

POOR AND UNDER PRESSURE: THE SOCIAL IMPACT OF EUROPE'S FISCAL CONSOLIDATION

ZSOLT DARVAS AND OLGA TSCHEKASSIN

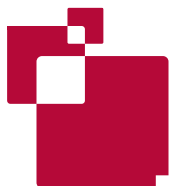
Highlights

- Europe faces major challenges related to poverty, unemployment and polarisation between the south and the north, which impact adversely the current living conditions of many citizens, and also negatively impact medium- and long-term economic growth.
- Fiscal consolidation exaggerated social hardship. In vulnerable countries there was no alternative to fiscal consolidation, but in most EU countries and at aggregate EU level, consolidation was premature when the cyclical position of the economy was deteriorating.
- Spending on social protection was shielded relative to other spending categories, but public bank rescue costs were high. While the changes in the tax mix favoured job creation, the overall tax burden became more regressive.
- There is an increasing generational divide between the elderly and the young in terms of social indicators. Social spending on elderly people was favoured relative to spending on families, children and education. There is now a serious danger that a lost generation might develop in several member states.
- Forceful policies should include bold structural reforms, better use of the European economic governance framework, more demand promotion, and a revision of national tax/benefit systems for fair burden sharing between the wealthy and poor.

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ARTICLE 3 of the Treaty on European Union (TEU) lays down the main objectives of the EU. These include, *inter alia*, promoting the well-being of its peoples, a highly competitive social market economy, aiming at full employment and social progress, social cohesion, social justice and combating social exclusion. In the wake of the global and euro-area financial and economic crisis, soaring unemployment in most EU countries and the weak economic outlook raises the spectre of poverty and social exclusion in a number of member states, and threatens grave polarisation within the EU.

According to Eurobarometer (2012), which is the sixth and most recent wave of monitoring of public perceptions on the social impact of the crisis, 80 percent of respondents think that poverty has increased in their country over the past 12 months, while 67 percent say it has increased in the EU. The survey also suggests a growing sense of hopelessness and insecurity in a number of EU countries.

One reason for increasing social hardship might be fiscal consolidation: the soaring budget deficits and public debt levels that followed on from the global and euro-area financial and economic crises led EU member states to embark on a series of fiscal retrenchment strategies to stabilise their public finances. Fiscal consolidation, which often consists of a combination of lay-offs in the public sector, cuts in various headline expenditures and increases in taxes and other contributions, can have a direct negative impact on the poorest segments of society. This can be particularly the case if the enacted fiscal measures weaken public social protection systems, or laid-off public servants fall directly into poverty. Indirectly, fiscal consolidation also holds back economic activity, which can negatively influence employment and thus adversely impact household incomes.

However, there are major complications in establishing a link between fiscal consolidation and poverty. These relate to the complexities in isolating the impact of fiscal consolidation from other factors influencing social conditions, the reasons why fiscal consolidation was needed in the first place and the choices made about the speed and composition of fiscal adjustment.

Against this background, this Policy Contribution evaluates social indicators that can have a bearing on poverty, looks at the fiscal consolidation strategies of EU member states and assesses the possible links between fiscal consolidation and social developments.

SOCIAL DEVELOPMENTS IN THE EU

The social situation in the EU is alarming. To summarise developments related to poverty, we took a closer look at four social indicators: the severe material deprivation rate, the unemployment rate, the NEET rate (persons not in education, employment or training) and children in jobless households, for the EU as a whole and for some major country groups. We do not analyse the at-risk-of-poverty rate, one of the three indicators adopted by the EPSCO (Employment, Social Policy, Health and Consumer Affairs) Council in the context of the Europe 2020 Strategy, because it is a measure of income inequality and not a measure of poverty (see Box 1 on page 5). High levels of income inequality can be identified as having adverse implications for society, as we argued in Darvas and Wolff (2014), but should not be confused with poverty.

The most suitable indicator of poverty is the severe material deprivation rate, which represents the proportion of people who cannot afford at least four of nine basic items, including utility bills, warm food, adequate heating or a car¹. The left panel of Figure 1 on the next page shows that the

1. The nine items are: 1) [arrear on] mortgage or rent payments, utility bills, hire purchase instalments or other loan payments; 2) one week's annual holiday away from home; 3) a meal with meat, chicken, fish [or vegetarian equivalent] every second day; 4) unexpected financial expenses; 5) a telephone [including mobile phone]; 6) a colour TV; 7) a washing machine; 8) a car and 9) heating to keep the home adequately warm.

favourable pre-crisis trend of a decline in material deprivation in the EU was reversed with the crisis, with some minor improvements observed in 2013. There is an emerging generational divide: the gap between young and old has widened. While the fall in severely materially deprived elderly people is a highly welcome development, more children were severely materially deprived even in 2013 than in 2007, which is worrying.

