in view of the heterogeneity in the size of Member States' economies, the estimations of the coefficients and the correlation coefficient have only a very limited value.

([35]) Evidently, analysis at regional level is beyond the scope of this chapter.

Box 4: Measures of convergence

In the current context, Sigma-convergence refers to a reduction of disparities over time between countries in terms of indicators such as level of income, and usually measured in terms of the standard deviation or coefficient of variation (the ratio of the standard deviation to the mean).

Beta-convergence refers to a situation such as where incomes in poorer countries grow faster than those in richer ones, which is usually measured in terms of changes in incomes in poor countries over time against their initial income levels.

The two concepts of convergence are closely related with Beta-convergence being necessary but not sufficient in order to achieve Sigma-convergence ([1]). Other indices exist (for instance the Gini coefficient, the Atkinson index, the Theil index and the Mean Logarithmic Deviation). It is recommended "to compute a variety of measures to draw firm conclusions about changes in the extent of disparities" (Monfort (2008)).

In this chapter we restrict ourselves to the coefficient of variation as a measure of sigma-convergence.

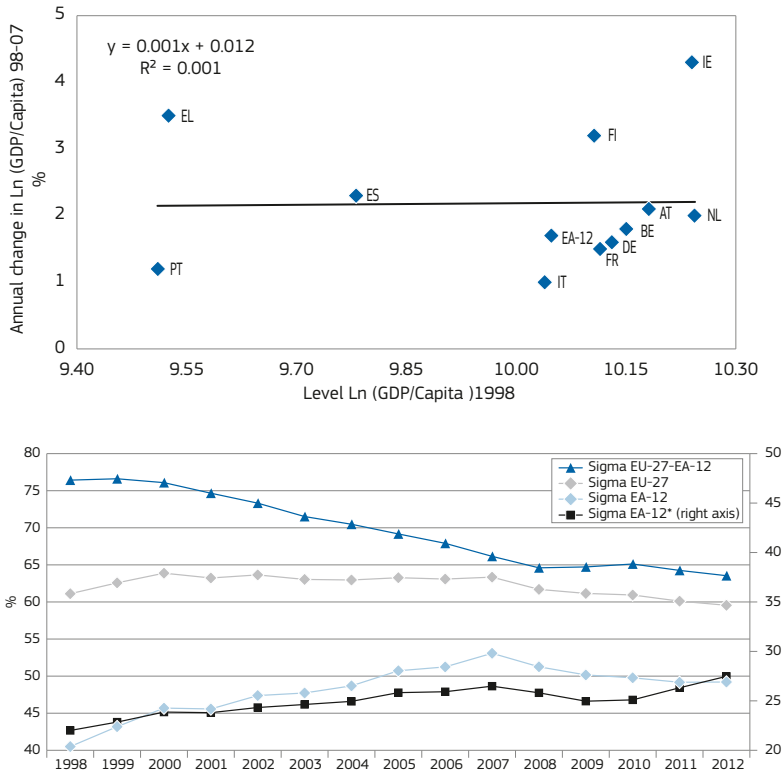
([1]) See, for example, Young, Higgins and Levy (2008) and Monfort (2008).

3.2. Evidence of convergence (1999-2007)

Average annual real GDP growth averaged 2.2% in EA-12 during the period 1999-2007, while GDP per capita (GDPpc) averaged 1.7%. In effect, reasonably robust growth overall in EA-12 was accompanied by some slight divergence in terms of GDPpc, while EU-27 acknowledged an overall stability and the rest of EU-27 was showing some convergence (Chart 5, right-hand panel).

Rates of growth of GDPpc were very close in Germany, France, Italy, Belgium, the Netherlands and Austria, close to the EA-12 average, but weaker in Portugal and Italy (around 1%), stronger in Spain (2.3%) and stronger again in Greece (3.5%). There was also stronger growth in Finland, Ireland and Luxembourg.

Chart 5: GDP per capita in EA-12 and EU-27 (1998-2012)



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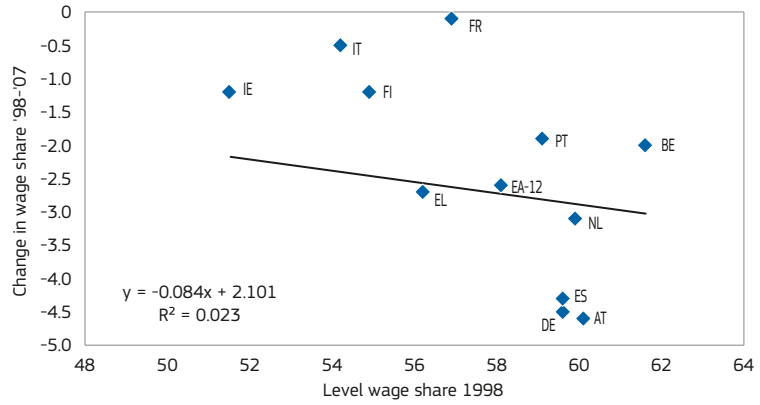
Source: Eurostat.

Notes: GDP in Euro and real values, LU not included in left Chart due to atypical levels. Weighted averages. EA-12* refers to EA-12 except LU.

Chart 6: Wage share (1998-2007)



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Source: AMECO: Adjusted wage share: total economy: as percentage of GDP at current market prices (ALCD0).

Note: EA-12 weighted average.

In effect, during the first decade of the euro, the catching-up process appears to have been slower within the euro area than it was Member States outside the euro area (see also European Commission (2008c)). It should be noted however that the dispersion showed a slight divergent trend within EA-12 (see Chart 5, left-hand panel) and that these within-EA-12 movements in dispersion have been accompanied by a significant average catching up of Southern EA-12 Member States ("between" convergence, see Chart 1). These trends contrast with the relative stability of the overall EU-27 dispersion observed since 2007 (Chart 5, right-hand panel), which has then been accompanied by some divergence between the Northern and Southern euro area (Chart 1).

While GDP growth averaged 2.2% a year in EA-12 over the period 1997-2007, there was a decline in the overall wage

share of 2.8 percentage points on average, as a result of wages growing at a slower pace than GDP, with potential consequences for the future sustainability of growth ([36]).

The decline in the wage share overall was accompanied by some weak convergence within EA-12 Member States, with more significant declines in Austria, Germany and Spain, some stability in Italy, with wage share in Greece, the Netherlands and Belgium moving in line with the EA-12 average.

While wages developed at a slower pace than GDP, employment increased by around 5 points on average. Moreover there was robust convergence with employment growth stronger in most Southern or periphery Member States, including Spain, Italy, Greece and Ireland, while it was weaker in most Northern Member States, notably in Belgium, Luxembourg and Austria. While it was also weaker in Portugal, this was from an initial high level.

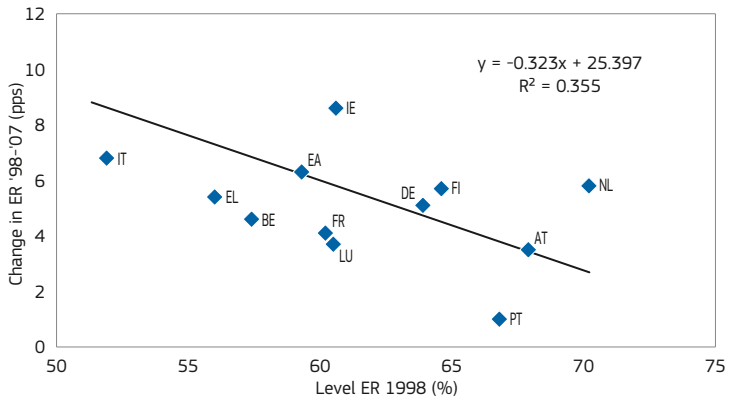
A decomposition of the changes in GDPpc growth into employment and labour productivity provides some insight into the nature and causes for these changes (see also European Commission (2008c)). On the one hand, the pace of job creation accelerated over the decade in the EA ([37]), notably in Spain (which accounted for 36 % of the increase). On the other hand, average yearly labour productivity growth slowed markedly to 0.75 %, with particularly low rates in Spain, Italy and Portugal.

The overall increase, and robust convergence, in employment rates resulted in a significant decline in unemployment rates of nearly 2 pps, accompanied by strong convergence. Reductions in unemployment were particularly notable in Spain, Italy, Greece, all of which had experienced particularly high rates, as well as in Finland and France. However, unemployment did not decline much in some Northern Member States with relatively high levels, such as Belgium and Germany, and increased significantly in Portugal, albeit from relatively low initial levels.

Youth unemployment rates fell even more than the average (-2.6 points) and was accompanied by strong convergence, with sharp declines in Spain, Italy and Greece.

However, the weak labour market situation in Portugal resulted in a worsening of the situation of the young people as it did but to a lesser extent in Luxembourg.

Chart 7: Employment rates (1998-2007)



Source: Eurostat [lfsi_emp_a].
Note: EA-12 weighted average.

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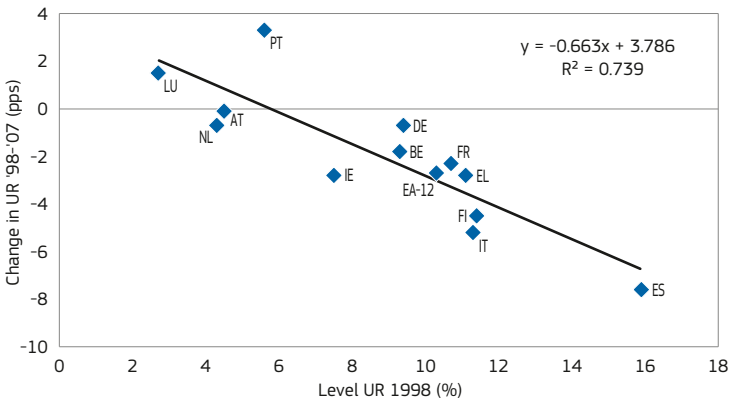
Chart 8: Unemployment rates (1998-2007)



Source: Eurostat [une_rt_a].
Note: EA-12 weighted average.

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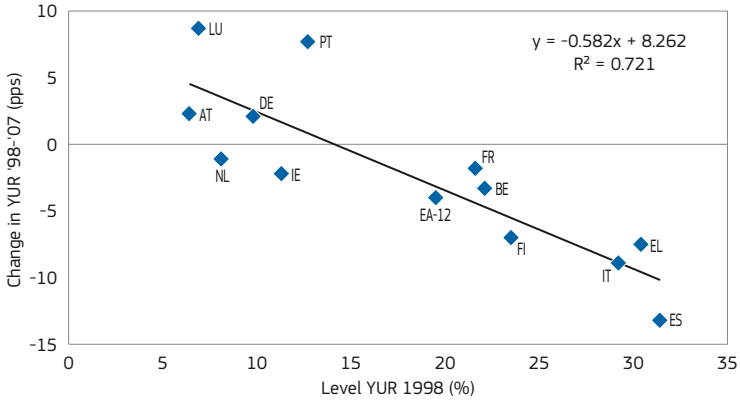
Chart 9: Youth unemployment rates (1998-2007)



Source: Eurostat [une_rt_a].
Note: EA-12 weighted average.

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([36]) See notably Onaran and Galanis (2012) on the wage-led versus profit-led growth regimes and Box 1, 'Conditions affecting the setting and adjustment of wages' in Chapter 5 of European Commission (2013a) on the impact of wages on the demand side.

([37]) There was a particular role for female employment, which contributed 63 % of the overall increase.

Over the sub-period 2004-2007 ([38]) overall positive developments in the labour market translated into only a small average improvement in the extent of employment polarisation across households within countries (which overall remained constant, it even decreased by 0.6 point), while there was some convergence in terms of the proportion of jobless households, with significant reductions in Italy and Belgium, but also increases in Austria and Ireland.

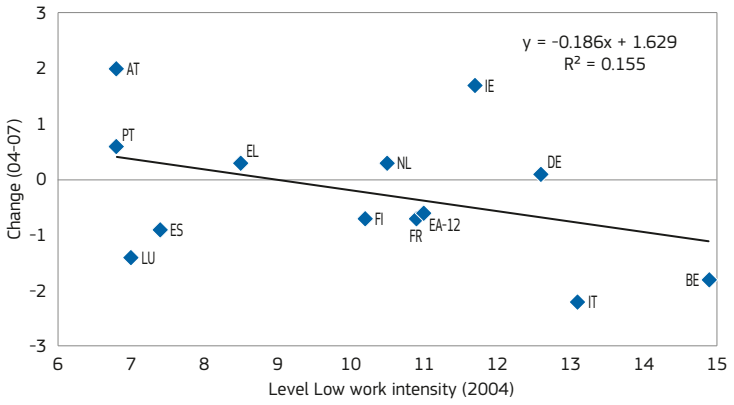
Over the period 1999-2007, overall GDP growth enabled household incomes per capita to increase at an average rate of 1.1 % a year in real terms, with significant convergence in terms of notably higher growth in some Southern Member States (Greece and Spain, but not in Portugal and Italy) and slower than average growth in richer Northern Member States, such as Germany and the Netherlands.

This average growth in GHDI (Gross Household Disposable income) per capita was accompanied by an overall stability of income inequalities over 2004-2007 (actually a slight increase) and strong convergence in EA-12 with declines in Southern Member States that initially experienced higher levels, notably Portugal and Italy, but also Ireland) and an increase in Germany, where initial levels were relatively low.

Over the same period, the risk of poverty and exclusion remained more or less constant overall in EA-12, but with strong convergence. This included a significant decline in Member States that had initially seen higher levels, notably Greece, Portugal, Ireland and Spain, while, there was a significant increase in Germany.

Over the same period, while relative monetary poverty ([39]) remained more or less constant over the period in EA-12, showing some signs of convergence (Chart 14, left-hand panel), anchored poverty ([40]) showed some decline together with a more robust convergence.

Chart 10: Jobless households (2004-2007)



Source: Eurostat.

Note: EA-12 weighted average, population 18-59. Households with zero or very low work intensity.

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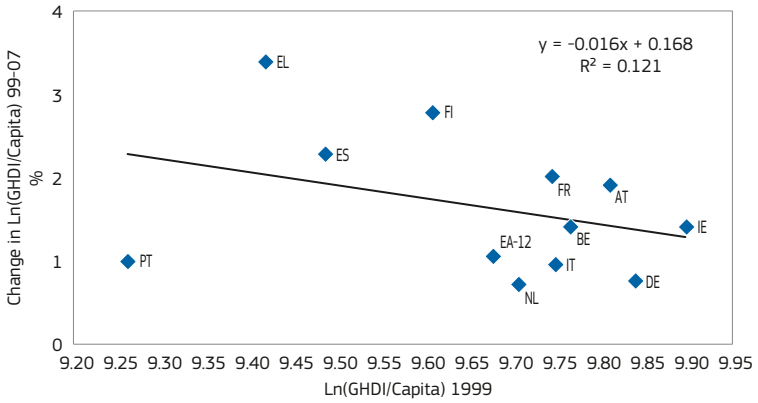
Chart 11: GHDI per capita (1999-2007)



Source: Eurostat.

Notes: in Euro and volumes. LU not displayed since data available only for 2008-2011. Data not available for IE (1999-2001), EL (1999), ES (1999), and LU (1999-2007). EA-12 weighted average.

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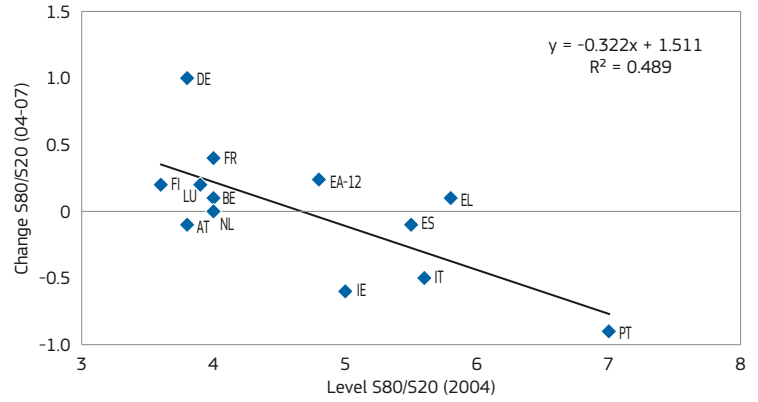
Chart 12: S80/S20 (2004-2007)



Source: Eurostat.

Note: EA-12 weighted average.

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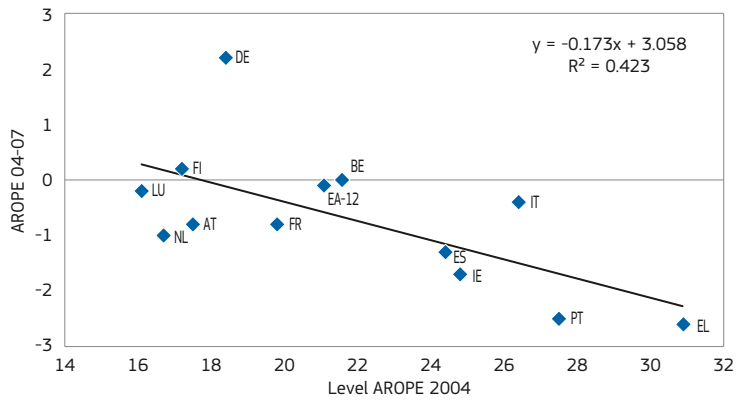
([38]) Data since 2004 are based on the EU-SILC surveys, which are not available before. For earlier periods, other surveys are available such as the EHCP, or national surveys, which implies breaks in series.

([39]) Measured relative to 60 % of the median equivalised disposable income.

([40]) Measured on the basis of a threshold with a real value fixed at a moment in time (here in 2007).

Chart 13: Poverty and exclusion rate (2004-2007)



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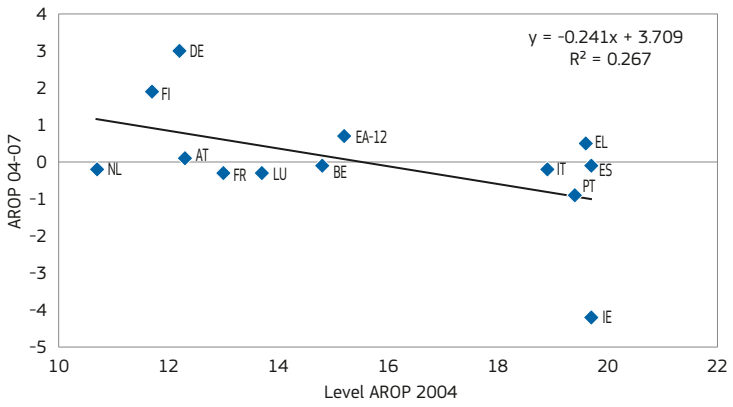
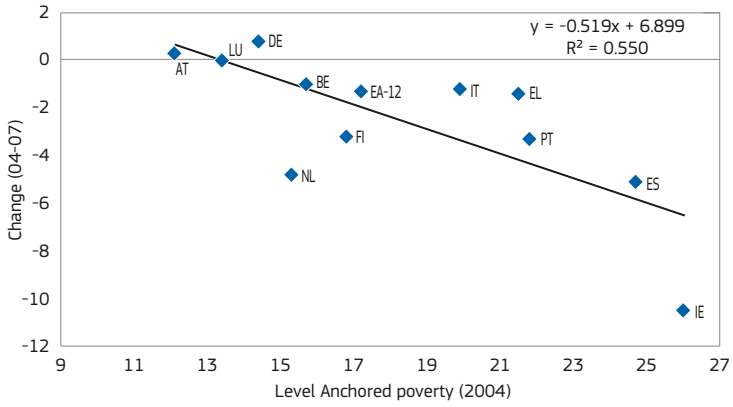
Source: Eurostat.