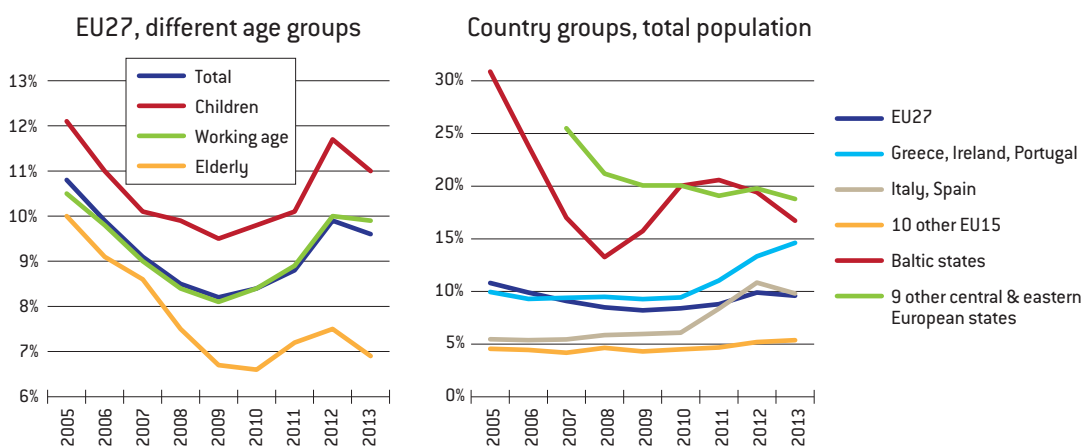
There are also major differences between countries in material deprivation terms, as indicated for country groups by the right panel of Figure 1. Before the crisis, material deprivation was very high but declining in the member states that joined in the EU in 2004-07. During the crisis, there were major increases in the Baltic states after 2008, and after 2010 in the three euro-area programme countries (Greece, Portugal, Ireland) and in Italy and Spain. In the other EU15 countries there was only a minor increase and even a slight decline in central and eastern European countries, though from a higher level. These developments suggest that the east-west divide has narrowed, while the north-south divide has widened with the crisis.

The country aggregates also mask some heterogeneity. Poverty in Europe is the most severe in Bulgaria, Romania and Hungary where more than one-quarter of the population is

severely materially deprived. The trend has been declining in Bulgaria and Romania but increasing in Hungary. On the other hand, in Slovenia and the Czech Republic, the poverty rate was below 7 percent in 2013, well below the EU average. Among the other 10 EU15 countries poverty was highest in the United Kingdom with a rate of 8.3 percent in 2013, and lowest in Sweden and Luxembourg with rates below 2 percent.

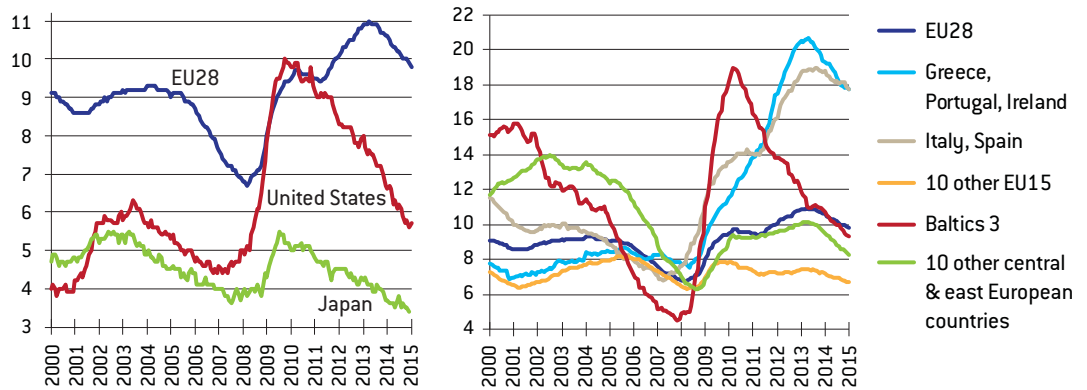
Unemployment and the share of people living in jobless households can have a direct impact on poverty. Moreover, the longer unemployment persists, the more work-related skills are lost and the more difficult reintegration into the active labour market becomes. Figure 2 on the next page shows that while the unemployment rate in the United States started to decline already in late 2009, in Europe it continued to increase up to early 2013. The recent decline in the EU unemployment rate is welcome, but it started too late, declined too little and there are still about 24 million unemployed in Europe, which is very alarming. There is again major cross-country heterogeneity, as the right panel of Figure 2 shows: unemployment in the euro-area periphery is very high, while it is moderate in the other older EU member states. There is therefore clear evidence of a wide south-north divide within the EU, while more recently the east-west divide has narrowed.

Figure 1: Severe material deprivation rate (% population), 2005-13



Source: Bruegel based on Eurostat. Note. 10 other EU15: Austria, Belgium, Denmark, Finland, France, Germany, Luxembourg, Netherlands, Sweden and United Kingdom; Baltic states: Latvia, Lithuania, Estonia; 9 other central & eastern European states: Bulgaria, Czech Republic, Hungary, Poland, Romania, Slovenia, Slovakia, Cyprus and Malta. Country group values are calculated by the total number of materially deprived people in the country group divided by the total population of the group. 2013 data for Ireland is not available: for calculating the 2013 average of Greece, Ireland and Portugal, we assumed that the number of severely materially deprived persons in Ireland remained unchanged at the 2012 level of 451,000, while we used the actual data for Greece (increase from 2.141 million in 2012 to 2.223 million in 2013) and for Portugal (increase from 910,000 in 2012 to 1.148 million in 2013).

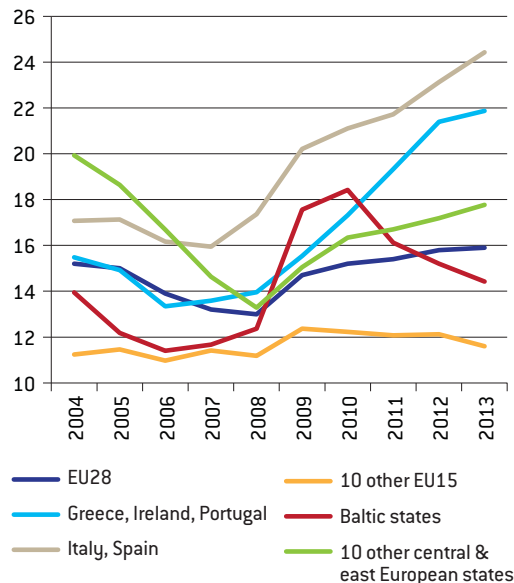
Figure 2: Unemployment rate (percent, seasonally adjusted), January 2000 – January 2015



Source: Bruegel based on Eurostat. Note: country groups as described in Figure 1 (10 other central and east European countries also includes Croatia). January 2015 data is not available for Estonia, Latvia, Hungary, Greece or the United Kingdom: we approximated the missing data for these five countries by assuming that the number of unemployed remained unchanged from December 2014.

Unemployment among young people, which is very high in a number of EU countries, is especially alarming. Figure 3 shows that young NEETs² have become substantially more numerous in the euro-area periphery, but also in central and eastern European countries. The only good news is that after a major increase in the Baltics up to 2010, there is a clear declining trend in these countries. Among the 28 EU member states, the proportion of NEETs increased from 2007 to 2013 in 23 countries³, underlining that this is a general EU problem and not just a problem for the euro-area periphery.

Figure 3: People not in employment, education or training (NEETs), 15-29 age group, 2004-13



Source: Bruegel based on Eurostat.

A long period of unemployment after graduation, when a worker should acquire the first skills in the workplace, can undermine whole careers – creating a lost generation and also having trickle-down effects on fertility rates and child support. Empirical research has confirmed a negative causal impact of unemployment on fertility (Currie and Schwandt, 2014; Kreyenfeld and Andersson, 2014)⁴, possibly due to increased income uncertainty related to unemployment.

When children grow up in families in which parents do not work for long periods or work irregularly, their current living conditions are curtailed, but also their opportunities compared to children whose parents work are affected. This is because a jobless household might be unable to make an adequate investment in quality education and training and therefore a child's opportunities to participate in the labour market in the future are likely to be adversely affected. The empirical research presented in OECD (2012) found that higher levels of economic, social and cultural status of parents are associated with higher educational attainments for their children.

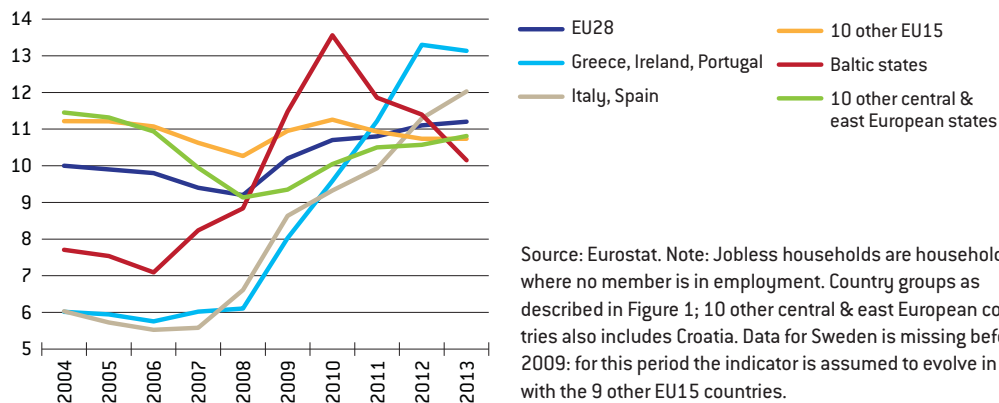
Figure 4 shows a continuous increase in the share of children under 18 living in jobless households between 2008 and 2013, with especially stark increases in euro-area periphery countries, where the rates more than doubled. After a dramatic increase between 2006 and 2010, the Baltic countries again show a positive development more recently, though even the most recent 2013 value remains well above pre-crisis levels.

2. We do not report the youth unemployment rate (which typically considers the 15-24-year age cohort), because it is a very imprecise measure of forced inactivity of young people. Most 15-year olds are in compulsory education and very few are looking for work, but also among, eg 24-year olds, education or other training activities occupy a significant share. The NEET indicator takes this into account education/training activities.

3. Between 2007-13, the NEET rate remained stable in Luxembourg and Sweden and decreased in Austria, Germany and Malta.

4. For example, by studying more than 140 million US birth records for the period 1975-2010, Currie and Schwandt (2014) found that a one percentage point increase in the average unemployment rate experienced between the ages of 20 and 24 reduces the short-run fertility of women in this age range by six conceptions per 1,000 women and to an overall loss of 14.2 conceptions by the time these women reach the age of 40.