Notes: EA-12 weighted average. DE and LU not available in 2004.

Chart 14: AROP and anchored AROP (2004-2007)





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Source: Eurostat.

Note: EA-12 weighted average.

Table 1: Average and dispersion trends (1999-2007)

Variable	Average trend	Dispersion trend
GDP per capita	+	=/+
Wage share	-	-
Employment rate	+	--
Unemployment rate (youth)	- (-)	-- (---)
Low work intensity	-	-
GHDI per capita	+	-
S80/S20	=	--
Poverty and exclusion	=	-

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Source: DG EMPL.

The 1999-2007 period was characterised by relatively strong average growth in GDPpc in EA-12 but with a slight dispersion, accompanied by some decline and convergence in the wage share.

Overall, some consistent and significant convergence (notably between Northern and Southern Member States) was seen in terms of labour market and social outcomes. The significant improvement in the employment and unemployment performance was accompanied by strong convergence, particularly with respect to the young. Likewise, household incomes benefited from these trends and converged somewhat in terms of inequalities and poverty levels.

3.3. Imbalances and warning signals 1999-2007

The convergence documented above with respect to employment and social indicators can be viewed as positive. However it was partly the result of unbalanced GDP growth, fuelled notably by the decline in interest rates observed in some Member States. This was often associated with unbalanced employment growth (segmentation) and a neglect of longer-term fundamentals such as productivity growth, competitiveness and human capital investment.

3.3.1. Unbalanced GDP growth due to lower interest rates (and other factors)

One of the most significant changes in the economic environment that resulted from the adoption of the euro was the reduction in nominal interest rates. Compared to the average of the previous nine years, average interest rates ([41]) during 1999-2007 were lower in all 12 Member States. Some Member States experienced a particularly large drop in their interest rates as markets adjusted their country risk assessments following the adoption of the euro ([42]) (in Table 2 and the following text, the drop in the average nominal interest rate is labelled "interest rate gain").

([41]) This concerns short-term as well as long-term rates.

([42]) Identifying the drivers of this re-assessment and determining whether or not this is a market failure (see Soros (2013)) would be beyond the scope of this publication.

Table 2: Average nominal interest rates during 1999-2007 and the nine previous years

	ISN 90-98	ISN 99-07	ISN gain 99-07	ILN 90-98	ILN 99-07	ILN gain 99-07	IR gain 99-07
Belgium	6.3	3.2	3.1	7.5	4.5	3.0	3.1
Germany	6.0	3.2	2.8	6.9	4.3	2.5	2.7
Ireland	8.1	3.2	4.8	7.8	4.4	3.4	4.1
Greece	19.0	4.4	14.6	16.8	4.8	12.0	13.0
Spain	9.8	3.2	6.6	9.9	4.4	5.5	6.0
France	6.9	3.2	3.7	7.3	4.4	2.9	3.3
Italy	9.8	3.2	6.6	10.6	4.6	6.0	6.3
Luxembourg	6.3	3.2	3.1	6.9	4.0	2.9	3.0
Netherlands	5.9	3.2	2.7	6.9	4.4	2.5	2.6
Austria	6.0	3.2	2.8	6.9	4.4	2.5	2.6
Portugal	11.4	3.2	8.2	10.6	4.5	6.1	7.1
Finland	7.7	3.2	4.5	9.0	4.4	4.6	4.5
EA-12	7.6	3.2	4.4	8.2	4.4	3.8	4.1

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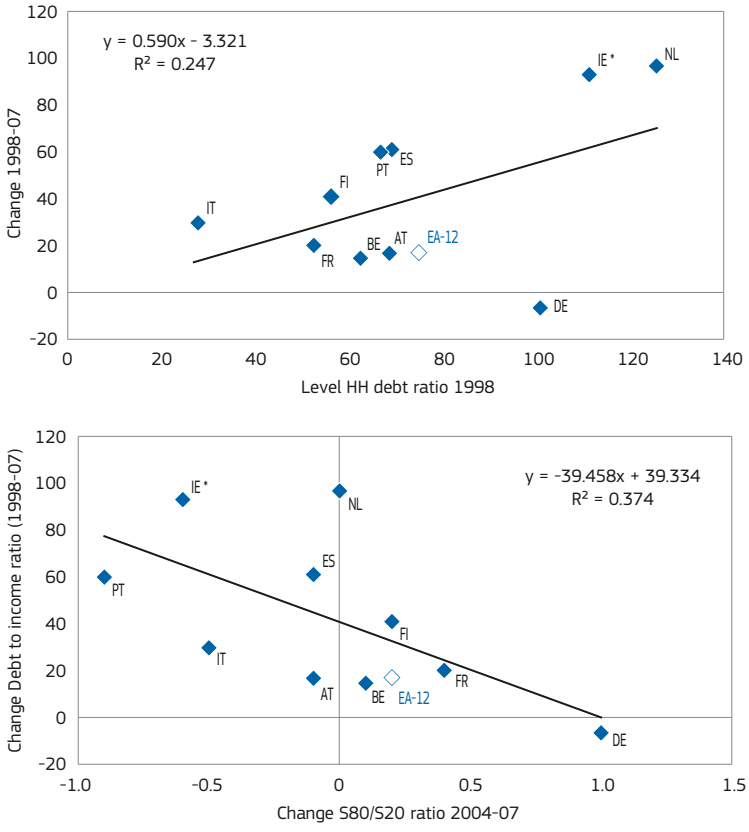
Source: Own calculations on the basis of AMECO [ISN, ILN].

Notes: IR is the average of short-term (ISN) and long-term rates (ILN).

In most of the Member States where the interest rate gain was large, activities that are particularly sensitive to interest-rate levels and changes (construction, consumption of durable goods, finance) boomed and credit expanded strongly. As a result of cross-border lending, financial sector activity was also boosted in other Member States.

Growth based on increased indebtedness ([43]) is recognised to be unsustainable, but the interest rate gain (together with a global sense of reduced risk, "the great moderation") helped to set in motion a typical boom and bust cycle (see also De Grauwe (2013), pp. 1-2). Typically, higher indebtedness makes economies more sensitive to shocks, due to the subsequent need for deleveraging, resulting in a tightening of access to credit (in particular for lower incomes). The large capital inflows into Southern euro-area Member States and their subsequent reversal in the wake of the 2008 financial crisis represented a large asymmetric shock that was endogenous to EMU as it was aided by its single monetary policy.

Chart 15: Household debt to income ratio (1999-2007)



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Source: Eurostat.

Note: EL, LU not available; *IE not available 1999-2001.

The credit boom occurred in all sectors of the economy, however, in the private sector, it was not only due to the interest rate gain. Lax supervision of the banking sector, rising house prices and excessive bank liquidity ([44]) also played an important role (Boltho and Carlin (2013)). As a result, too much unproductive investment took place and EMU was not yet able to produce a more efficient capital allocation (Wunsch (2013)).

However, the household credit boom over the period 1999-2007 developed at a very different pace across EA-12, with an average increase of around 20 points in the household debt to income ratio, with much larger increases seen in some Northern (Ireland and the Netherlands), as well as in some Southern Member States (Spain and Portugal).

While it has been argued that growing inequalities fuelled the development of household indebtedness in the US (see, for example, Stiglitz (2011) and Rancière and Kumhof (2011)), this seems to have played a more modest role in the EA-12, given that increases in household debt seem to

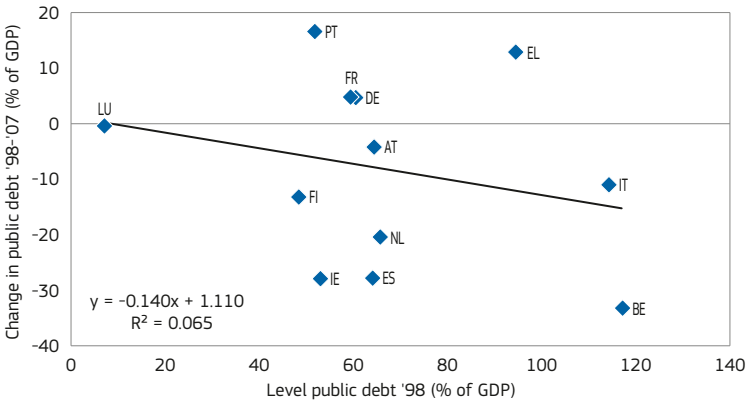
([43]) GDP growth was also based on poor productivity growth. We will come back to this below.

([44]) Excess bank liquidity came to a large extent from euro-area countries with current-account surpluses.

have occurred more in Member States with stable or lowering levels of inequality (as measured by the change in the S80/S20).

The origins of Member States' fiscal problems differed strongly before and after 2007. In the period 1999-2007, only Portugal and Greece could be seen as euro-area Member States with significantly aggravating fiscal problems, while Belgium and Italy were seen to be lowering their high levels of public debt (Chart 16; developments post-2007 are described in 4.1.1).

Chart 16: Public debt to GDP (1998-2007)



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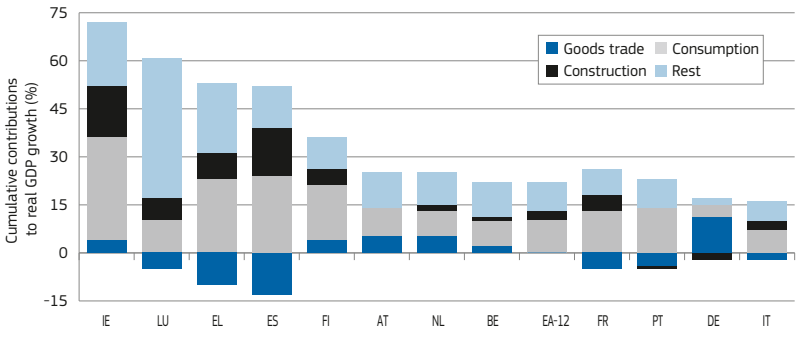
Source: Eurostat, Government deficit/surplus, debt and associated data [gov_dd_edpt1].

Chart 17: A decomposition of GDP growth (1998-2007)



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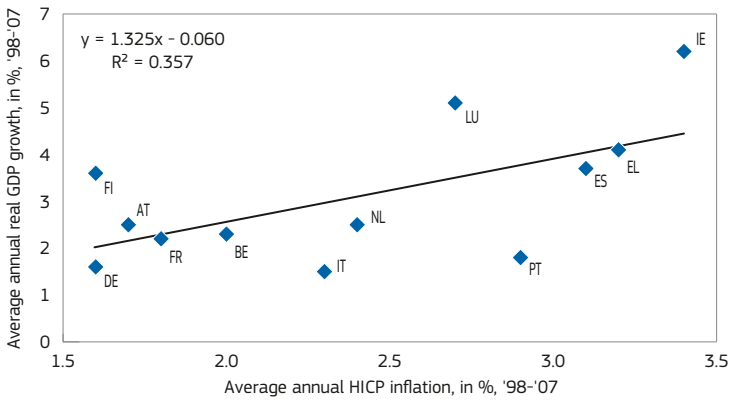
Source: Own calculations on the basis of Eurostat, National accounts [nama_gdp_k], [nama_pi6_k] and [nama_exi_k].

Notes: Contributions calculated as the growth rate of the component multiplied by its average weight over the period. EL: 2000 instead of 1998.

Chart 18: Inflation and GDP growth (1998-2007)



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Source: Own calculations on the basis of Eurostat, National accounts [nama_gdp_k] and prices [prc_hicp_aind].

The high correlation between inflation and growth in Chart 18 reflects this two-way causality between these variables. In the case of Italy and Portugal, notwithstanding substantial capital inflows and above-average inflation, growth remained low partly due to competitiveness issues.

In general, Member States where the interest rate gain was large took comfort from the strong growth these rates brought, typically in the non-tradable sector. At the same time, growth in their

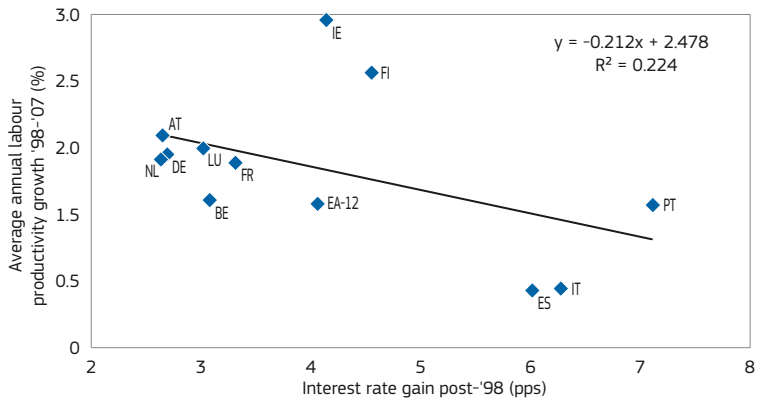
In Chart 17 GDP growth is decomposed into the contributions from two interest-rate sensitive components (construction and consumption ([45])), trade in goods (which is sensitive to price competitiveness) and a residual term. GDP was boosted by booms in construction and consumption in Ireland, Greece and Spain, while net exports made a clear negative contribution in the latter two Member States. Among the Member States with large interest rate gains, however, Italy and Portugal stand out with below-average GDP growth. In Italy, all the GDP components were weak, with private consumption growth below the euro-area median and no impetus from net exports of goods. In Portugal, the contributions from construction and from the net exports of goods were both negative.

The concern that a single monetary policy with different national inflation rates could have spurred growth differentials within the euro area is not supported by the evidence.

Mongelli and Wyplosz (2009) find that, during the euro's first decade, the competition channel (lower inflation rates implying a real exchange rate depreciation) likely counteracted the real interest rate channel (lower inflation rates implying higher real interest rates), thereby limiting further divergence in Member States' inflation rates (although persistent inflation differences remain a problem in the euro area).

([45]) Private consumption acts as an approximation for durable consumption, because of data issues.

Chart 19: Interest rate gain and labour productivity



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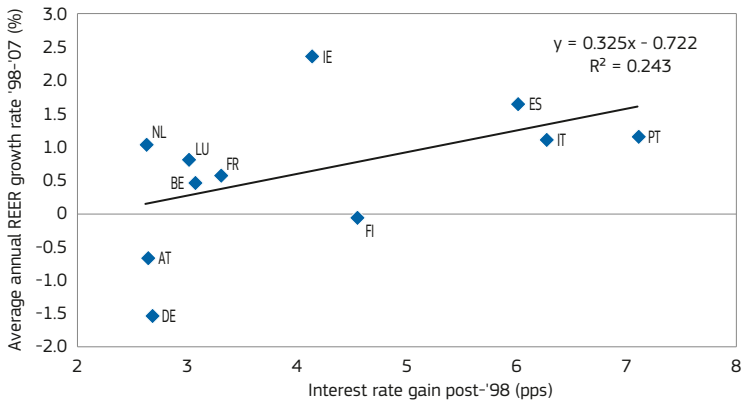
Source: Own calculations on the basis of AMECO [ISN, ILN, OVGD, NETD, and NLHA].
Notes: Labour productivity expressed per hour.

Chart 20: Interest rate gain and price competitiveness



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Source: Own calculations on the basis of AMECO [ISN, ILN, XUNRQ].

tradable sector was hampered by a lack of price competitiveness as inflationary pressures increased. Very strong demand boosted wages in the non-tradable sector which spilled over into the tradable sector. Strong growth and the absence of the disciplining effect of the foreign exchange market led many Member States to neglect the key issues of productivity, competitiveness and, to some extent, education. Productivity and competitiveness is analysed in more detail in the following two subsections.

Member States with large interest rate gains had, in general, a less favourable evolution in terms of labour productivity, with the exception of the 'high-tech' economies of Finland and Ireland ([46]) where productivity increased the most, in spite of the above-average interest gain.

Member States with large interest rate gains had, in general, a less favourable evolution in terms of price competitiveness (as measured in terms of the real effective exchange rate or REER – see 3.3.2 for its definition) ([47]).

In considering different national developments in terms of private and public indebtedness, productivity and competitiveness, labels such as 'periphery' to group the experiences of the most stressed euro-area Member States, should be avoided in so far as such descriptions "simplistically lump together very different cases" (Mongelli (2013)).

Boltho and Carlin (2013) also analyse and emphasise the role of asymmetric behaviour by different euro-area Member States in causing the present problems ([48]), tracing the lack of convergence in wage (and hence price) competitiveness and differences in governance practice back to "deep-seated differences in institutions, culture and trust". A case in point is the evolution of wages in Germany, which followed a markedly different path than the rest of the euro area ([49]).

3.3.2. Unbalanced growth and the neglect of productivity

To analyse the sources of growth, real GDP growth can be decomposed into growth in employment and growth in real labour productivity per person employed. The latter can, in turn, be decomposed into growth in hours worked (per person employed) and real growth labour productivity per hour worked. The latter measure is more precise, as differences in productivity per person can be influenced by differences in the incidence of part-time work and short-time working arrangements.

Spain and Italy stand out in Table 3 as laggards within EA-12 in terms of labour productivity growth (on both measures). Ireland and Finland, in contrast, had the highest labour productivity growth over this period.

Differences in productivity growth between countries also have an important sectoral component, which is particularly notable in the case of Spain where the boom in the low-productivity construction sector dragged down overall productivity, illustrating the earlier point that, during the credit boom insufficient attention was paid to the productive value of alternative investments.

Besides such compositional effects, cross-country differences in labour productivity growth are seen to result from 'capital deepening', human capital investment and accumulation and the quality of institutions and policies (see OECD (2007), Chapter 2).

([46]) Greece is not shown on the graph in view of its very high interest rate gain (13 pps). Greek labour productivity increased by 2.5 %, making the country an exception in this story of linking labour productivity with the interest rate gain.

([47]) Greece is not shown on the graph in view of its very high interest rate gain (13 pps). Greece's REER appreciated by a mere 0.6 %, making the country an exception in this story of linking price competitiveness with the interest rate gain.

([48]) A point also emphasised by Allard *et al. (2013): "In fact, not only have there been larger and more frequent idiosyncratic shocks but also more idiosyncratic policies."*

([49]) In Germany, nominal wages increased 1.1 % on average per year between 1998 and 2007, versus at least twice that rate in all other EA-12 countries.