Figure 4: Children under 18 in jobless households (% of children), 2004-13



Source: Eurostat. Note: Jobless households are households where no member is in employment. Country groups as described in Figure 1; 10 other central & east European countries also includes Croatia. Data for Sweden is missing before 2009: for this period the indicator is assumed to evolve in line with the 9 other EU15 countries.

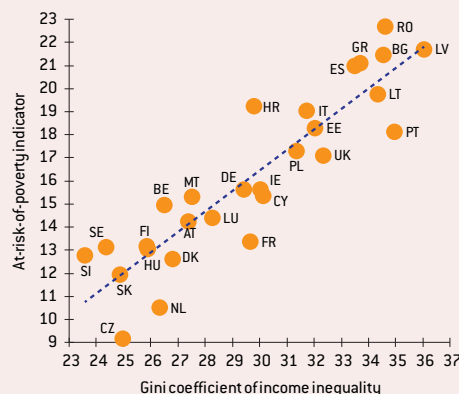
BOX 1: WHAT IS POVERTY AND WHAT DOES THE AT-RISK-OF-POVERTY INDICATOR MEASURE?

The World Bank defines poverty as whether households or individuals have sufficient resources or abilities to meet their daily needs⁵ and highlights non-monetary aspects, such as health, education and subjective perceptions.

However, the most widely used EU indicator including the word ‘poverty’, the at-risk-of-poverty rate, is not a measure of poorness. It measures the share of people with net income after social transfers below 60 percent of national median equivalised disposable income. As Eurostat’s glossary also notes, “this indicator does not measure wealth or poverty, but low income in comparison to other residents in that country, which does not necessarily imply a low standard of living”⁶. As Figure 5 highlights, there is a very strong association between the at-risk-of-poverty rate and the Gini-coefficient of income inequality: the correlation coefficient is 0.90. The at-risk-of-poverty rate is therefore a measure of income inequality.

Furthermore, the differences between the national thresholds (which are used to calculate the at-risk-of-poverty-rate) are so huge that they further underline the inappropriateness of this indicator for assessing poverty trends in Europe. After correcting for the differences in price levels, in Romania, a disposable income of €2,106 a year (after taxes and social transfers) is considered to be the threshold, while in Luxembourg the price-level adjusted threshold is €15,996. This means that if a person’s net income after social transfers is at the threshold in Luxembourg, she or he can consume 7.5 times more goods and services in Luxembourg than a Romanian person at the national threshold in Romania. This is an enormous difference. But even the difference between two less extreme countries, Austria and the Czech Republic, is substantial: after taking prices into account, someone at the national threshold in Austria can consume twice as much in goods and services as someone at the national threshold in the Czech Republic. The anchored version of this indicator, which uses the real value of the 2008 thresholds in later years, does not address these drawbacks and the inappropriateness of the indicator to measure poverty trends.

Figure 5: The correlation between the Gini-coefficient of income inequality and the at-risk-of-poverty indicator



Source: Bruegel calculation using data from Eurostat. Note: both indicators are averaged over 2007-13. The correlation coefficients between the two indicators in each year between 2007 and 2013 are: 0.92, 0.90, 0.88, 0.90, 0.85, 0.84 and 0.87. The correlation coefficient between the 2007-13 time averages of the two indicators is 0.90. The at-risk-of-poverty indicator is ‘At risk of poverty rate [cut-off point: 60% of median equivalised income after social transfers]’, while the Gini coefficient is the ‘Gini coefficient of equivalised disposable income’.

5. <http://go.worldbank.org/0C60K5UK40>.

6. http://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:At-risk-of-poverty_rate.

Overall, social developments in the EU are alarming and suggest polarisation between the young and old, between the European south and north, while the trend in terms of the east-west divide is more mixed, with some gaps narrowing while others have widened

THE SPEED AND COMPOSITION OF FISCAL CONSOLIDATION IN THE EU

There are certain budget consolidation measures that can have a direct impact on the poorest segments of society. Social spending cuts can reduce the benefits people receive and limit the ability of social protection systems to support the poor. Public sector lay-offs lead to unemployment if there are no job opportunities in the private sector. Cuts in public sector wages reduce the disposable income of public servants, which can deepen poverty, if some public servants already belonged to the poorest segment of society. An increase in consumption taxes, such as value added tax, has more adverse impacts on poorer people, because they spend a larger fraction of their income on consumption than the people at the upper end of the income distribution scale.

Beyond these direct impacts, fiscal consolidation measures can also have an indirect impact on poverty. Various spending cuts and revenue increases depress the economy at least in the short and medium terms⁷. Recent research concluded that fiscal consolidation has a more significant negative impact on the economy during a recession than during expansions, ie the so-called fiscal multiplier is higher; see for example literature surveys and own estimates in Baum *et al* (2012), Auerbach and Gorodnichenko (2012) and Dell’Erba *et al* (2014). It is also established, as we will demonstrate, that economic contractions are strongly associated with a fall in employment in almost all EU countries, and therefore fiscal consolidation can adversely impact social conditions, including poverty.