Table 3: Labour productivity per hour and per person employed, growth between 1998 and 2007

	GDP	GDP / empl	GDP / hour	Hours/empl	Empl
EA-12	**19.9%**	**7.8%**	**11.6%**	**-3.8%**	**12.1%**
BE	20.5%	10.8%	11.9%	-1.1%	9.7%
DE	14.7%	10.3%	15.6%	-5.3%	4.4%
IE	55.7%	21.6%	26.3%	-4.6%	34.0%
EL	36.4%	23.4%	25.6%	-2.2%	13.0%
ES	33.0%	0.3%	4.6%	-4.3%	32.7%
FR	19.5%	9.3%	14.9%	-5.6%	10.2%
IT	13.8%	1.4%	4.8%	-3.4%	12.4%
LU	44.9%	11.3%	16.1%	-4.7%	33.6%
NL	22.2%	11.6%	15.2%	-3.6%	10.6%
AT	22.6%	13.7%	17.1%	-3.4%	9.0%
PT	15.7%	10.4%	11.5%	-1.1%	5.3%
FI	31.5%	19.0%	22.1%	-3.1%	12.6%

GDP	Gross domestic product at 2005 market prices
GDP / empl	Real labour productivity per person employed
GDP / hour	Real labour productivity per hour worked
Hours/empl	Average annual hours worked per person employed
Empl	Employment, all domestic industries (National accounts)

Source: Own calculations on the basis of AMECO, [NLHA] (average annual hours worked per person employed), [NETD] (employment, all domestic industries, national accounts) and [OVGD] (GDP at 2005 market prices).

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Capital deepening involves an increase in the capital-to-labour ratio, or capital intensity, which means that workers are using more machinery or equipment as part of their work. A related concept is total factor productivity (TFP), which measures how efficiently capital and labour are used, and is, in effect, the increase in GDP that cannot be explained by increases in either capital or labour ([50]).

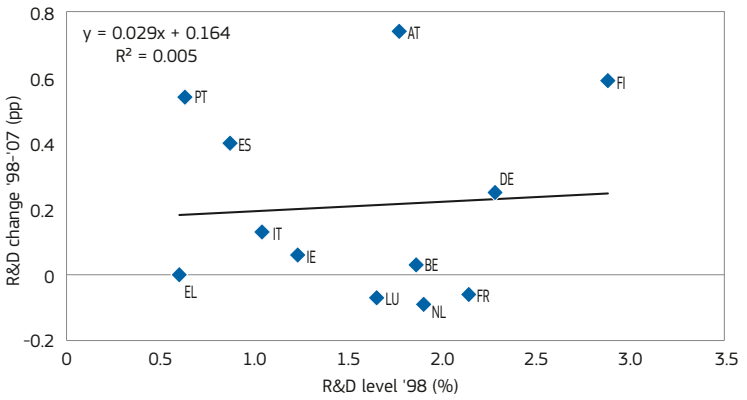
While improvements in human capital are not captured in the labour input (whether expressed in hours of work or numbers of persons), they are picked up in TFP, which also reflects the benefits arising from the use of new technologies and the best working practices. However, while such factor efficiency is considered to be a key driver of TFP in the short- to medium-term, knowledge investments is seen to play the major role in a long-term perspective (European Commission (2011b)) and we will come back to the link between human capital and TFP below.

In the EA-12 in 1999, cross-country differences in the capital-to-labour ratio ([51]) were fairly limited, with the laggards being Greece (at 80% of the EA-12 average) and Portugal (at only 43%). Some convergence was achieved in the period 1999-2007, with the largest increase in the capital-to-labour ratio being in Portugal.

([50]) See also Box 1 on the Solow model and the related production functions with TFP.

([51]) Commission estimates retrieved from AMECO, [RKNDE].

Chart 21: R&D expenditure as a share of GDP (1998-2007)



Source: Eurostat, Gross domestic expenditure on R&D as a percentage of GDP [t2020_20].
Note: Series start in 1999 for Greece and 2000 for Luxembourg.

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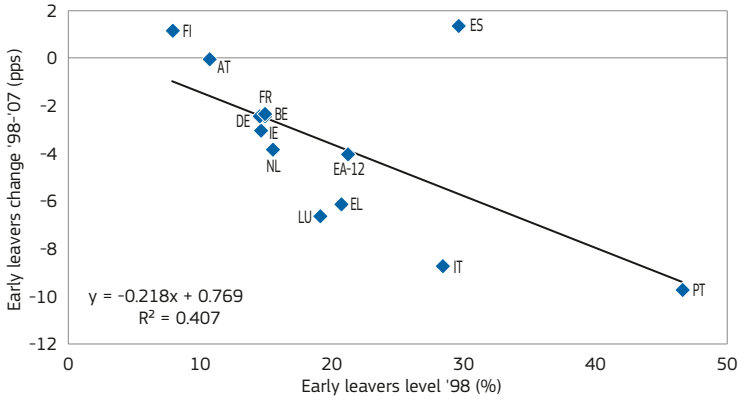
Chart 22: Early school leavers (1998-2007)



Source: Eurostat, Labour Force Survey [edat_lfse_14].

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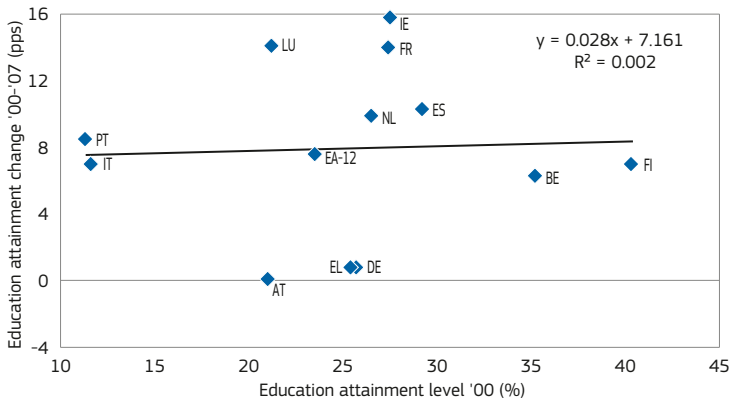
Chart 23: Educational attainment (2000-2007)



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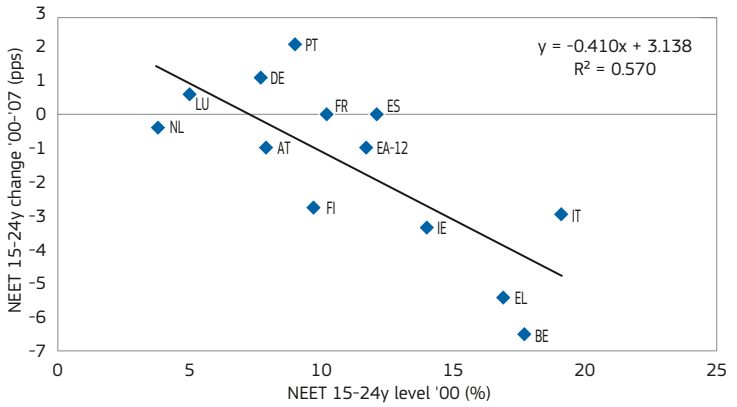
Source: Eurostat, Labour Force Survey, [edat_lfse_07].

Chart 24: NEET rates (2000-2007)



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Source: Eurostat, Labour Force Survey, [edat_lfse_20].
Note: Ireland: series starts in 2002.

During this period, TFP growth ([52]) was particularly high in Finland, Greece and Ireland, very low in Italy and Portugal and negative in Spain. Overall, however, TFP growth in EA-12 was only 4.5 % over this eight-year period with the average being exceeded only by Germany out of the four largest EA-12 Member States ([53]).

Institutions and policies affect productivity growth mostly indirectly, for example by influencing the incentives to innovate or through measures that affect the cost of doing business.

Given that knowledge is such an important determinant of TFP growth - see European Commission (2011b) - we look next at key indicators of knowledge building. This can be seen from the perspective of firms, with the focus on their knowledge investment decisions, but another point of view concerns human capital development ([54]) within households, looking at issues of educational attainment, with particular concern about losses due to early school leavers and about those who are neither in employment nor in education and training (NEET) ([55]). As we will see below, the Member States with the weakest TFP performance (namely Spain, Italy and Portugal) are also those which underperform in terms of human capital formation.

On the side of firms, Chart 21 shows a lack of convergence in expenditure on research and development, with significant increases in Member States which already had R&D expenditure above the average (Germany, Austria and Finland), while there was some catch-up in Spain and Portugal.

From the household perspective, while Chart 22 shows a clear convergence across the Member States between 1998 and 2007 in terms of the indicator for early school leavers ([56]), the levels in Portugal and Italy remained (very) high at the end of the period. Spain proved to be the worst case, however, with an initial high level of early school leavers increasing still further over the period, which may be explained by departures from school in order to work in booming sectors at that time, notably construction.

More generally, however, no convergence was recorded in terms of educational attainment ([57]) (Chart 23). While the Member States with the lowest levels of educational attainment, Italy and Portugal, did make improvements in line with the EA-12 average, even much larger improvements were recorded in Member States already doing better than average in 2000, specifically Ireland and France. An apparent stagnation in the performance of Germany and Austria is to some extent, a reflection of their strong vocational education, which is held in high regard, but which does not facilitate moves from vocational education towards tertiary level education.

Evidently, the Europe 2020 indicator on educational attainment looks only at one type of educational achievement for a five-year tranche of the population. While that indicator focuses on tertiary education, the rate of completion of upper secondary education is also worth analysing as it "is considered as the minimum requirement for achieving adequate skills for a successful integration into the labour market" (European Commission (2012b)).

([52]) Commission estimates retrieved from AMECO, [ZVGDF].

([53]) European Commission (2011b) links the weak performance since 1999 to the skill composition of the labour force (increasing share of low-skilled) and the deceleration in knowledge spill-overs from the US.

([54]) Human capital can be defined as "the knowledge, skills, competencies and other attributes embodied in individuals that are relevant to economic activity" (OECD (1998), p. 9).

([55]) NEET is the indicator on young people neither in employment nor in education and training. The indicator, corresponds to the percentage of the population of a given age group (in the case of Chart 24: 15-24 years old) and sex who is not employed and not involved in further education or training.

([56]) Early leavers from education and training denotes the percentage of the population aged 18-24 having attained at most lower secondary education and not being involved in further education or training. This is a Europe 2020 indicator.

([57]) Measured by the Europe 2020 indicator "persons with tertiary education attainment 30-34 years old". The series starts in 2000.

On completion of upper secondary education, a significant catch-up was achieved between 2000 (first year of data) and 2007 for the age group 25-64. Nevertheless, levels in Portugal and Spain (respectively 14% and 21.5%) remained very low compared to Germany and Austria (above 60%). For the age group 20-24, the rate fell in Spain and in six other Member States between 2000 and 2007. However, the level of Spain was already one of the lowest and reached only 40% in 2007 (against above 80% in Austria and Finland). The rate increased most in Portugal, which was lagging most in 2000 (and reached 45.6% in 2007).

Overall, it can be seen from the above human capital indicators that large capital inflows into countries with important interest gains were not matched by sufficient convergence in human capital and productivity developments. Over the medium-term, this would have important implications for these countries' non-price competitiveness.

Many other indicators could be considered here, see for example the seven "Education and Training 2020 benchmarks" analysed in the "Education and Training Monitor" (European Commission (2013a)). Finally, educational attainment has its limitations as a measure of human capital and should be complemented by direct measures of skills ([58]). Such detail is, however, beyond the scope of this chapter.

While the NEET rates converged, some Member States converged less than others, notably those Member States furthest from the trend line in Chart 24, namely Portugal, Spain and Italy ([59]).

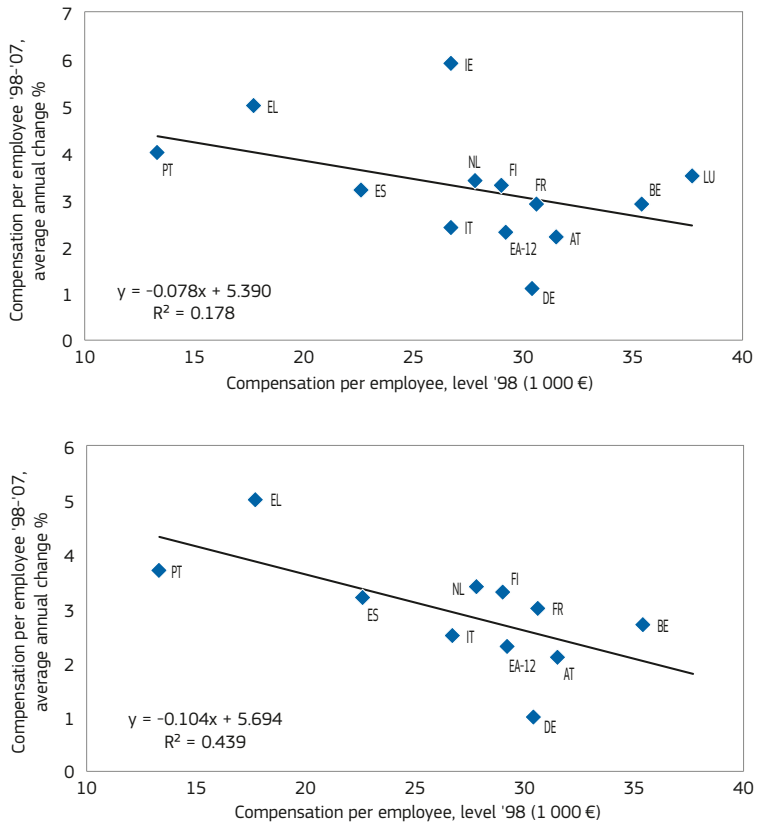
3.3.3. Unbalanced growth and the neglect of competitiveness

Chart 25 shows that there was a catch-up in the average wage level between 1998 and 2007, with the correlation between the change in compensation per employee and the 1998 level becoming more significant if two smaller countries are excluded (namely Ireland and Luxembourg, see right-hand panel chart). Among the remaining Member States, the outliers are then Greece on the upside and Germany on the downside.

([58]) See OECD (2013c), pp. 103-104.

([59]) A more detailed analysis of NEET rates will follow under segmentation (3.3.4).

Chart 25: Compensation per employee (1998-2007)



Source: Eurostat, National Accounts by 10 branches - employment data [nama_nace10_e] and compensation of employees [nama_nace10_c].

Note: Greece, Spain and EA-12: series starts in 2000. Greece: break in 2005.

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The data on nominal compensation per employee can be adjusted for labour productivity per employed person in order to arrive at the nominal unit labour cost (NULC) whose evolution provides an indication of domestic cost-push inflationary pressures. Since relative costs (or prices) between countries are subject to nominal exchange rate fluctuations ([60]), relative price (or cost) competitiveness is measured by adjusting relative prices (measured in domestic currency) by the nominal exchange rate, to produce the real effective exchange rate (REER ([61])).

([60]) Even for euro-area Member States, exchange rate movements matter for comparing their relative price / cost competitiveness, in view of their different shares of trade with non-euro-area countries.

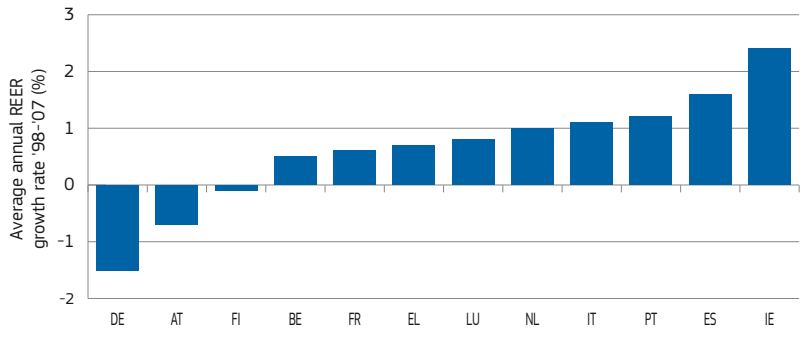
([61]) The REER is usually defined as the nominal effective exchange rate times the domestic NULC over the appropriately weighted average of foreign NULC. An appreciation (depreciation) of the REER is a loss (gain) of international cost competitiveness. Other deflators than the NULC could also be used. Depending on the deflator used, developments in the REER can be quite dissimilar. A difference between the evolution of, on the one hand, the REER based on export prices and, on the other, the REER based on unit labour costs or the GDP deflator indicates differences between relative prices of tradables and non-tradables.

While competitiveness is a broader concept than the REER, there is no clear consensus on how widely to define and measure it. As an example, when the European Commission (2009b) defined competitiveness as "the ability of a nation to generate relatively high income and employment, while being exposed to external competition", this implies also an important role for non-price factors in competitiveness, which we will come back to below.

Cost competitiveness encompasses other costs besides wages. For example, in its annual euro-area report, IMF (2013) recommends boosting competitiveness also by "tackling vested interests in the product markets - including measures to increase competition in the transportation, energy and other network industries ...". Moreover, the cost (and availability) of finance can vary considerably between Member States ([62]).

([62]) The REER based on ULC or other deflators provides a useful insight into the developments in international competitiveness in the short run. In the medium term, as capital stocks adjust, a broader definition is required to guide policy making (see 'Wage developments in the European Union during a severe economic downturn', Chapter 5 in European Commission (2013b)).

Chart 26: Price competitiveness (1998-2007)



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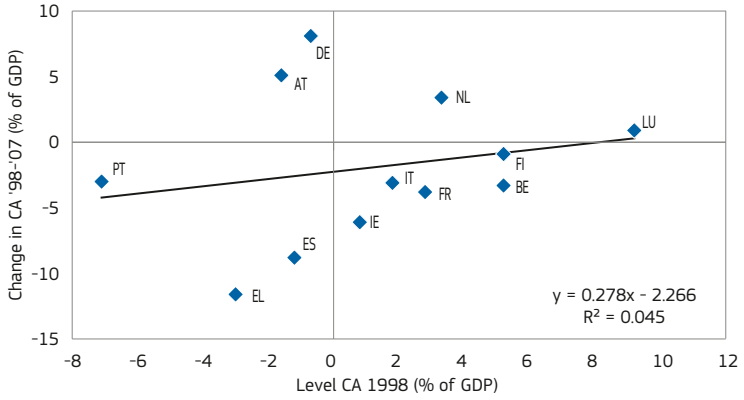
Source: AMECO, Real effective exchange rates, based on unit labour costs (total economy), performance relative to the rest of the 36 industrial countries: double export weights: EU-27, TR CH NR US CA JP AU MX NZ [XUNRQ].

Chart 27: Current account balance (1998-2007)



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Source: Eurostat, Balance of Payments [bop_q_gdp].

Returning to price competitiveness based on the NULC, REER developments diverged up until 2007, with most EA-12 Member States losing price competitiveness, mainly due to the nominal appreciation of the euro ([63]) (see also Wyplosz (2013)). However, Germany and Austria managed to improve their price competitiveness, mainly due to wage moderation (see Chart 26 ([64])), but also due to a more intense offshoring of parts of their production to the new Member States in Eastern Europe (Marin (2010)).

Among the remaining Member States, it is clear that other factors than the euro appreciation were at play. The largest average annual increases in the NULC were seen in the Member States posting the highest increase in the REER (Ireland, Spain, Italy and Portugal ([65])), as a result of labour costs ([66]) increasing much more than labour productivity in these countries.

A decomposition of GDP developments over this period (Chart 17) shows that those Member States which gained overall price competitiveness (namely Germany and Austria) also recorded the largest positive growth contributions from net exports in goods. Conversely, large negative growth contributions from net exports were recorded in Greece and Spain.

Chart 27 shows the lack of convergence in Member States' current account balances ([67]). Divergences in export performance are often linked to the evolution of Member States' current account balances. However, an analytical consensus has emerged that large current account deficits are mostly due to excessive demand (Wyplosz (2013)). Several authors also point to the role of the regime shift of euro adoption for financing large external imbalances. For example, Chen *et al.* (2012) see "a special role for intra-euro area financial integration in allowing for persistent current account imbalances" (see also Jaumotte and Sodsriwiboon (2010)).

In effect, these "excessive demand" and financing explanations downplay the possible role of price competitiveness in explaining the evolution of current account deficits in 1999-2007 ([68]). However, the build-up of external imbalances and the ensuing accumulation of foreign debt require trade surpluses which, *ceteris paribus*, could be achieved by means of competitiveness gains.

In principle, a single currency should reinforce the single market by strengthening price transparency and reducing transaction costs. As a result, it should increase competition ([69]), and reinforce the importance of competitiveness issues. However, given that devaluation is not an option under the single currency, changes in price competitiveness have to come through price adjustments, which take time to materialise, specifically in the euro area where price rigidity is fairly high (an issue to which we will return in Section 4).

Apart from concern regarding price (and cost) competitiveness, attention should also be paid to non-price competitiveness, which is again a concept without clear definition. Non-price factors could

([63]) According to the broadest measure available (against 41 trading partners), the nominal effective exchange rate of EA-17 appreciated 17% (Eurostat, [ert_eff_ic_a]). Please note that we use in this chapter price and cost competitiveness as synonyms. This is a simplification as the REER based on the NULC is a cost competitiveness indicator, while the REER based on export prices is price competitiveness indicator. In general, NULC, output and export prices which affects price competitiveness.

([64]) Productivity growth in Germany and Austria exceeded the EA-12 average only by a little margin (see Chart 19).

([65]) Greece is an exception, with an above-average increase in the NULC translating into a fairly modest REER appreciation. This is due to its different geographical distribution of trade.

([66]) On top of higher wage increases, payroll taxes also played a significant role in the rise in labour costs (Working Group on Econometric Modelling of the European System of Central Banks (2012)).

([67]) An alternative representation of this graph would be to put foreign debt in 1999 (is equivalent to the cumulated current account deficits up to then) on the X-axis against the current account deficits cumulated over 1999-2007 on the Y-axis.

([68]) "...current account developments were not necessarily related to price competitiveness effects." (Working Group on Econometric Modelling of the European System of Central Banks (2012)).

([69]) In addition to other competition-increasing trends such as intensifying globalisation and technological progress.

be product quality, technology, business conditions, the quality of human capital, the quality of industrial relations and so on, along with structural factors such as the geographical and sector specialisation of exports. Among the latter, Chen *et al.* (2012) point to the divergent impact on the external balances of different Member States of the rise of China, the integration of Central and Eastern European countries with the rest of Europe, and rising oil prices ([70]).

In all these respects, Estrada *et al.* (2012) find only a limited correlation between the dispersion in euro-area Member States' current account balances and price and cost competitiveness indicators. Instead, they find a stronger relationship with non-price competitiveness factors, concluding that "internal devaluation policies may have limited success at reducing external imbalances unless accompanied by structural reforms that boost some of those non-price factors."

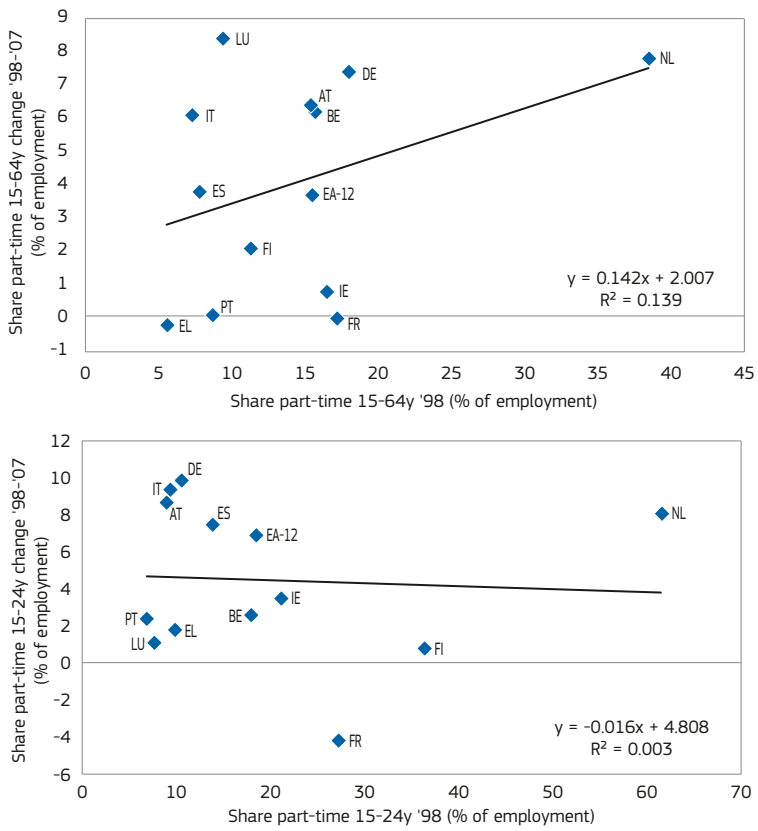
3.3.4. Unbalanced employment growth, segmentation

Employment growth in the euro area during the period 1999 to 2007 was not only achieved at the price of low productivity performance and unbalanced sectoral specialisation, but it was also accompanied by increased labour market segmentation. Labour market segmentation can take the shape of low-wage traps, part-time traps, sectoral or occupational segregation, etc. and has resulted in the creation of a large workforce on temporary contracts with weak transition possibilities to permanent jobs.

Labour markets were already segmented before EMU, as during the 1990s temporary contracts were deregulated, while restrictions on permanent contracts were maintained. As permanent contracts are more heavily protected than temporary ones, a workforce based on temporary contracts is more easily expanded in times of economic boom and reduced in times of downturn. Therefore, employers might be induced to hire more temporary workers in order to have a better control of their workforce, labour expenditure, and output. EMU has increased competition and has likely stimulated firms

([70]) See also Box 1: 'The "China Shock" to Italy and Portugal' in Ahearne and Pisani-Ferry (2006).

Chart 28: Part-time employment (1998-2007), total and young



Source: Eurostat, Labour Force Survey [lfsa_eppga].

Note: Breaks in series for IE (2009), ES (2005), IT (2004) and AT (2004). Some unreliable data for specific years for BE, IE and LU.

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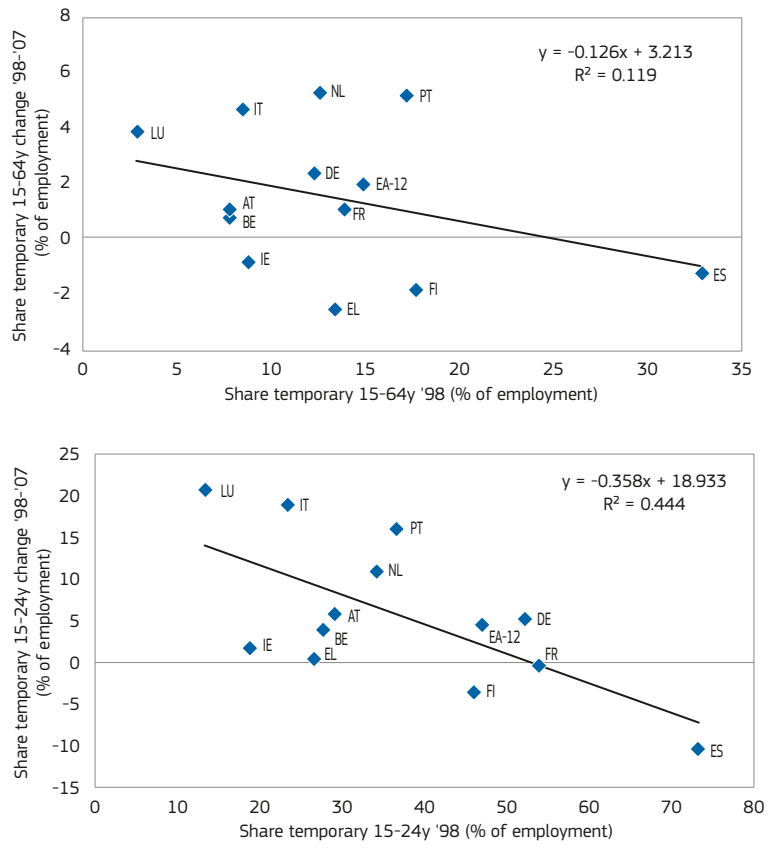
Chart 29: Temporary employment (1998-2007), total and young



Source: Eurostat, Labour Force Survey [lfsa_etpga].

Note: Breaks in series for ES (2005), IT (2004) and AT (2004).

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further to look for more labour cost containment and flexibility.

The degree of labour market segmentation is difficult to measure because it cannot be observed directly. For a starter, the evolution of the share in total employment of three atypical forms of employment (part-time, temporary and self- employment) is analysed here.

The euro-area average share of part-time employment in 1999-2007 was almost 3 pps above its average level over the previous eight years, with increases in all EA-12 countries, exceeding 6 pps in Germany, Luxembourg, Belgium and the Netherlands.

For youngsters (15-24 years old), the average increase between these two periods was somewhat larger, keeping the gap with the overall employment share of part-time fairly contained. The Netherlands is a specific outlier, pointing to the role of social preferences as a determinant of the part-time share and, consequently, its low value as an indicator of segmentation. No convergence is seen for the overall part-time share, while clear convergence is seen for youngsters, when excluding the Netherlands.

In the euro area, the average share (in the total) of temporary employment in 1999-2007 was about 2 pps above its average level of the previous eight years, with increases above 4 pps seen in the Netherlands, Italy and Portugal (and declines only in Spain and Ireland).

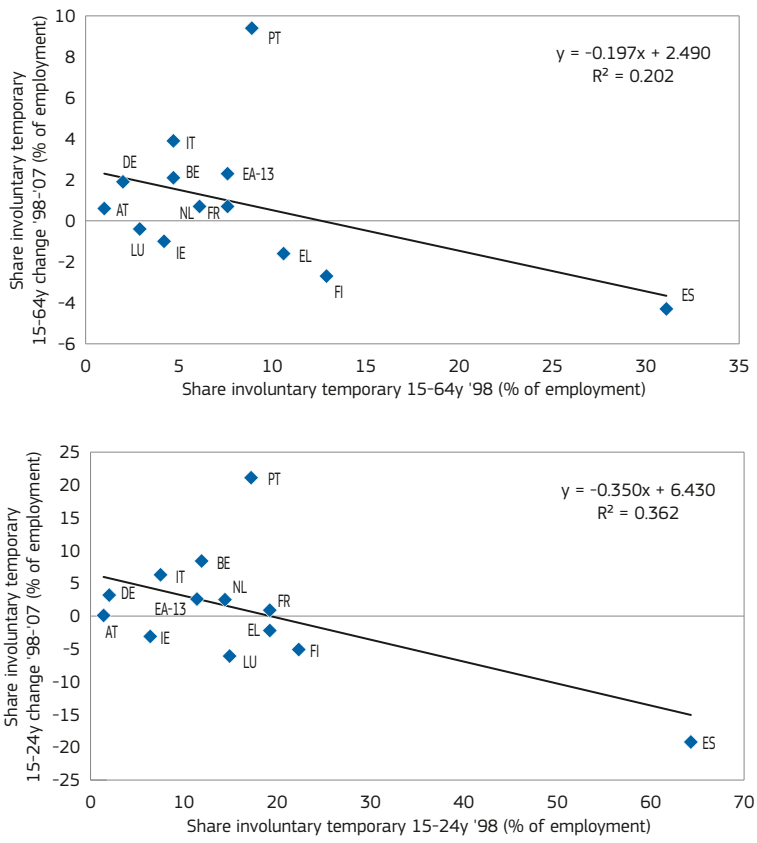
For youngsters, the average increase between these two periods was much larger, at about 5 pps at the euro-area level, with double-digit increases in Belgium, the Netherlands, Luxembourg, Germany, Italy and Portugal. There were declines only in Ireland and Spain, where two-thirds of all jobs for youngsters were temporary ones in 1999-2007. The euro-area average came close to 50%, exceeding 45% in Germany, France, Portugal and Finland. Chart 29 shows convergence in the share of temporary employment between 1999 and 2007, specifically for youngsters, notwithstanding the large increases for Portugal.

The third atypical form of employment is the self-employed person, who generally is also less protected than an employed person in a permanent job. The average share of self-employed in total employment in 1999-2007 was generally below its average level of the previous eight years. It only increased in Germany, the Netherlands and Austria.

The overall share of temporary contracts is not a good indicator for segmentation as in some countries temporary contracts are associated with apprenticeships, traineeships, and probation periods. Thus, a temporary job could be used as a stepping stone for a better career. The share of involuntary temporary contracts or transition rates between temporary and permanent employment have been found better for approximating labour market segmentation.

There are significant issues with the data on involuntary temporary contracts ([71]).

Chart 30: Share of involuntary temporary contracts in total employment (1998-2007), total and young



Source: Eurostat, Labour Force Survey [lfsa_etgar] and [lfsa_etpga].

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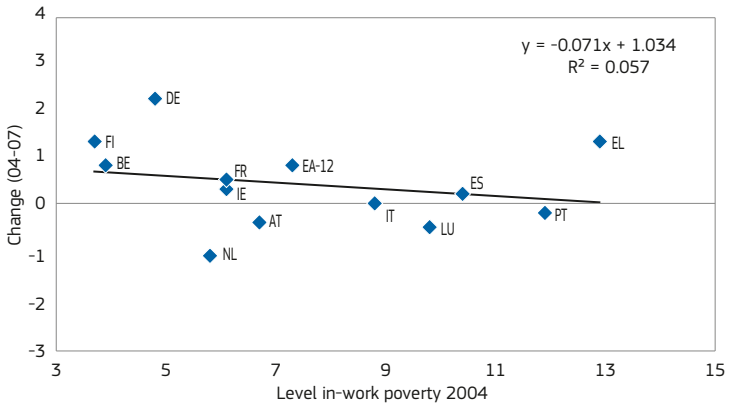
Chart 31: In-work poverty (2004-2007)



Source: Eurostat. *Note:* weighted average.

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([71]) Most Member States and euro-area data are classified as "unreliable" by Eurostat for most of the period analysed. Moreover, data for Ireland, Italy, the Netherlands and Portugal have a break.

Table 4: Main adverse developments in 1998-2007

	Public debt	Private debt	Productivity	Competitiveness	Segmentation
BE					
DE					
IE		☹		☹	
EL	☹				
ES		☹	☹	☹	☹
FR					
IT			☹	☹	
LU					
NL		☹			
AT					
PT	☹			☹	☹
FI					

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Under this caveat, data on the share of persons who indicate they work part-time as they cannot find a permanent job showed already a North-South divide in the first eight years of the euro, with rates below 40% in the North and above 50% in the South (but also in Belgium, France and Finland). For youngsters, this share exceeded 65% in the period 1999-2007 in Portugal, Greece, Belgium and Spain.

The share of involuntary temporary contracts in total employment exceeded 10% in Greece, Finland, Portugal and Spain, while it was below 3% in Austria, Ireland, Germany and Luxembourg. Chart 30 shows clear convergence, with the exception of Portugal where the share doubled to 18.3% in 2007 (second highest after 26.8% in Spain). A similar picture can be seen for youngsters, with respective shares of 38% and 45% in 2007 for Portugal and Spain.

The higher share of involuntary temporary contracts indicates a more serious problem of labour market segmentation in Southern Member States. While temporary contracts potentially could be stepping stones towards permanent positions and are useful as screening devices for employers, they also come with drawbacks, as they tend to be associated with less pay and low training possibilities and are typically hardest hit during recessions ([72]).

The extent and impact of temporary work by Member State is linked to its labour market institutions and is different for countries with strong vocational education (Germany and Austria). The impaired human capital formation because of a more intense use of temporary contracts weighs on potential growth.

Apart from its wider economic implications, unbalanced employment growth did not help in tackling in-work poverty in EA-12 which actually increased by nearly 1 percentage point over the period 2004-07 ([73]). Furthermore, no significant improvements occurred in countries with relatively higher levels such as Greece, were it actually increased further, while increases were also observed in Member States such as Germany, Finland and Belgium.

Furthermore, since atypical employment is generally associated with more limited access to unemployment benefits, this tends to make the economies concerned more fragile in the face of adverse shocks since income smoothing is more limited, thereby weakening the stabilising impact of unemployment benefits on aggregate demand.

3.3.5. Conclusions

The EA-12 Member States which were hardest hit post-2008 were those with the most significant imbalances built up before 2008. However, there were differences in the nature of these imbalances, suggesting the need for different cures.

Imbalances in both productivity and competitiveness provided a problematic combination for Spain and Italy. For Spain, private debt issues and labour market segmentation came on top of these problems while Ireland and Greece had mainly debt imbalances (respectively, private and public debt) ([74]) and Portugal had a combination of public debt, labour market segmentation and competitiveness issues ([75]).

Table 4 summarises the findings regarding the main adverse developments during 1998-2007 ([76]).

4. Labour market and social divergence since 2007

4.1. Evidence of divergence

4.1.1. How the financial crisis morphed into a sovereign debt crisis, exposing the weakness of the EMU architecture

In this section, developments are assessed relative to the position in 2007 which is taken to be the last pre-crisis year, even though it was not until the Lehman Brothers' default in September 2008 that the full extent of the crisis became clear ([77]). In this analysis, annual data for 2012 is generally compared to the 2007 average, but with two caveats: first, much 2012 data still has a provisional character and, second, attention may need to be paid to higher-frequency data.

Public debt levels increased between 2007 and 2012 by an average of +26 pps across the EA-12, with a minimum increase of 13 pps This was not because of fiscal profligacy (with the exception of Greece), but because the public sector in many Member States had been obliged to use fiscal stimulus packages to avoid recession turning into depression and to take part of the unsustainable private debt onto its own books in order to rescue banks.

([72]) The empirical literature has clearly pointed out the negative consequences of dual labour markets, in both efficiency and equity terms (Chapter 2, 'Protecting jobs, enhancing flexibility: A new look at employment protection legislation', in OECD (2013a)).

([73]) See also Chapter 4, 'Is working enough to avoid poverty? In-work poverty mechanisms and policies in the EU' in European Commission (2012b).