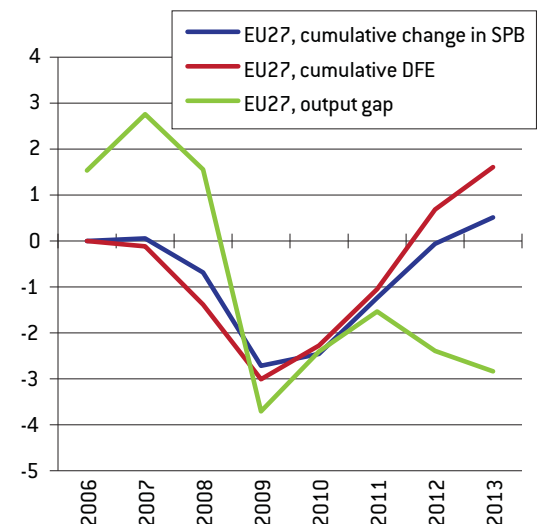
Consequently, beyond fiscal measures that can potentially directly impact poverty, the overall fiscal consolidation strategies of EU member states should also be assessed. Policy choices, such as the actual speed and composition of fiscal adjustment, can have major impact.

Speed of fiscal adjustment

The EU’s fiscal strategy was based on the conviction that fiscal consolidation was needed to restore the trust of financial markets, to limit the increase in public debt levels, and thereby to lay the foundations for sustainable growth. Undoubtedly, low public debt levels come with great benefits. However, premature⁸ fiscal consolidation at the EU level likely had significant side effects, such as the worsening of the cyclical situation of the EU economy (Figure 6), and the need for fiscal consolidation at the country level varies.

Fiscal consolidation needs – from an economic perspective – were different in different EU countries. Fiscal consolidation was clearly necessary (at least to some extent) in those member states in which budget deficits had increased to very high levels at a time when there was a supposedly permanent fall in output resulting from the burst-

Figure 6: The output gap and two indicators of discretionary fiscal measures in the EU (% of GDP)



Source: Bruegel using AMECO and European Commission (2013). Note: the blue line shows the cumulative change in structural primary balance (SPB), as revealed by AMECO. The red line shows the cumulative discretionary fiscal effort (DFE) as implied by European Commission (2013). We calculated the EU27 SPB as the weighted average of the euro area 17 and the 10 other EU countries, for which we derived the weights from the average GDP during 2000-13. We calculated the DFE for the EU27 the same way, after calculating the euro area 17 DFE for 2012-13 by weighting the values of the first 17 members of the euro area, because DFE for the euro area as whole was available in European Commission only for 2007-11. A source of non-comparability between the two lines is that we use the February 2014 version of AMECO, while European Commission (2013) calculated DFE using an earlier vintage of the structural balance.

7. Using the examples of fiscal adjustment in Denmark and Ireland in the 1980s, in their seminal paper Giavazzi and Pagano (1990) introduced the notion of ‘expansionary fiscal consolidations’, whereby fiscal consolidation could increase output. Guajardo *et al* (2011) challenged this notion and found, using a better indicator of fiscal adjustment and an empirical strategy applied to a larger set of countries that fiscal consolidation has contractionary effects on private domestic demand and GDP.

8. We call fiscal consolidation premature when it is conducted in an economy in which the cyclical conditions deteriorate, provided that markets do not give a clear signal that public debt has increased to such a high level which threatens public debt sustainability.

ing of unsustainable pre-crisis bubbles. Greece, for example, had a 16 percent of GDP budget deficit in 2009, when public debt was 130 percent of GDP. Under such circumstances, there was no alternative to fiscal consolidation: the question was the speed and composition. The speed was probably too fast and Greece entered a vicious circle with falling output, lower tax revenue and larger budget deficits, accompanied by the consequent increased consolidation needs, which exaggerated the output fall. Entering such a vicious circle was a major flaw of the Greek assistance programme (Sapir *et al*, 2014), though the public finance trajectory had to be rectified.

However, from an economic perspective, at the aggregate EU level as well as in most EU countries, budget deficits and public debts did not warrant a harsh consolidation strategy at a time when the cyclical position of the EU economy had deteriorated considerably. In countries with stronger fiscal fundamentals more expansive fiscal policies better aligned to their negative output gaps, and the needs of the EU aggregate would have not led to concerns about debt sustainability. Germany has even outperformed both the national and European fiscal targets (Barbiero and Darvas, 2014). As a comparison, the US and Japan continue to borrow at low interest rates despite their much higher public debts and deficits. Therefore, the issue is not a return to 'failed old debt-making policies' in highly indebted countries, but to ensure fiscal stabilisation at the EU level as long as private demand is weak.

Buti and Carnot (2013) challenge some criticisms of the EU's fiscal strategy and essentially conclude that fiscal consolidation was necessary in southern Europe, a conclusion that we agree with. But they are silent on developments in the aggregate fiscal stance of the euro area, which was strongly influenced by the major fiscal consolidation in Germany and other euro-area member states with strong fiscal fundamentals. They only note that the fiscal stance of Germany is now broadly neutral: this assessment does not consider the implications of the earlier German fiscal tightening for the aggregate euro-area fiscal stance at a time when the cyclical position of the euro area was very weak.

In an elegant model, Merler and Piani-Ferry (2012) demonstrated that in a monetary union which consists of a competitive, moderately leveraged North and an uncompetitive, over-indebted South, the South needs to tighten fiscal policy more than the North. Consequently, when fiscal consolidation is too fast in the North, it has to be even faster in the South, which depresses output and inflation more in the South, making it more difficult to progress with debt deleveraging.