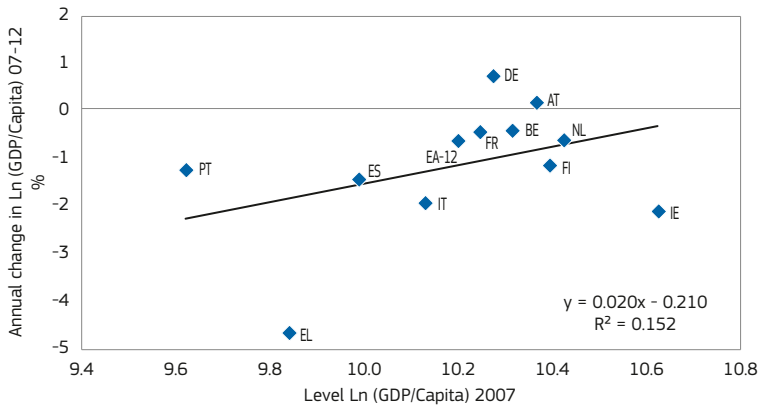
([74]) As the price competitiveness issue seems less problematic for Ireland in view of its higher wage flexibility and its attractiveness in terms of non-price competitiveness.

([75]) Portugal is a border case on productivity, with average performance in labour productivity per employed and per hour, but underperforming in TFP.

([76]) This stylised way of presenting developments over the period 1998-2007 should not be confounded with the formal 'Macroeconomic Imbalances Procedure Scoreboard'.

([77]) See European Commission (2009a).

Chart 32: Real GDP per capita (2007-2012)



Source: Eurostat. *Note:* LU not included due to atypical levels.

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The financial and, ensuing, economic crisis turned into a euro-area sovereign debt crisis, first in Greece in late 2009, spreading risk aversion to other euro-area Member States considered to be vulnerable, and creating an adverse feedback loop between weakening sovereigns, fragile banks and shrinking economies ([78]).

Consolidation efforts were made and intensified on several occasions, but raised doubts among some observers ([79]) about the appropriateness of their speed and size, as well as their effectiveness (particularly in a period of very weak growth and zero-interest rates). The debate also took a technical turn, focusing on estimations of the size of fiscal multipliers ([80]) and of the output gap ([81]).

Martin and Philippon (2012) show that the responses of US States and euro-area Member States as regards employment developments were strikingly similar in the first phase of the crisis (2007-2009), but differed significantly afterwards due to the constraints put on government borrowing and transfers in the euro area.

In the meantime, substantial progress has been made on fiscal consolidation, allowing more emphasis to be put on growth-friendly measures and the modernisation of administration at all levels.

As a consequence of the crisis, GDPpc declined on average in EA-12 since 2007, with only Germany and Austria as exceptions, while a stronger than average decline was observed in so-called Southern or 'peripheral' Member States, notably Greece, Italy or Ireland, with a lesser impact in so-called Northern or 'core' Member States. As a result, the apparent overall stability in the dispersion of GDPpc since 2007 is actually the result of two factors: a growing North-South gap and a stable or narrowing dispersion *within* Northern and Southern areas.

4.1.2. Macro-economic divergence (and some convergence)

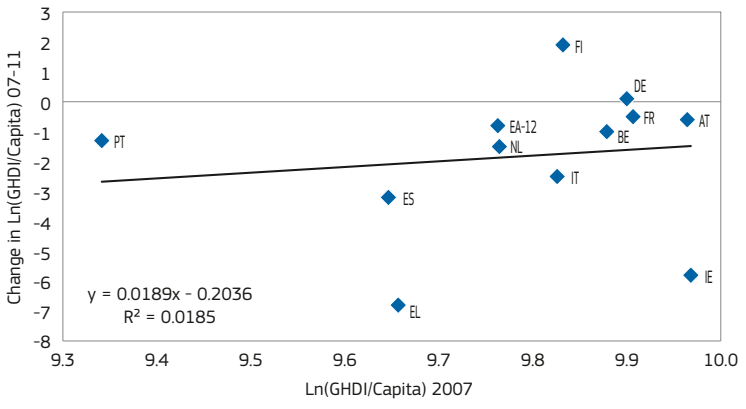
The deleveraging process of the private sector and drying up of bank liquidity (the so-called 'credit channel') played an important role in the contraction of GDP. In several Member States, this effect was compounded by other factors, including the need to enact credible fiscal consolidation and achieve gains in cost competitiveness through wage moderation.

Household incomes declined during this period in all EA-12 Member States except Finland and Germany, with large falls seen in Spain, Ireland and Greece (Chart 33). Similarly, the wage share declined by at least 1.5 pps in Portugal, Spain and Greece, while it rose in all other EA-12 Member States due to the larger drop in profits than in wages.

The average GHDI of Southern EA-12 dropped significantly after 2008, while that of Northern EA-12 remained broadly constant. This translated into a widening divergence in levels of per capita household disposable incomes. This had a negative impact on national aggregate demand, which, in turn, weighed on demand from other euro-area countries through the channel of trade.

The weakness in household income translated into a weakness of private consumption, which, in 2012, stood below its 2007 level in Portugal, Spain, Ireland and Greece, but also in Italy, the Netherlands and the EA-12 overall. With declines in private consumption of at least 5% in

Chart 33: GHDI in EA-12 (2007-2011)



Source: Eurostat.

Note: weighted average and Euro values, deflated at 2005 prices.

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([78]) A good description of these developments can be found in Mongelli (2013).

([79]) For example De Grauwe and Ji (2013) argue that "fear and panic led to excessive, and possibly self-defeating, austerity ...". See also the VoxEU debate on "Has Austerity Gone Too Far debate" (http://www.voxeu.org/debates/has-austerity-gone-too-far) and Paul Krugman's numerous posts on the topic on his NYT blog.

([80]) See the summary on p. 34 of European Commission (2013c).

([81]) Estimations of the output gap determine the structural budget deficit and are, as a result, the basis for determining the fiscal consolidation effort needed. See Wall Street Journal (2013), 'Europe's Austerity Hangs in Budget's Balance', 4 July 2013, http://online.wsj.com/article/SB10001424127887323899704578585661751307472.html.

Spain, Greece, Ireland, Italy and Portugal, it was no surprise that GDP levels also trailed the 2007 levels by at least 4% in these five Member States (since private consumption makes up, on average, 57% of GDP in EA-12, his leaves little room for other GDP components to compensate for these declines).

The decomposition of GDP growth over 2007-2012 (Chart 35) shows how, in Portugal, Spain, Ireland and Greece, net exports of goods nevertheless brought significant growth contributions (but mainly due to the large drop in imports) which were, however, insufficient to stop GDP falling significantly.

Given the shift of resources to non-tradable sectors (construction, finance, other services) that had occurred during the first nine years of EMU in many of the hardest-hit Member States, a shift back to tradable goods and services was seen as necessary in order to reduce their external deficits and thus ensure sustainability of public and private debt and restore confidence in their economies. For this purpose, the Member State has to regain cost competitiveness, which in a monetary union usually happens through the so-called "internal devaluation" policy ([82]).

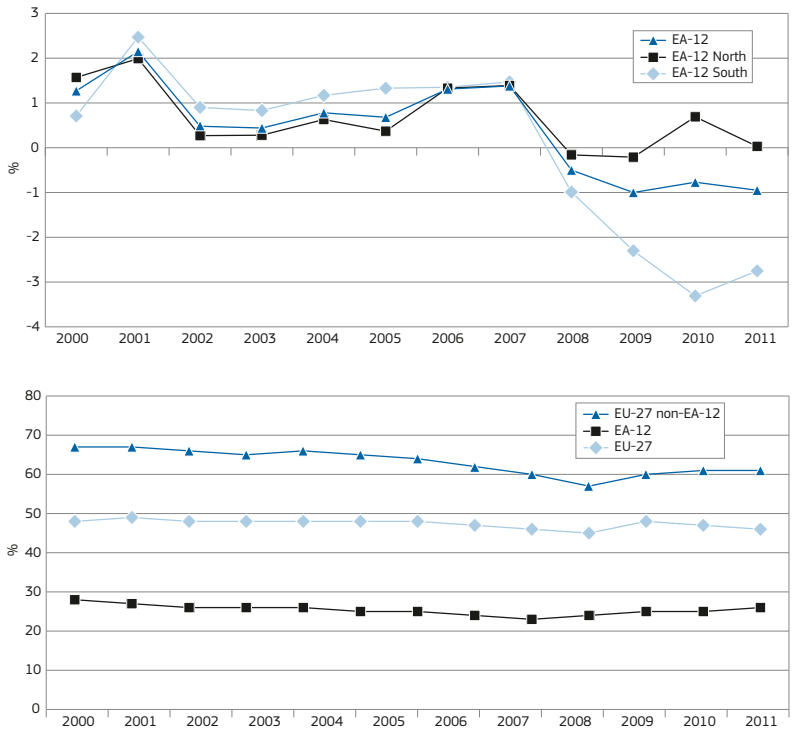
This policy comes with a timing issue, as the negative demand effects of wage containment ([83]) precede the positive effects of improved export performance ([84]). Recently more signs of an improvement in exports have become visible in vulnerable Member States, specifically in Spain and Portugal.

The effectiveness of wage containment policies depends on a series of factors including the openness of the economy and the size of its manufacturing sector (Chart 36), the strength of external demand ([85]), and the presence of flanking policies enhancing non-cost competitiveness factors.

Developments in compensation per employee showed a high degree of divergence in the period 2007-2012, with those Member States that already had higher-than-average compensation levels showing faster growth than the others, with the exception of Ireland. As a result, nominal unit labour costs and real effective exchange rate increased most in the Member States with the smallest increase (or even decline) in the previous period (and vice versa).

The resulting convergence in price competitiveness supported convergence in the current account balances (Chart 37), although much of this was due to falling domestic demand, including extremely weak productive investment.

Chart 34: GHDI in EA-12 (1999-2011) – Growth and Sigma convergence



Source: Weighted averages and Euro values, deflated at 2005 prices.

Note: Own calculations based on Eurostat. Weighted averages and Euro values, deflated at 2005 prices.

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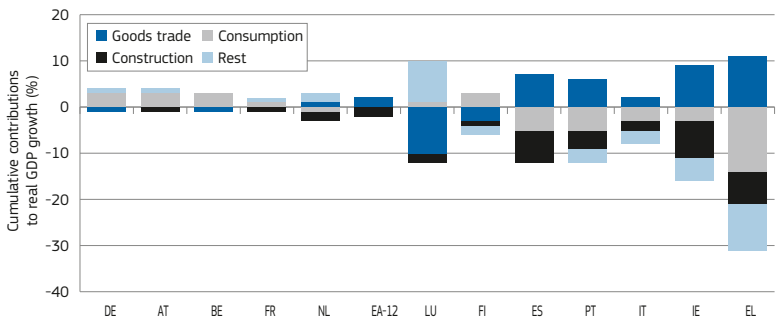
Chart 35: A decomposition of GDP growth (2007-2012)



Source: Own calculations on the basis of Eurostat, National accounts [nama_gdp_k], [nama_pi6_k] and [nama_exi_k].

Notes: Contributions calculated as the growth rate of the component multiplied by its average weight over the period.

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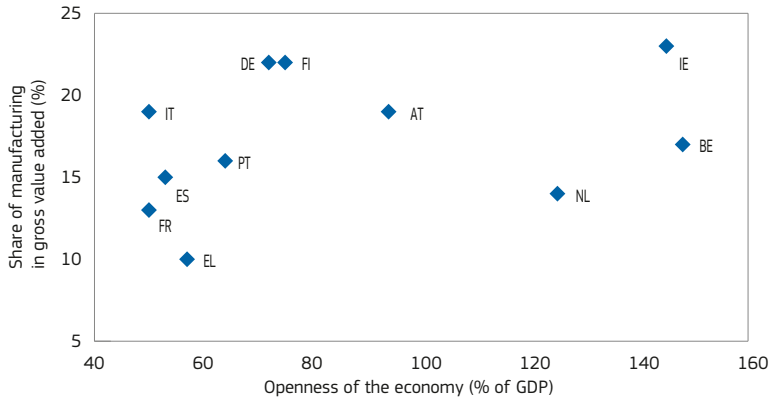
([82]) This is a reduction in nominal wages relative to productivity, so that unit labour costs decrease, trying to mimic the effects of a change in the exchange rate.

([83]) See also Barkbu *et al. (2012).*

([84]) Price adjustments take time to materialise, particularly in the euro area where price and wage rigidities are high. Moreover, domestic demand is affected more negatively when price adjustments do not sufficiently follow wage adjustments.

([85]) Fitzgerald (2011) flags that successful episodes of redressing of major imbalances in the past occurred against the backdrop of continuing demand growth among their trading partners, which was not the case for most euro-area countries.

Chart 36: Openness of and share of manufacturing in EA-12 economies



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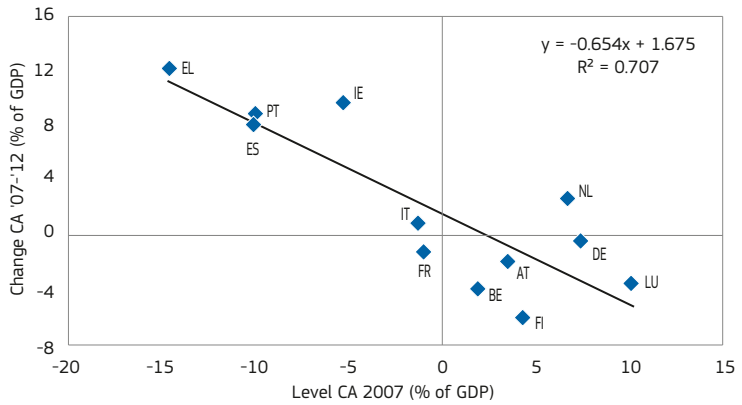
Source: Eurostat, share of manufacturing in gross value added (at basic prices) [nama_nace10_c] and openness calculated as exports plus imports of goods and services divided by GDP, variables from annual national accounts [nama_gdp_k].

Notes: Averages for 1995-2012 (2000-2012 for Greece for both variables and for the manufacturing share in Spain). Luxembourg is not shown on the graph because of its very large openness (279%).

Chart 37: Current account balance (2007-2012)



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Source: Eurostat, Balance of Payments [bop_q_gdp].

4.1.3. Labour market divergence

In the early days of the financial crisis the employment impact was muted since many firms decided to hoard labour, often through short-time working arrangements ([86]), rather than create redundancies since they expected only a sharp, but short, downturn. However, after the crisis turned into a euro-area sovereign debt crisis in late 2009, the employment reaction became more pronounced.

Over time, though, employment rates diverged significantly. Four Member States, namely Germany, the Netherlands, Austria and Finland, who had started from higher rates than the EA-12 average in 2007, saw their relative position improve even further by 2012. In contrast, employment rates fell 6 pps in Portugal and slightly above 10 pps in Ireland, Greece and Spain, against the average EA-12 reduction of 1.7 pps, with Ireland, Greece and Portugal ending up with rates 4½ to 5½ pps below their 1999 level, although Spain still saw an increase over this period. Italy, although starting from 7 pps below the EA-12 average in 2007, had still dropped almost further 2 pps by 2012.

The muted initial employment response in the early stages of the crisis led to a significant decrease in labour productivity in 2009 (particularly when expressed per person employed rather than in hours). However, the subsequent reduction in hoarding boosted labour productivity in both 2010 and 2011, but with more mixed results in 2012.

These labour productivity developments varied considerably across Member States varied considerably however, with significant increases in Spain and Ireland and, to a lesser extent, Portugal (see Table 5), driven in part by the sharp declines in construction employment and by the broader shift towards the tradable sector ([87]).

The decline in construction employment and, to a lesser extent in manufacturing, mainly hit low-skilled male workers. As a result, their employment rate, which was already low in 2007, fell 8 pps in the period to 2012, against only 1.7 pps for all workers. So, in addition to the divergence between Member States, there were also employment divergences by skill level, with the resulting skill mismatch problems.

Besides the three Member States mentioned above, productivity per employed decreased elsewhere (except in France). When corrected for hours worked, productivity growth is also seen to have turned positive in Germany and Austria. In contrast, the declines in productivity per hour in six Member States have raised concerns ([88]).

Given the low levels of investments by both firms and governments, it was not surprising that total factor productivity declined by 2.3% overall between 2007 and 2012 in EA-12, although this was much less the case in Ireland, Portugal and Germany, with an increase being recorded in Spain. The largest declines were seen however in Italy (already the weakest performer during the first nine years of EMU), Finland, Greece and Luxembourg.

With respect to early school leavers, large improvements were seen in Spain and Portugal. However, in the other Member State with an above-average rate in 2007, namely Italy, the improvement was below the EA-12 average.

([86]) See Chapter 2 in European Commission (2010).

([87]) See also Darvas (2012).

([88]) Darvas *et al.* (2013) point to a number of structural factors hampering productivity growth in the EU: banking problems, low integration in the global value chain, pro-cyclicality of business R&D expenditures, impediments to reallocation and the uncertain outlook.

Table 5: Labour productivity per hour and per person employed, growth between 2007 and 2012

	GDP	GDP / empl	GDP / hour	Hours / empl	Empl
EA-12	**-1.4%**	**0.6%**	**2.4%**	**-1.8%**	**-2.0%**
BE	2.1%	-1.7%	-2.7%	1.0%	3.8%
DE	3.5%	-0.8%	1.0%	-1.8%	4.3%
IE	-6.2%	9.2%	12.4%	-3.2%	-15.3%
EL	-22.4%	-5.9%	-5.8%	-0.1%	-16.5%
ES	-4.3%	11.0%	9.3%	1.7%	-15.3%
FR	0.0%	0.6%	1.2%	-0.6%	-0.6%
IT	-7.1%	-5.0%	-1.4%	-3.6%	-2.1%
LU	-0.1%	-12.9%	-9.2%	-3.7%	12.8%
NL	-0.3%	-1.2%	-1.1%	-0.2%	0.9%
AT	3.0%	-1.8%	2.6%	-4.4%	4.9%
PT	-5.8%	3.8%	4.9%	-1.1%	-9.6%
FI	-2.8%	-4.1%	-2.0%	-2.0%	1.2%

GDP	Gross domestic product at 2005 market prices
GDP / empl	Real labour productivity per person employed
GDP / hour	Real labour productivity per hour worked
Hours/empl	Average annual hours worked per person employed
Empl	Employment, all domestic industries (National accounts)

Source: Own calculations on the basis of AMECO, NLHA (average annual hours worked per person employed), NETD (employment, all domestic industries, national accounts) and OVGD (GDP at 2005 market prices).