The premature aggregate EU and euro-area fiscal consolidation is hindering the deleveraging of the private sector and making it more difficult for southern euro-area member states to implement their necessary fiscal consolidations. It is pushing inflation close to zero, making it more difficult to achieve a symmetric correction in intra-euro area current-account imbalances. It is also pushing the euro area and the EU into a strong current account surplus. This last effect worsens global imbalances⁹.

Composition of fiscal adjustment

Beyond the speed, the composition of fiscal consolidation is also crucial for influencing social conditions.

Large-scale support to the financial sector drained the resources of many EU governments and triggered or reinforced fiscal consolidation efforts, which in turn depressed the economy with adverse consequences for the poor. Data from the European Commission's State Aid Scoreboard, which is reported in Table 5 of Darvas *et al* (2014), shows that in the EU as a whole, recapitalisation measures and asset-relief interventions amounted to almost €600 billion in the EU from 2008-12, which is equivalent to 4.6 percent of EU GDP, a very large amount. In addition, governments provided various guarantees and liquidity support measures, which amounted to €906 billion (7.7 percent of GDP) in 2009, of which €535 billion (4.1 percent of GDP) was still outstanding in 2012.

Financial-sector support was very high in Ireland, Greece, Belgium, Cyprus and Spain. However, in eight EU countries (Bulgaria, Czech Republic, Estonia, Lithuania, Malta, Poland, Romania and Slovakia),

9. Darvas (2010) warned that premature fiscal consolidation at the euro-area level would likely lead to these side effects.

no support was provided, while support was tiny in Finland and small in Hungary, Sweden and Italy¹⁰.

At the height of the crisis, public support was motivated by financial stability concerns. However, by analysing eight bank restructurings between 2008 and 2013 in different countries¹¹, Dübel (2013) concluded that in all cases significant potential for creditor participation was wasted, to the detriment of taxpayers, even if there has been more emphasis in more recent restructurings on the depth of creditor participation. These eight cases underline that even given the financial stability motive of financial-sector support, bank restructuring could and should have been implemented in a less costly way for taxpayers, which would have provided more fiscal space for governments for other purposes¹².

By considering the main public expenditure categories beyond bank support, Table 1 shows that for the EU as a whole and all country groups, public investment was the major victim of fiscal adjustments. Barbiero and Darvas (2014) argue that since the fiscal multiplier of public investment is the largest among the main expenditure and revenue categories of the government, the significant cut-backs in public investment exaggerated the output fall.

On the other hand, social payments increased more than other primary expenditures, or fell less than other primary expenditures in the three euro-

area programme countries. While the aggregate social payment amounts are in themselves not informative on the effectiveness of social protection, and inflation has eroded the real value of social expenditures (see the last line in Table 1), this development suggests that governments might have tried to cushion the negative impact of the crisis on society, which applies also to those countries that implemented the sharpest fiscal adjustments. Indeed, Figure 7 on the next page clearly indicates that there is no systematic relationship between fiscal adjustments and social expenditures; that is, countries that implemented larger fiscal adjustments did not cut social expenditures more. This is a benign development. The only exception is Greece.

However, within social expenditures, pensioners were the main beneficiaries of fiscal adjustments, as old-age related expenditure increased more than other social protection expenditure in every country group (Table 2 on the next page). Sickness and disability expenditure suffered cuts in the hardest-hit countries (vulnerable euro-area members and the Baltic states), but increased in other EU15 and central and eastern European countries. Family and child support declined substantially, by 19 percent in the three euro-area programme countries, 14 percent in the Baltic states and 10 percent in Italy and Spain, while there was only a marginal increase in other EU15 and central and eastern European countries. Inflation eroded further the real value of family and

10. In the central and eastern EU members, foreign banks dominate domestic banking systems and foreign parent banks provided the necessary capital to their subsidiaries and branches established in other countries. This was certainly helpful for public finances in host countries, yet foreign-owned banks reduced their activities in host countries, which can have adverse effects (see Figures 1 and 2 of Darvas and Wolff, 2013).

11. Ireland: Anglo Irish Bank (2009), Germany: Hypo Real Estate (2009), Denmark: Amagerbanken (2010, 2008), Spain: Bankia/BFA (2012, 2010/11), France/Belgium: Dexia (2012, 2008), Netherlands: SNS Reaal (2013), Cyprus: Laiki Bank (2013, 2012), Greece: Alpha Bank (2013).

12. The substantial public support to banks was the main reason for the shift in bank rescue policies to more bail-ins, leading to the Bank Recovery and Resolution Directive (BRRD) and the Single Resolution Mechanism (SRM).

Table 1: Main public expenditure categories net of bank recapitalisation by the public sector, % change from 2009-13 (in current prices and constant exchange rates)

	Share		Percent change in current prices, 2009-13				
	EU28	EU28	Greece, Ireland, Portugal	Italy, Spain	10 other EU15	Baltics 3	10 other CEE
Total expenditure	100	6	-15	-2	9	1	9
Interest expenditure	5	20	10	31	15	167	25
Primary expenditure	95	5	-17	-4	9	-1	8
Social expenditures	43	10	-8	8	12	14	13
Compensation of employees	22	2	-21	-6	7	-8	3
Other current primary expenditure	22	3	-24	-9	7	-6	12
Capital expenditure	8	-13	-31	-41	-1	-13	-8
<i>Memorandum: inflation</i>		10	6	9	9	13	12

Source: Bruegel using AMECO data. Notes: Country groups as described in Figure 1. For the Baltics the 2008-13 period is shown, because fiscal consolidation started earlier in these countries. The aggregates involving countries with different currencies were calculated using constant exchange rates (the average of 2009-13) and therefore exchange rate fluctuations do not affect the values shown.

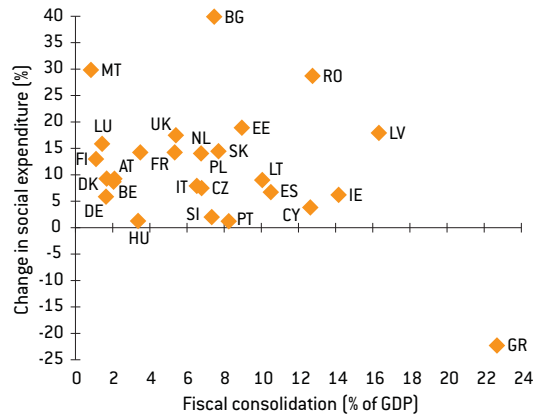
child benefits. Unemployment benefits were increased significantly where it was needed the most, in the euro-area periphery and the Baltic states, while they declined in the rest of the EU.

Therefore, intentionally or not, there was redistribution from families and children towards pensioners, while unemployment benefit expenditure might have helped to mitigate the adverse impact of unemployment in those countries in which the unemployment rate has increased the most. Spending on education was also significantly reduced in the most vulnerable countries, which can also affect adversely the young generation.

Fiscal consolidation might also have an impact on poverty rates by reducing expenditure on public sector employees. Figure 8 on the next page shows that countries that implemented larger fiscal adjustments reduced more their spending on public sector workers.

Reducing public sector labour compensation can take two main forms: reducing wages and laying

Figure 7: Fiscal adjustment vs social expenditures during fiscal consolidations



Source: Bruegel using data from Eurostat and European Commission (2013). Note: for each country, we checked the start date of fiscal consolidation and calculated the change in the indicators from that date till 2013. Social expenditures in the sum of ‘Social benefits other than social transfers in kind: general government’ and ‘Social transfers in kind supplied to households via market producers: general government’. Fiscal consolidation is measured by the discretionary fiscal effort (DFE) indicator of European Commission (2013). Missing DFE values for Greece (2007-10), Hungary (2007-09) and Luxembourg (2007-11) completed with the change in structural primary balance.

Table 2: General government expenditure by function, % change 2009-12 (in current prices and constant exchange rates)

	Share		Percent change in current prices, 2009-12				
	EU28	EU28	Greece, Ireland, Portugal	Italy, Spain	10 other EU15	Baltics 3	10 other CEE
Total general govt. expenditure	100	4	-12	1	6	-3	7
Interest payments	5	23	14	32	19	164	22
Broad services	17	-2	-12	-11	2	-15	-1
Economic affairs	9	-5	-45	5	-6	-20	-4
Environment protection	2	-5	-26	-8	-4	-6	21
Health, recreation	17	4	-20	-7	8	-6	12
Education	11	2	-14	-10	5	-7	8
Old age	20	10	0	8	10	15	13
Family and children	4	0	-19	-10	3	-14	1
Housing	1	12	-30	6	13	23	20
Unemployment	4	0	11	14	-5	13	-11
Sickness and disability	6	7	-7	-1	9	-5	12
Other social protection	5	7	-11	5	9	26	8
<i>Memorandum: inflation</i>		8	6	8	7	12	10

Source: Bruegel using Eurostat’s ‘General government expenditure by function’ (COFOG) database. Note: Belgium, Croatia, Slovakia and Romania are not included because of lack of data; we report data for the aggregate of the remaining 24 countries of the EU (EU24). Country groups as described in Figure 1. For the Baltic states the 2008-12 period is shown, because fiscal consolidation started earlier in these countries. The aggregates for countries with different currencies were calculated using constant exchange rates [the average of 2009-13] and therefore exchange rate fluctuations do not affect the values shown. Broad services include: general public services except interest payments, defence, public order and safety and community amenities.

off public sector workers. EU countries adopted different mixes of these methods: in Ireland, Romania and Spain, most of the reduction in total labour compensation resulted from cutting hourly wages, while in Latvia about half of the reduction was the result of wage cuts and lay-offs. Wages were cut the most in Greece (by 20 percent), but also employment was reduced by 10 percent, while those who remained employed work more hours per week now than in 2008 (see Figure 4 in Darvas *et al*, 2014).

The cut in the public sector bill might have not impacted the poorest segments of the society, because wages in the public sector tend to be much higher than wages in the private sector in those countries that implemented the largest fiscal adjustments (see Figure 5 in Darvas *et al*, 2014). Also, in some countries public sector wage cuts were highly progressive. For example in Greece, where wages were cut by 20 percent on average, public servants with monthly salaries of less than €1000 faced only a 2 percent cut, while higher earners faced larger cuts with the highest earner category (over €4000) facing a 35 percent cut. Yet if lay-offs lead to long-term unemployment, then it certainly has an impact on poverty too.