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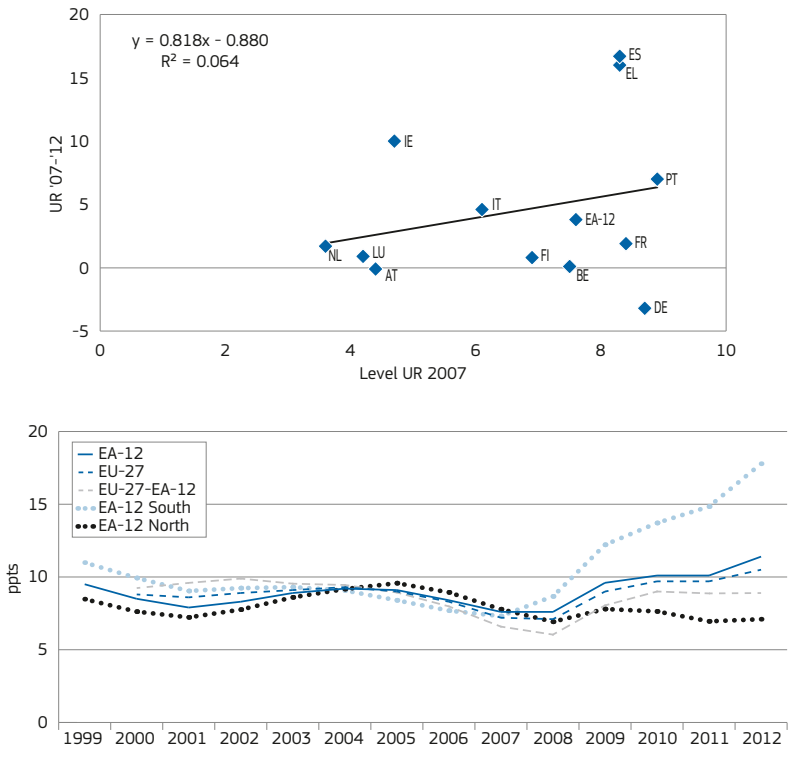
In terms of educational attainment, Portugal was seen to be catching up, in contrast to Italy, which saw its gap with the EA-12 average widen further. Ireland, Luxembourg and the Netherlands meanwhile showed above-average increases, having already been above the EA-12 average in 2007. Finland was the only Member State recording a decline.

Between 2007 and 2011 ([89]), expenditure on research and development continued to diverge, with again the largest increases in Member States which were already above the average (Germany, Austria and Finland) and some catch-up in Ireland and Portugal. No catch-up was seen in Spain and Italy.

Overall, the Member States with the strongest productivity and TFP performance (Ireland, Spain and Portugal) also saw an improvement in their human capital formation (educational attainment, early school leavers), while still having a NEET problem (see below). Weak performers in the field of productivity and human capital formation were Italy (overall), Greece (with labour productivity, TFP and NEET) and Finland (with labour productivity, TFP and educational attainment). All other Member States performed better in terms of productivity and human capital formation.

Chart 38 presents the evidence on the divergence in unemployment rates, with above-average increases for Member States starting already from above-average levels

Chart 38: Unemployment rates over 2007-2012



Source: Eurostat, Labour Force Survey [une_rt_a] and own calculations.

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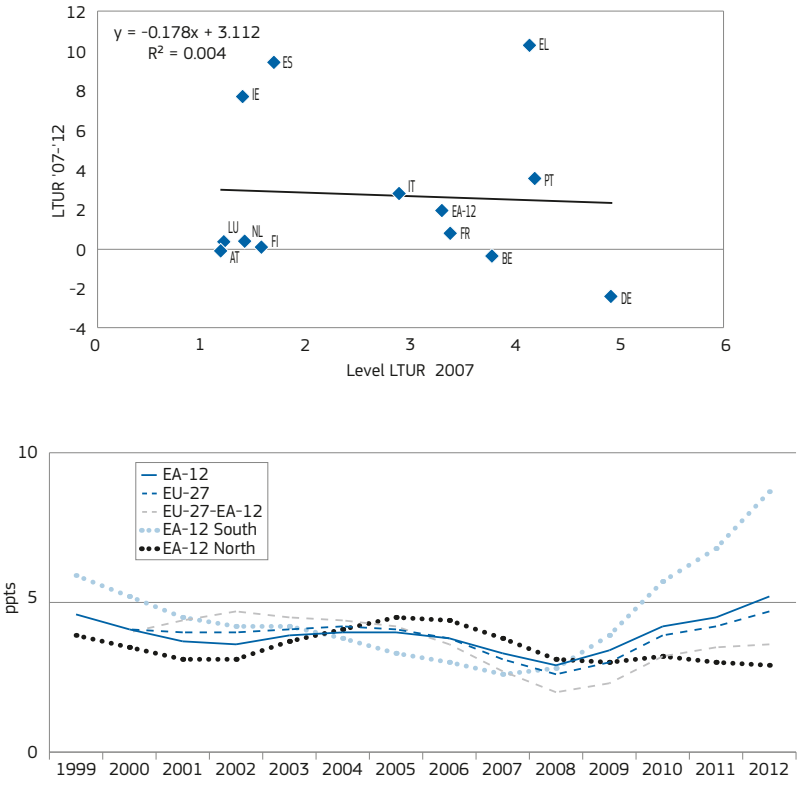
in 2007 (Spain, Greece and Portugal), as well as for Ireland and Italy. All other EA-12 Member States had below-average increases or even stability (Belgium and Austria) or a large decline (Germany) ([90]).

The picture with respect to long-term unemployment is similar, with an average increase of 2 percentage points since 2007 and significant increases in Ireland, Spain and Greece, against stability or even declines in Germany, Belgium and Austria. As a result, the decline in the North-South gap in long-term unemployment rates observable in the period

([89]) No data yet for 2012.

([90]) The sigma measure shows the opposite developments in divergence within EA-12 and within the rest of EU-27 since 2010.

Chart 39: Long-term unemployment rates over 2007-2012



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Source: Eurostat, Labour Force Survey and own calculations.

Table 6: Labour transitions by employment status

	2006	2007	2008	2009	2010	2011
From part-time to full-time work	15.1	14.2	17.3	16.5	13.6	17.5
From inactivity to activity	10.7	11.8	14.8	12.3	12.7	14.8
From unemployment to employment	34.4	31.7	33.9	27.2	27.3	28.3
From unemployment to inactivity	16.1	14.6	17.1	13.8	15.5	15.6

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Source: Own calculations on the basis of Eurostat, EU-SILC [ilc_lvhl30].

Notes: Results for EA-11 median calculated by replacing the non-available data for DE and FR by, respectively, the 2007 and 2010 data. No data for IE.

2004-2008 has been reversed since 2009, reaching a gap of 6 points in 2012.

Fast rising or high levels of unemployment, especially long-term unemployment, are seen as liable to have scarring effects ([91]) on human capital, leading to lasting losses of productivity and competitiveness. In this respect, social protection policies that provide support to skills (such as lifelong learning) or support to return to employment (such as public employment services and activation policies, but also childcare policies or adequate financial incentives) are seen as essential. At the same time, rising unemployment leads directly to income losses, which depresses aggregate demand, especially if the effectiveness of automatic stabilisation is limited (for instance due to insufficient coverage and adequacy of safety nets), which can spread to other Member States through the weakening of trade exchanges.

Table 6 shows that the outflow rates from unemployment to employment, as well as into inactivity, are significantly lower since 2009, with the lower outflow to inactivity most likely related to the difficult financial situation of many households, which has encouraged participation, if only at a low level, by second earners.

The overall picture for youth unemployment is similar to the one for total unemployment, although it differs in two main respects. The first difference is the scale of the developments, with increases of 15 pps and more in two EA-12 Member States for overall unemployment, while increases of that scale took place in five Member States for youth. Moreover, five Member States had a rate above 30% in 2012.

In the case of Spain and Portugal, segmentation is seen as a possible explanation for the divergent pattern, as their share of involuntary temporary contracts remained very high. For the age group 15-64, there was convergence in this indicator between 2007 and 2012, as the rate declined in Portugal (marginally) and Spain (substantially), while it rose significantly in Ireland. However, there was no convergence for youngsters, as rates in Portugal and Spain continued to increase, while very large increases were seen in Ireland and Italy.

Segmentation may also have an impact on the possible success of internal devaluation policies, as Bakker and Zeng (2013) find that, in the EU, real wage growth is much less sensitive to unemployment changes in countries with a high share of temporary employment.

Linked to developments in youth unemployment, NEET (the indicator on young people neither in employment nor in education and training) showed strong divergence in 2007-2012, with particularly large increases in Greece, Spain, Ireland and Italy and a strong increase in the North-South gap from 5 points in 2007 to more than 10 points in 2012.

High and rising levels of NEETs are seen to impose substantial costs, not only on the young people concerned, but on the economy and society as a whole, with the lack of income and skills resulting in higher levels of public expenditure support along with foregone future earnings.

Estimates of the overall costs in 2008 are of the order of 1% of GDP ([92]) (without counting foregone future competitiveness and revenues), with the risk of permanent scarring also well documented (see, for example, Scarpetta *et al.* (2010)). Even if the young unemployed do find jobs in the

([91]) See for example Box 1, 'The potentially scarring effects of unemployment on youth' in Scarpetta, Sonnet and Manfredi (2010).

([92]) An October 2012 Eurofound study estimated the economic cost of the labour market disengagement of young people who are not in employment, education or training. The total cost for the year 2011 amounts to approximately €153 billion (i.e. around 1.2% of Europe's GDP), comprising foregone earnings as well as excess transfers. See http://www.eurofound.europa.eu/emcc/labourmarket/youth.htm for further detail.

future, they risk being substantially less employable and productive. These costs and scarring effects impact negatively on competitiveness overall and eventually affect the growth prospects of individual Member States and the euro area as a whole.

4.1.4. Social divergence

The effects of the worsening labour market conditions since 2007 can also be seen in the proportion of the working age population (18-59) seen to be living in very low work intensity households ([93]). Although there was no significant change in the overall dispersion in EA-12, sharp increases were observed in countries with initially low (Spain, Greece) or high levels (Ireland). The average differences between the EA-12 Northern Member States and the Southern Member States declined, due to reductions in France, the Netherlands and Germany and increases in Spain and Greece. Between 2007 and 2010, this was reflected into a slight increase of in-work poverty in EA-12 as a whole, though without a significant change in the overall dispersion ([94]).

As a result of the crisis, inequality in EA-12 countries increased slightly after 2007 ([95]) although the dispersion remained fairly constant, albeit with strong increases in Spain and Greece and significant reductions in Germany and the Netherlands. This apparent overall stability in dispersion thus actually reflected an increase in the EA-12 North-South gap.

Rising levels of income inequalities ([96]) indicate that the economic situation of a larger part of the population is deteriorating, while at the same time there is an increasing concentration of income (and wealth ([97])) in the most affluent sections of society ([98]). Such developments tend to make growth less sustainable, for example the less affluent segments of society may end

([93]) As reflected by SILC surveys.

([94]) Declines in Portugal and Greece were partly linked to sharper declines in the median incomes there, directly impacting on the poverty line and thus the poverty rates.

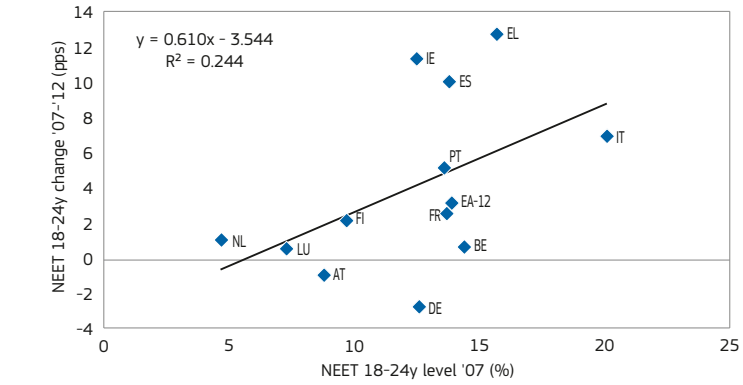
([95]) As measured by the S80/S20 ration which increased on average of 0.2 points

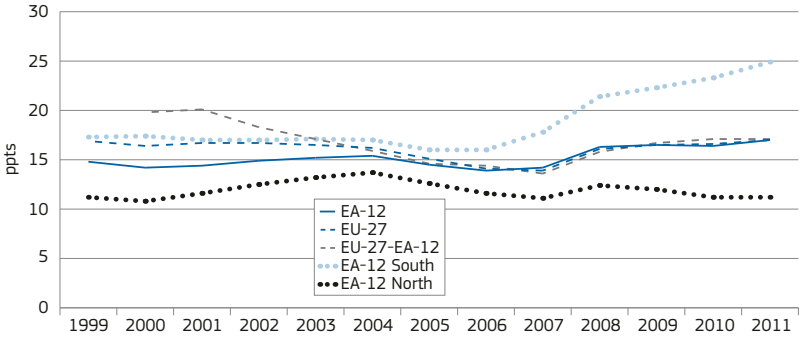
([96]) OECD, *Why Inequalities keep rising*, 2011.

([97]) There is no one to one link between the concentration of wealth and that of income, while generally the former is higher than the latter.

([98]) European Commission, Employment and social developments in Europe 2011, Ch 2.

Chart 40: NEET (2007-2012)





Source: Eurostat, Labour Force Survey [edat_lfse_20].
Note: field 15–24 year old population.

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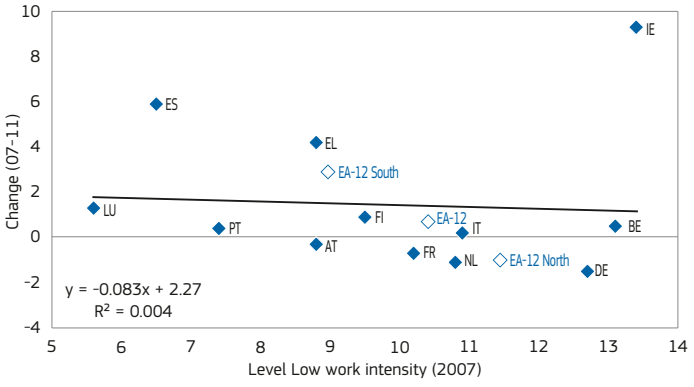
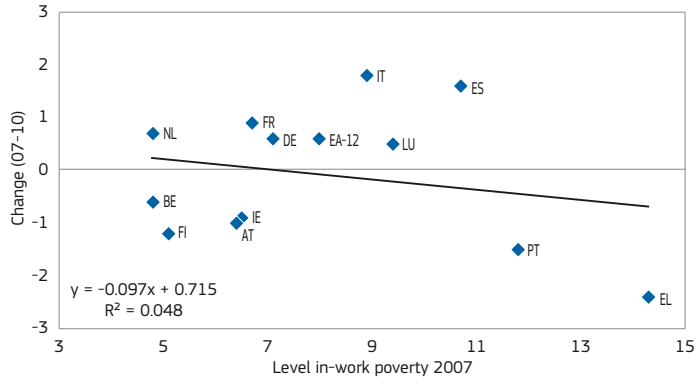
Chart 41: Low work intensity and in-work poverty (2007-2011)





Source: Eurostat.

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up with unsustainable borrowing to cope with their consumption needs ([99]). Moreover it can result, not only in reduced opportunities for many people to fulfil their potential, but also in breeding social and political tensions.

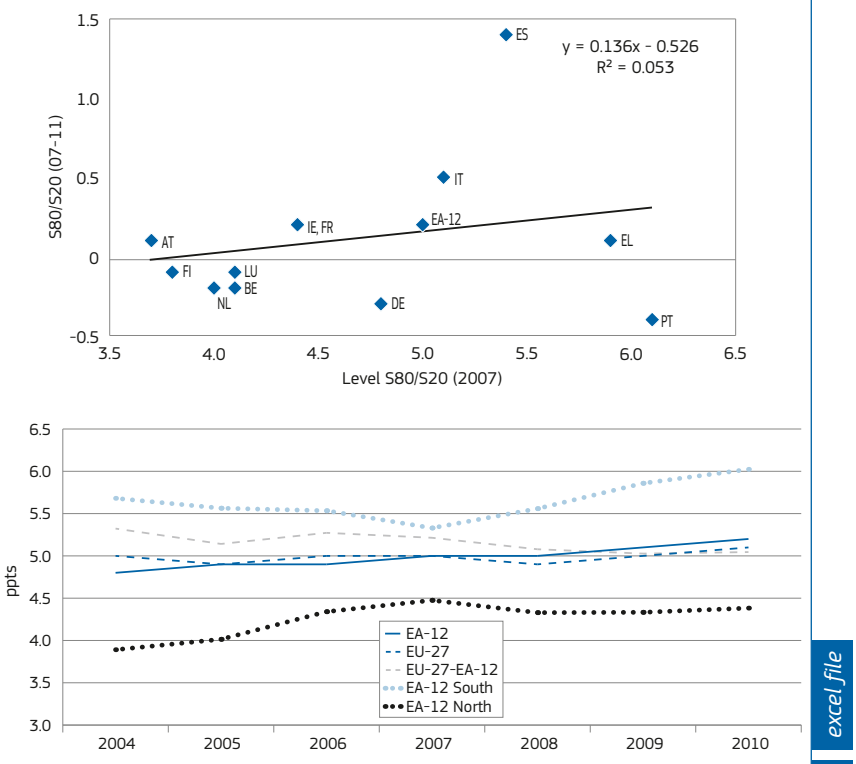
The worsening labour market situation between 2007 and 2010 resulted in an increase of poverty and exclusion of 1 percentage point on average, but with some divergence between the Northern and Southern euro-area Member States, with more significant increases registered in Spain, Italy, Greece and Ireland, against relative improvements recorded in Germany, Belgium and Portugal.

Monetary poverty increased for EA-12 as a whole over the period 2007 to 2010: by one percentage point measured in relative terms or by 2 percentage points when the poverty rate is seen relative to its 2007 value. The average increase was accompanied by a strong divergence resulting from a weak increase in the Northern Member States and a significant increase in the Southern ones. The increase was particularly strong in Spain and Greece (but also for the anchored in time poverty in Ireland and Italy). Non EA-12 Member States, on the other hand, had experienced an overall stability in their poverty rates since 2007 (measured either relative or anchored in time).

Increases in the at-risk-of-poverty rate (especially if accompanied by a stagnation or decline in median income, as reflected in the anchored-in-time poverty rate) obviously indicate a growth in the number of people living on low income and constrained budgets.

This has a negative consequence for the achievement of sustainable growth, notably for child poverty, due to significant longer-term negative consequences for economic and labour market integration quite apart from the obvious social consequences ([100]). In this context in-work poverty and poverty in working age more generally signals a poor functioning of labour markets, characterised by segmentation with a polarisation between job rich and job poor households. More generally this indicates an underutilisation of existing human capital as well as an underinvestment in future human capital.

Chart 42: S80/S20 (2007-2010)



Source: Eurostat.

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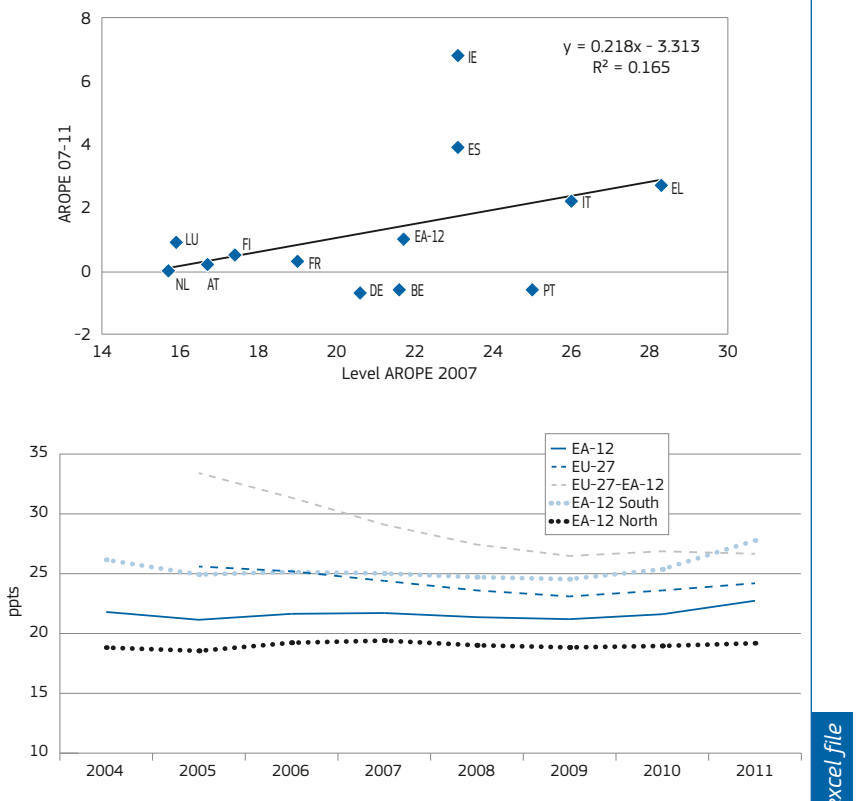
Chart 43: AROPE (2007-2010)



Source: Eurostat.

Note: IE not available for 2011.

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([99]) See for instance Berg and Ostry (2011).

([100]) See notably Bradshaw (2002) and Griggs, J. and Walker, R. (2008). Vandenbroucke *et al.* (2013) argue that *"huge disparities in child poverty should be alarming since they signal problems that are relevant to the sustainability of the monetary union"* both because comparatively high levels of child poverty reveal an *"investment deficit that may be the cause and effect of underperforming labour markets and education systems"*.

Chart 44: Poverty and anchored poverty (2007-2010)

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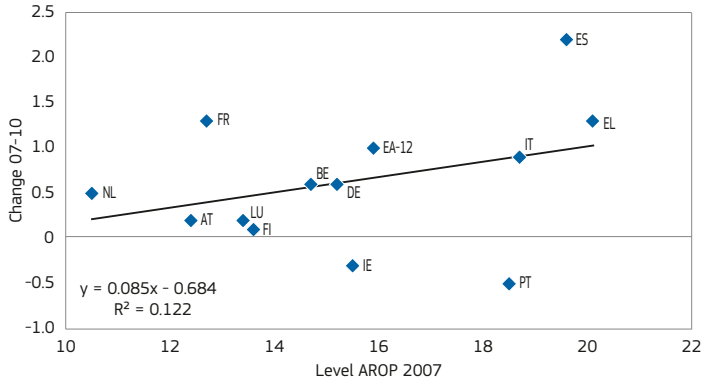

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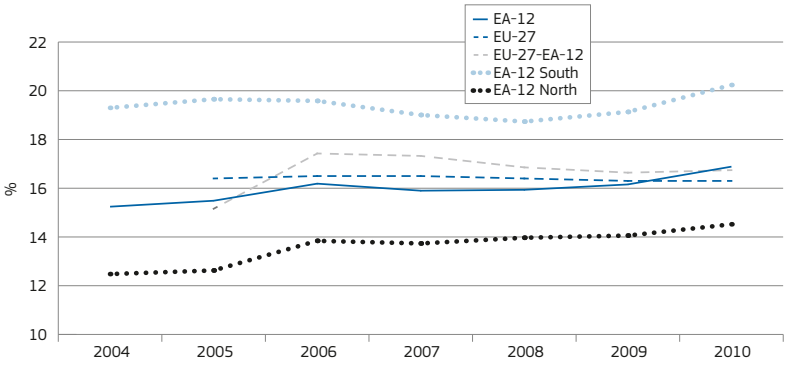

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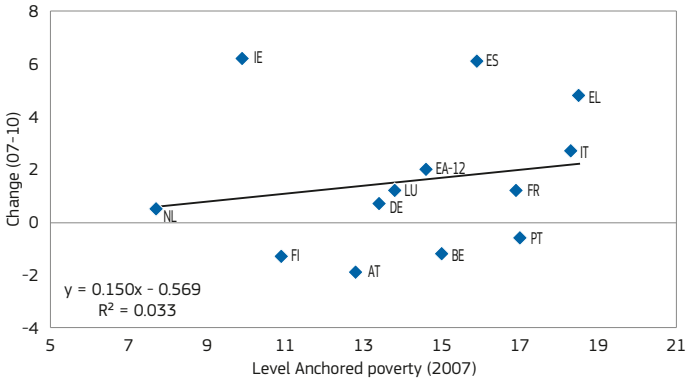

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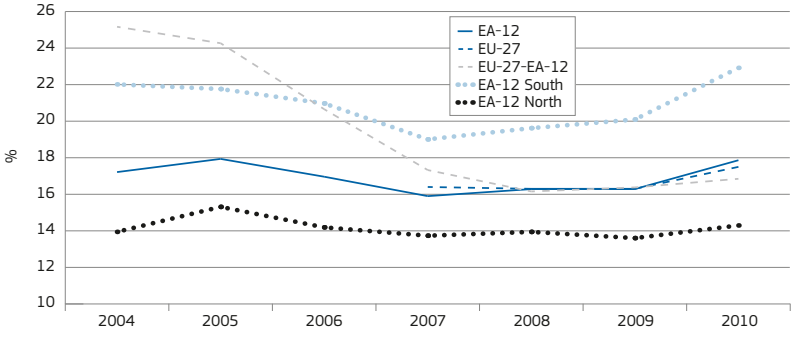

Source: Eurostat.

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Note: for anchored poverty, FR not available 2004-2007, EL not available 2004. Anchored poverty based on 2008 SILC wave, accordingly on 2007 incomes.

4.1.5. Conclusions on divergence in the period 2007-2012

From late 2009 on, the need to avoid liquidity crises and defaults led to significant fiscal consolidation, which may have contributed to the increasing divergence in employment developments compared to the US States (see subsection 4.2 as well as Martin and Philippon (2012) ([101])). A lack of structural reforms undertaken in the early years of EMU in some Member States (see section 3) may also have contributed to this divergence.

In the period after 2008, GDP per capita and household incomes declined in the euro area. The weakness in household income translated into a weakness in private consumption and growth. A wide gap between Northern and Southern euro-area Member States opened up in macro-economic, employment and social terms. The initial negative growth effect of wage containment policies contributed to this divergence (but this contribution is expected to fade away).

High levels of unemployment, especially youth and long-term unemployment, are seen as liable to have scarring effects on human capital, leading to lasting losses of productivity and competitiveness, with similar effects coming from an over-reliance on temporary contracts for employing youngsters.

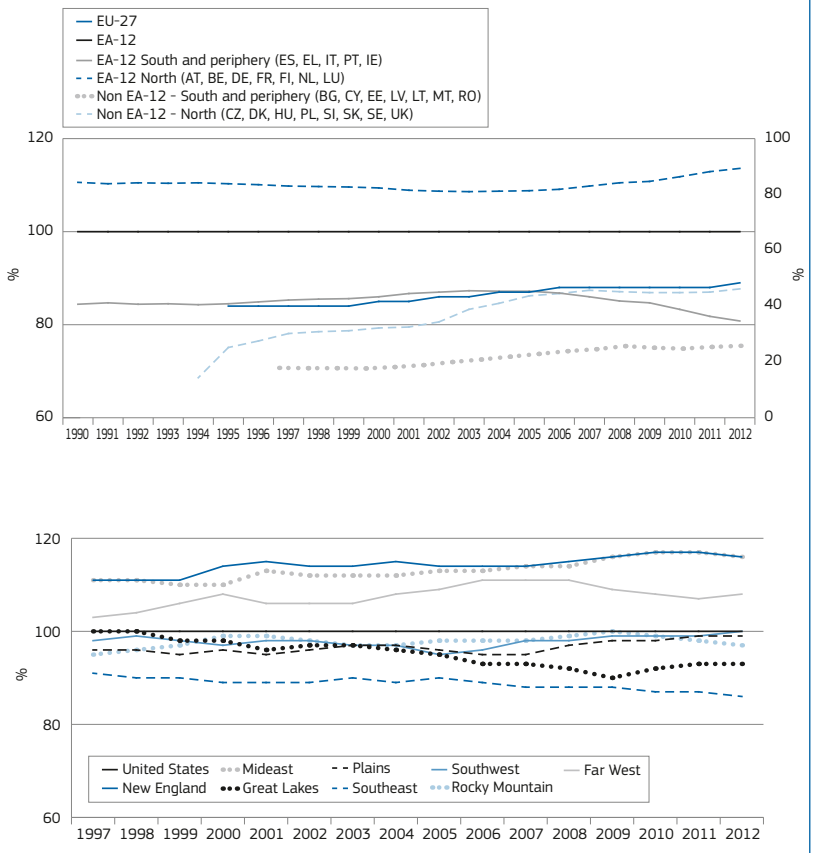
The worsening labour market situation between 2007 and 2010 resulted in an increase in poverty and exclusion, with some divergence between Northern and Southern euro-area Member States, while monetary poverty also increased.

4.2. Developments since 2007 in other monetary unions and in the non-euro EU area

While GDPpc per regions began to diverge between Northern and Southern EA-12 Member States in the euro area at the onset of the crisis (see above), this was not the case in among EU Member States outside the euro area (where developments were parallel in Northern and Southern countries).

([101]) However, it has to be considered that lack of consolidation may, in some cases, have elicited even worse consequences (e.g. Corsetti (2012)).

Chart 45: GDP per capita EU and US (1990-2012)



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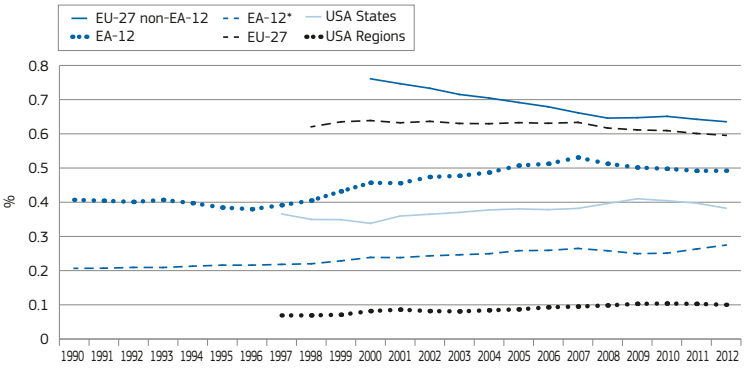
Source: Eurostat, Bureau of Economic Analysis.

Note: Real GDP per capita. DG EMPL calculations.

Chart 46: GDPpc dispersion in EU and US (1990-2012)



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Source: Eurostat, Bureau of Economic Analysis.

Note: real GDP per capita, EA-12* refers to EA-12 without LU. Own calculations.

This was not the case in the US either. While there was some divergence at the onset of the crisis (such as weakening in the Great Lakes region or acceleration in New England), the situation in 2012 is very close to that of 2007-08 in relative terms (with the exception of a relative improvement in the Plains and a relative weakening in the Southeast).

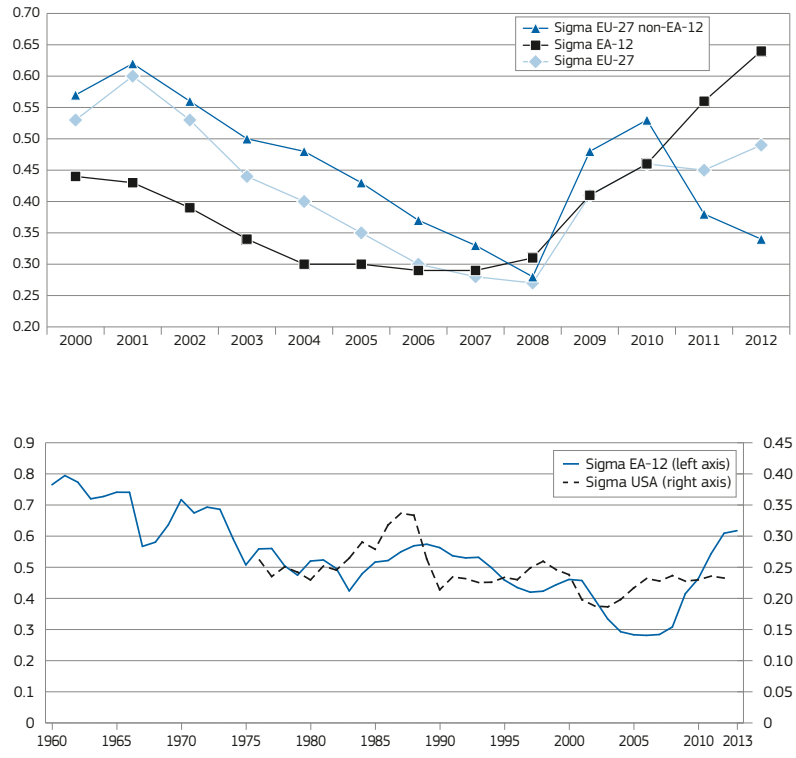
In terms of the dispersion of GDPpc, the euro area has seen an increase in the most recent years, while the reduction in the dispersion slowed in the EU-27 Member States not in the EA-12 (see Chart 46). In the US, the dispersion of GDPpc increased in the first years of the crisis but has been on the decrease since 2010 and was back to pre-crisis levels in 2012.

After 2010, the divergence in unemployment rates was much stronger in the crisis within EA-12 than in the EU as a whole (Chart 47a), also reflecting different cyclical positions. While divergence went on in the EA-12 after 2010, the dispersion levels actually came back to their pre-crisis levels in non EA-12 Member States in 2012. This strong increase in unemployment dispersion in EA-12 contrasts with the long term declining trend since the 1960s, while on the reverse in the US, there was actually no significant change in the dispersion of unemployment rates between States (Chart 47b).

The dispersion in poverty rates was much stronger in the crisis within EA-12 than within EU as a whole where the dispersion actually declined in line with the development observed in non EA-12 Member States (Chart 48a). Indeed, while the divergence developed in EA-12, dispersion actually declined in non EA-12 Member States. Furthermore while in the US the poverty rate increased also significantly in the crisis (however measured differently than in EU) ([102]), there was actually no change in the dispersion of poverty rates between States or main regions.

([102]) It should however be noted that the measurement of poverty in the USA differs from that in EU, since the poverty thresholds is actually only indexed on price developments, while in Europe, it relies on the current value of the median disposable income (at a threshold of 60%).

Chart 47: Convergence in unemployment rates EU and US



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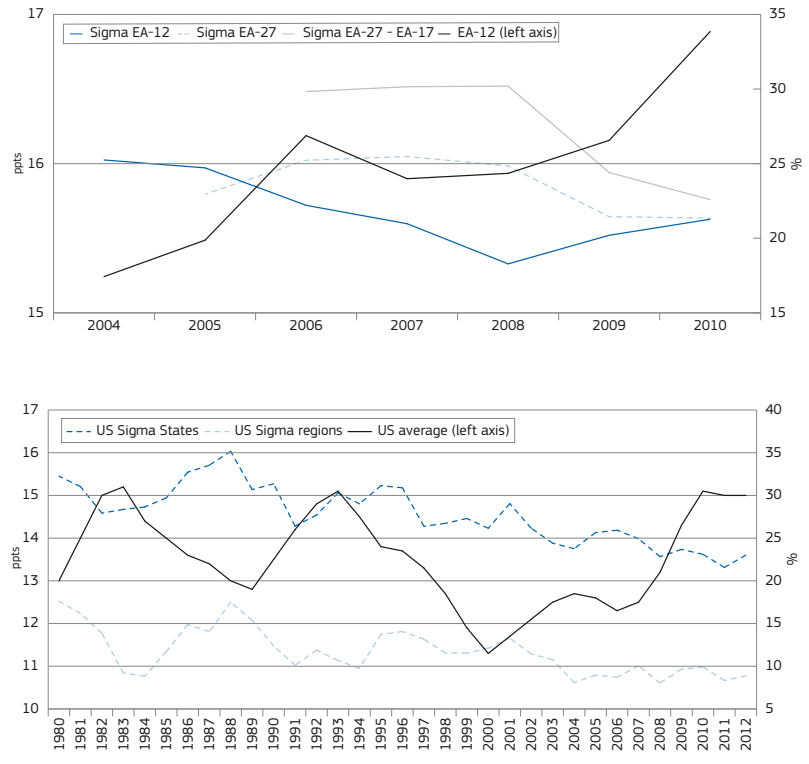
Source: Own calculations based on Eurostat, Labour Force Survey [une_rt_a] and BLS.

Chart 48: Dispersion in poverty rates over 2007-2012



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Source: Own calculations based on Eurostat, SILC [une_rt_a] and Census bureau.

5. IMPROVING THE WORKING OF THE EMU

5.1. Introduction – the Commission Blueprint

Since the start of the euro-area sovereign debt crisis, a number of important measures have been taken, particularly in the areas of financial regulation, the introduction of financial firewalls and instruments for official financial support and in terms of a reformed fiscal framework ([103]), but it was not until the European Commission released its "Blueprint for a Deep and Genuine Economic and Monetary Union" ([104]), that EMU employment and social policies were mentioned among the ingredients for an improved monetary union architecture.

With respect to employment and social policies, the Blueprint notably underlines the fact that steps towards more responsibility and economic discipline should be combined with more solidarity and financial support. The Blueprint distinguishes those steps that can be taken in the short-term, without Treaty revision, from the more ambitious medium- to longer-term steps that could require Treaty revision.

In December 2012, the Commission Blueprint was followed by the Report of the President of the European Council, "Towards a Genuine Economic and Monetary Union" ([105]), referred to henceforth as the Four Presidents' Report.

Both the Commission Blueprint and the Four Presidents' Report recognised that an EMU-wide shock absorption function is an essential component of a sustainable monetary union. In particular the Commission Blueprint proposes an EMU-level scheme to stabilise asymmetric shocks (or symmetric ones) that should be supportive of structural reforms but subject to strict political conditionality in order to avoid moral hazard and long-term transfers. Payments from the scheme could also be earmarked for a defined purpose, such as unemployment benefits, if this was considered appropriate.

([103]) Crisis resolution mechanisms (ESM), ECB actions ensuring bank liquidity (LTRO) and monetary policy transmission and euro-area integrity (OMT), increased coordination of fiscal and macro policies (6-pack, 2-pack, Fiscal Compact), steps towards banking union (Single Supervisory Mechanism as a first step), see also http://ec.europa.eu/economy_finance/economic_governance/index_en.htm

([104]) European Commission (2012b).

([105]) Van Rompuy (2012).

The Four Presidents' Report foresees the creation of a shock-absorption function at EMU level for the period after 2014 that would have built-in incentives to encourage Member States to continue to pursue sound fiscal and structural policies, linking the two objectives of asymmetric shock absorption and the promotion of sound economic policies.

According to the Four Presidents' Report, the specific design of the asymmetric shock-absorption function could follow two broad approaches. The first would be a macroeconomic approach, with contributions and disbursements based, for example, on measures of economic activity. The second could be a micro-economic approach, linked more directly to a specific public expenditure function that was sensitive to the economic cycle, such as unemployment insurance. An assessment of the relative merits of these approaches is seen to require a more in-depth analysis.

5.2. Social EMU

The December 2012 European Council asked the Commission to deliver on the "social dimension of the EMU, including social dialogue", a request that was repeated in the June 2013 Council, and which led to the adoption of a Communication on "Social EMU" in October 2013. The Communication covers three major strands: first, a reinforced surveillance of employment and social developments and strengthened policy coordination; second, further solidarity and action in support of employment and labour mobility and third a strengthening of social dialogue. The Communication also mentions that, over the longer term, it should be possible to establish an autonomous euro area capacity to absorb adjustment to asymmetric shocks, as a common instrument for macroeconomic stabilisation could provide an insurance system to pool the risks of economic shocks across Member States, thereby reducing the fluctuations in national incomes.

The Communication underlines that major employment and social problems can generate effects beyond national borders. In particular, unemployment and social problems mean a loss of income for significant parts of the population or for society as a whole and weigh on national internal demand and thus spill over to other euro-area Member States through trade. They also hold back competitiveness and the growth potential of the economies concerned, because present and future human capital is underutilised or lacks investment. Persistent unemployment and social inequalities can also weaken political and public support and can affect the stability of governments and their capacity to make sound policies.

Indeed, higher unemployment or poverty implies weaker aggregate demand (also depending on the effectiveness of automatic stabilisers), which, in turn, affect demand in other euro-area Member States as many euro-area Member States have most of their exchanges directed at the rest of the euro area ([106]). In the medium-term, higher unemployment, higher NEETs or higher poverty erode skills and discourage labour market participation. As a result, the long-term growth potential of one euro-area Member State and, through international trade, of other euro-area Member States is undermined. Such lasting output effects of reduction in human and physical capital caused by cyclical downturns are typically known as hysteresis ([107]). High unemployment rates and severe social gaps can also lead to social pressures on current and/or future public budgets that are perceived as unsustainable ([108]). More generally these tensions can weaken the capacity of governments to maintain the kinds of sound, long-term, policies that are required in order to maintain confidence in the common currency.

The Communication stresses the need to strengthen the coordination of employment and social policies within the monetary union with a view to better detecting major challenges and thus preparing the ground for recommendations in the framework of the EU Semester and informing the Macroeconomic Imbalances Procedure. This would be done by monitoring a scoreboard of a limited number of key indicators allowing the early identification of major employment and social problems that need to be addressed, either because of their severity and/or because they risk generating negative spill-over effects on other Member States.

5.3. European automatic stabilisers

A consensus has developed concerning the need for a supranational automatic stabiliser in EMU, as acknowledged in the Commission Blueprint and the Four Presidents' Report. Such stabilisers ([109]) smooth cyclical fluctuations, restraining booms and busts and stabilise the economic and social situation in the Member States most affected by crises. Moreover, they help fiscal policy to focus on structural balances (as a significant cyclical part is taken away) and boost confidence in individual Member States by moving part of the insurance function to the supranational level.

The Communication on the Social Dimension of EMU reaffirmed that, in the long term, 'it should become possible to establish an autonomous euro area budget providing the euro area with a fiscal capacity to support Member States absorb shocks'. However, it also drew attention to the fact that supranational automatic stabilisers need to be seen as much longer-term potential projects, not least in view of institutional issues concerning possible Treaty changes ([110]). As a result, discussions on concrete proposals for the implementation of a fiscal capacity have not started yet.

While discussions have started in academic circles, where proposals typically take the form of a transfer system across Member States or a centralisation at EU (or euro-area) level of certain redistributive functions (to citizens), more analysis is clearly needed in order to assess in-depth the different options for a fiscal capacity.

Often transfer systems across Member States are linked to the output gap, which is theoretically the best approximation of a Member State's cyclical position. However, from a practical

([106]) See for example ECB (2013), 'Intra-euro area trade linkages and external adjustment', Monthly Bulletin, January 2013.

([107]) See e.g. J. B. DeLong and L. Summers, "Fiscal Policy in a Depressed Economy", Brookings Papers on Economic Activity, Spring 2012, http://www.brookings.edu/~/media/Projects/BPEA/Spring%202012/2012a_DeLong.pdf .

([108]) IMF *(2012) 'Fiscal Monitor': "fiscal adjustments that are seen as unfair are unlikely to be sustainable".*

([109]) See also Box 3: 'What are automatic stabilisers?' in Chapter 3, 'Social protection systems confronting the crisis' in European Commission (2013b).

([110]) 'Such measures would require a substantial Treaty change, since, at present, the EU does not have the competence to adopt them, either for the euro area or for the EU as a whole' (European Commission (2013c), p. 11).

perspective, triggers based on the output gap or the unemployment gap ([111]) may end up creating pro-cyclical transfers due to large, sometimes persistent, revisions in these gaps ([112]). Enderlein *et al.* (2013) find that, for a cyclical shock insurance scheme based on the output gap, shock absorption is more than halved when using the real-time output gap data (compared to the ex-post adjusted output gap estimates).

Another typical form of an EMU-wide automatic stabiliser would be a supranational system of unemployment benefits, which would be complementary to the national systems. The effectiveness of stabilisation through the use of unemployment benefits is in principle high, since they are timely and target a population with a high consumption propensity and thus have a large multiplier effect ([113]). More generally, a scheme that supports adjustments to asymmetric shocks would also stimulate long-run labour mobility within EMU (for example, due to the portability across borders of the eligibility to a European unemployment scheme).

The US unemployment insurance system could be a possible source of inspiration for the design of such a supranational redistributive system, since it combines state-specific with federal elements and there is evidence of significant stabilisation ([114]). It combines a relatively loose harmonisation of the State systems, a specific financing structure (States pay for benefits during normal times, but receive support from federal sources during downturns) and separate schemes for large downturns. Automatic reduction of deficits of State accounts at the federal level tackles the issue of persistent net transfers in the regular unemployment insurance ([115]). An alternative system which was also discussed in the US is for the supranational system to provide some reinsurance for national schemes in order to ensure a smooth stabilisation over the economic cycle, without changing the actual functioning of national systems ([116]). This would probably imply a lower stabilisation impact as it would only kick in during deep downturns. Note that the current system also has a significant federal component which only kicks in during deep downturns.

It is usually proposed to base the financing of a potential unemployment EMU provision on social contributions (although a broader tax base such as GDP or consumption can also be considered) or to provide the EMU fund with specific resources. Financing through contributions has the advantage of establishing a clear link to past wages, while financing on GDP (or consumption) has the advantage of providing a broader tax base (increasing wage competitiveness of the EMU area) and avoiding potential interferences with the national structure of direct taxation.

While an EMU-wide unemployment benefit system appears to be an efficient option in terms of stabilisation, implementation implies choices concerning how the EU-wide system would interact with the national system (on issues such as eligibility, contribution size and forms, benefit levels and duration), as well as on the issue of possible temporary deficits in order to increase its stabilisation effectiveness. In this respect, Esser *et al.* (2013) suggest that the EMU provision should remain complementary to national provisions and should focus on the short term (duration between 3 and 12 months for instance).

There is obviously a moral hazard concern, in so far as Member States may be tempted to reduce their own activation efforts or loosen the supervision of eligibility conditions when they receive central funding. Hence the introduction of an EMU-wide system would gain from being accompanied by standard conditions on activation linked to the EMU provision and actions to strengthen national administrations, notably public employment services. Member States also have different implicit or explicit taxes on unemployment benefits, which could lead to different levels of net transfers to national budgets from an EMU provision if these are not addressed.

To avoid unintended permanent net transfers, national contribution rates could be regularly reviewed and adjusted in order to reach a balance of Member States' accounts with the EMU-wide system over the medium term.

6. Conclusions

This chapter has shown how the convergence in employment and social developments in the euro area over the period 1999 to 2007 was largely halted by the global financial and economic crisis, and how some of the imbalances that contributed to the subsequent euro-area sovereign debt crisis were already visible.

The chapter documents the negative and divergent employment and social developments in the euro area, and describes some of the proposals that have been made to strengthen the architecture of the euro area, particularly with respect to the achievement of the EU's overall employment and social goals.

Unbalanced 1999-07 convergence

The 1999 to 2007 convergence masked an unbalanced growth in GDP. It was notably fuelled by the decline in interest rates in some Member States and, in the absence of the disciplining effect of the foreign exchange market, the resulting weak performance in some Member States in productivity and competitiveness passed largely unnoticed, resulting in unbalanced employment growth, increasing labour market segmentation, and weak human capital investment. In general the Member States where the interest rate gains were large took comfort from the strong growth these brought, typically through booming credit and expansion in the non-tradable sector, specifically in interest-rate related activities such as construction, consumption of durable goods and finance, resulting in a pattern of growth based on increasing and unsustainable debt.

In the private sector, lax banking supervision, rising house prices and excessive bank liquidity also played their part in fuelling the credit boom. At the same time, growth in the tradable sector of these same Member States was hampered by a lack of price competitiveness as inflationary pressures increased with

([111]) The unemployment gap is the difference between the actual unemployment rate and the estimated natural or structural unemployment rate.

([112]) On the issues of revisions of the output gap estimation, see Kempkes (2012).

([113]) Dullien (2013a) suggests that it is possible with a supranational system of unemployment benefits to reach large marginal stabilisation in downturns for a reasonable size of the system (0.7% of euro-area GDP). Marginal stabilisation is measured during the downturn and not over the whole cycle, as is done for average stabilisation.

([114]) See, for example, Chimerine *et al.* (1999) and Vroman (2010).

([115]) See, for example, Stone and Chen (2013).

([116]) See also Gros (2013).

strong demand boosting wages in the non-tradable sector, which spilled over into the tradable sector.

Member States with large interest rate gains also tended to have a less favourable evolution of labour productivity, with those with the weakest performance here (Spain and Italy) also having the weakest performance in terms of total factor productivity (TFP) due in part to underperformance in terms of human capital formation (educational attainment, early school leavers and NEETs) resulting in a general depreciation of human capital.

The single currency reinforced the importance of competitiveness since price transparency was boosted and transaction costs reduced but, since devaluation was impossible, it restricted actions by Member States facing declining competitiveness to price adjustments, which take time to materialise (particularly in the euro area where price rigidity seems fairly high).

Price and cost competitiveness developments, as reflected in the real effective exchange rate, diverged strongly in this first period. Member States with large interest rate gains generally experienced a less favourable evolution, in contrast to Germany and Austria, which managed to gain price competitiveness, mostly due to wage moderation and a more intense offshoring of parts of their production to the new Member States. The largest competitiveness losses occurred in Ireland, Spain, Italy and Portugal, where labour costs increased much more than labour productivity.

Actually, the lack of convergence in Member States' current account balances does not appear as an immediate consequence of the divergence in price competitiveness, but more as a result of excessive demand, with a role for the regime shift of euro adoption for financing large external imbalances.

The excessive demand and financing explanations downplay the possible role of price competitiveness in explaining the evolution of current account deficits in this period. Moreover, studies have found a strong correlation between the dispersion in euro-area Member States' current account balances and *non-price* competitiveness factors such as the geographical and sector specialisation of exports, as well as product quality, technology, business conditions and the quality of industrial relations.

On this basis a race to the bottom in terms of wages or social or environmental standards was unlikely to provide an efficient remedy for the imbalances, with the emphasis actually needing to be put on further improving "high productivity at home and high-quality-based competitiveness in the global market place" (see Bucher and Pichelmann (2013)).

Employment growth between 1999 and 2007 was not only achieved at the price of low productivity performance and unbalanced sectoral specialisation, but it was also accompanied by increased labour market segmentation. Labour markets were already segmented before EMU, but as EMU has increased competition, firms are likely to have sought more labour cost containment and flexibility through increased use of temporary contracts.

The higher share of involuntary temporary contracts indicates a more serious problem of labour market segmentation in Southern Member States, specifically Portugal and Spain. While temporary contracts potentially could be stepping stones towards permanent positions, they also tend to be associated with less pay and low training possibilities and are typically hardest hit during recessions. The impaired human capital formation because of a more intense use of temporary contracts weighs on potential growth. Finally, unbalanced employment growth was not helpful in tackling in-work poverty.

Developing divergence since 2007

After 2008, public debt levels increased to unsustainable levels in many countries, not because of fiscal profligacy, but because the public sector had to use fiscal stimulus packages in order to avoid recession turning into depression, to preserve employment and to rescue their banks from collapse. Simultaneously growth largely came to a halt, with inevitable fiscal consequences.

The financial crisis then turned into a euro-area sovereign debt crisis with an adverse feedback loop between weakening sovereigns, fragile banks and shrinking economies. Austerity efforts had to be intensified on several occasions, as a lack of consolidation would have had worse consequences. Nevertheless some observers expressed doubts about the appropriateness of the size and speed of the austerity programmes, as well as their likely effectiveness (in a period of weak growth and zero-interest rates).

As a result of the austerity efforts and the reduced access to unemployment benefits ([117]), the contribution of national automatic stabilisers was weakened in many Member States. As a result real gross disposable income of households declined, which translated itself into a weakening of private consumption. In Portugal, Spain, Ireland and Greece, changes in their trade balance, mainly due to the collapse in imports, made a significant contribution to growth, but it was not enough to stop GDP falling dramatically. While the convergence in current account balances across EA-12 was largely due to a widespread decline in domestic demand, recently signs of an improvement in exports have become visible in vulnerable Member States, specifically in Spain and Portugal.

Wage compression and weakened economic stabilisers in individual Member States spilled over into others in the form of weaker external demand, given the interdependence between euro-area Member States. Besides the detrimental effect on growth of a downward pressure on wages, early delivery of results by the so-called 'internal devaluation' policy in vulnerable Member States was hampered by its limited impact on non-price competitiveness factors and its social cost.

Labour productivity developments have diverged across Member States since 2007, with significant increases in Spain and Ireland and, to a lesser extent, Portugal, explained to some extent by the sharp reduction in employment in construction and, more broadly, by the shift in activity towards the tradable sector. These Member States also performed best in terms of TFP with improvements in human capital formation (increased educational attainment, reduced early school leavers), but with a continuing weakness in NEETs. Italy has been a weak performer in productivity and human capital formation overall, however, while developments

([117]) Access was reduced as benefits have a limited duration and as eligibility conditions were tightened in some Member States.

have been mixed in Greece and Finland. All other Member States generally did better in terms of productivity and human capital formation.

The deterioration in the economic situation led to high and rising rates of unemployment, long-term unemployment and NEET, with a strong divergence of outcomes between the Northern and Southern euro-area Member States, which spilled over to other Member States. This has included permanent losses of human capital, notably associated with growing long-term unemployment due to scarring effects. More generally rising unemployment has led directly to income losses, which have depressed aggregate demand, in part because of the weaknesses of automatic stabilisation due to their inadequate coverage.

The effects of the economic and employment deterioration are also visible in increasing inequalities and increasing poverty in the euro area, with a strong pattern of divergence between Southern Member States, which were more affected, compared with Northern ones. High and increasing levels of income inequalities have not only served to undermine sustainable growth by depressing aggregate demand and encouraging unsustainable borrowing but have bred social resentment and weakened the legitimacy of political processes and institutions.

Increases in poverty, on whatever basis it is calculated, represents a general social and economic challenge that also signals poorly functioning labour markets, characterised by segmentation and a polarisation between job-rich and job-poor households. This in turn reflects underinvestment in human capital. Furthermore, increases in child poverty have long-lasting effects on future adults' achievements and thus weighs on future potential growth.

Social EMU

It is in the collective interest of all members of a monetary union to ensure that unemployment, youth inactivity, poverty or inequalities do not spiral out of control in any Member State. Indeed, given the degree of economic interdependence between members of a monetary union, employment and social adverse developments are also likely to have impact beyond national borders with the main channels being intra-euro-area trade, competitiveness and eroded confidence.

- Firstly, increases in unemployment or reductions in household incomes weigh on national internal demand and thus spill over to other euro-area Member States through intra-euro-area trade.

- Secondly, higher unemployment, NEETs or poverty likewise erode skills and discourage labour market participation, thereby undermining the long-term productivity paths and growth potential of other euro-area Member States.

- Thirdly, increasing employment and social imbalances may weaken public support and the capacity of governments to run sound policies, which is required for maintaining confidence in the common currency.

Thus it appears important to strengthen the coordination of employment and social policies in the monetary union in order to better detect and address major challenges. That is why it is being argued that key employment and social developments relevant for the well-functioning of the EMU should be subject to enhanced surveillance with a scoreboard monitoring a limited number of key indicators allowing the early identification of major employment and social problems that need to be addressed, either because of their severity and/or because they risk generating negative spill-over effects and undermine the good functioning of the monetary union.

EMU-wide automatic stabilisers

A consensus has developed concerning the need for a supranational automatic stabiliser in EMU, as acknowledged in the Commission Blueprint and the Four Presidents' Report.

Such stabilisers smooth cyclical fluctuations, restraining booms and busts and thereby stabilise the economic and social situation. Moreover, they help fiscal policy to focus on structural balances (since a significant cyclical element has been removed) and boost confidence in individual Member States by moving part of the insurance function to the supranational level.

The Communication on the Social Dimension of EMU reaffirmed that, in the long term, 'it should become possible to establish an autonomous euro area budget providing the euro area with a fiscal capacity to support Member States absorb shocks'. However, it also drew attention to the fact that supranational automatic stabilisers need to be seen as much longer-term potential projects, not least in view of institutional issues concerning possible Treaty changes. As a result, discussions on concrete proposals for the implementation of a fiscal capacity have not started yet.

Discussions have however started in academic circles, where proposals typically take the form of a transfer system across Member States or a centralisation at EU (or euro-area) level of certain redistributive functions (to citizens). Often transfer systems across Member States are linked to the output gap, which is in principle the best approximation of a Member State's cyclical position. However, from a practical perspective, triggers based on the output gap or the unemployment gap may end up being pro-cyclical due to large and sometimes persistent revisions of the series. Another typical form of an EMU-wide automatic stabiliser would be a supranational system of unemployment benefits, which would be complementary to the national systems. The effectiveness of stabilisation through the use of unemployment benefits is by construction high, since expenditure flows are timely and target a population with a high consumption propensity and thus have a large multiplier effect.

Clearly, more analysis is needed in order to assess the different options for a fiscal capacity, including on aspects such as stabilisation impact, moral hazard and possibly interaction with national systems.

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