The analysis of the revenue side of budgets suggests that in the EU as a whole, effective labour

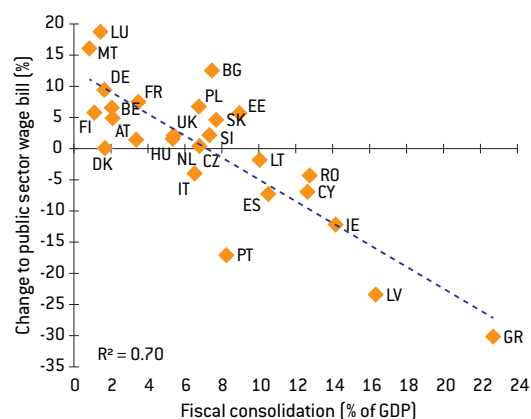
taxes fell slightly, effective consumption taxes increased slightly, while effective capital taxes were reduced significantly (Table 6 of Darvas *et al*, 2014)¹³. But there are diverse developments within the EU. Labour taxes tended to decrease in those countries in which they were the highest before the crisis, while labour taxes increased in countries with low tax rates. The correlation coefficient between 2008 tax rates and their change from 2008 to 2011 is -0.57. A similar relationship can be observed with consumption taxes, though the correlation coefficient between 2008 consumption tax rates and their subsequent changes is smaller, -0.31. However, for capital taxes, the correlation coefficient is close to zero [-0.03], suggesting that the level of the pre-crisis tax rates did not influence the direction of changes in the tax rate during the crisis.

Labour taxes are generally structured in a way that is progressive to some degree, though there are about ten central and eastern EU members that have adopted flat personal income tax rates. Among the most severely hit countries, labour taxes increased in Ireland, Latvia, Portugal and Spain, which might have negatively impacted social conditions, though the effective tax rates in these countries remained well below the EU average even after the increase. In Greece, effective labour taxes declined by 2 percentage points, which was the third largest decline in the EU.

In the various editions of the Annual Growth Survey, the European Commission suggested moving the tax burden away from labour toward consumption, on the basis that this should boost labour productivity and promote employment. In the 2008-11 period, 14 out of the 27 EU countries followed this advice (of which eight cut labour taxes and increased consumption taxes, while the other six countries cut labour taxes more than consumption taxes). Additionally, two other countries cut both taxes, but cut labour taxes more than consumption taxes. Therefore, the direction of tax changes was in line with the Commission suggestion in many EU countries. Yet the eco-

13. Unfortunately, there is no comprehensive dataset of tax rates and the complicated tax laws, including the definition of tax bases and exemptions, making it rather difficult, if not impossible, to compare tax rates and the changes to them. We therefore compare implicit tax rates (ITRs), which measure the effective average tax burden on different types of economic income or activities (labour, consumption and capital), as the ratio between revenue from the tax type under consideration and its (maximum possible) base. For example, the ITR on consumption is the ratio between the revenue from all consumption taxes and the final consumption expenditure of households.

Figure 8: Fiscal adjustment vs public sector labour compensation during fiscal consolidations



Source and notes: see Figure 7.

'While social expenditures were generally preserved relative to other spending categories, there was redistribution from families, children and education towards pensioners, which may have contributed to the widening poverty gap between the young and the old.'

nomics literature has shown how indirect (and in particular consumption) taxes tend to be regressive, so an increase in consumption taxes burdens more the poorest segments of society.

Finally, during 2008-11, the effective tax rate on capital was reduced in 17 countries and increased in only three countries (France, Sweden and Germany). It needs to be seen to what extent these cuts in effective capital taxes are part of a broader taxing strategy to attract (or at least maintain) investment and capital inflows, or if they are a specific and temporary reaction by the governments to the crisis, during which corporate profits plummeted.

THE RELATIONSHIP BETWEEN FISCAL CONSOLIDATION AND DETERIORATING SOCIAL CONDITIONS

Academic research on poverty, inequality and fiscal adjustments

Poverty has various micro and macro determinants, as detailed by, among others, Jäntti and Bradbury (2003), Valletta (2004) and Zaidi (2009). Factors such as educational attainment, age, employment status, family structure, generosity of social benefits (and especially of family benefits) and pension generosity are proved to have a significant negative effect on the odds of poverty. Macro factors, such as the regional unemployment rate and regional GDP, have also been found to affect the individual at-risk-of-poverty status. The key question is thus the interaction between fiscal austerity and these micro and macro determinants of poverty.

The literature has also concluded that fiscal consolidation typically increases income inequality. If an increase in income inequality increases poverty too, then one may easily associate the increase in poverty indicators with fiscal consolidation.

For example, Ball *et al* (2013) analysed the distributional impacts of 173 fiscal consolidation episodes in 17 OECD countries from 1978-2009. They found that fiscal consolidation typically had significant distributional effects by increasing inequality, decreasing wage income shares and

increasing long-term unemployment. On the composition of fiscal adjustment, they found that spending-based adjustments had, on average, greater distributional effects than tax-based adjustments.

Woo *et al* (2013) largely corroborate these findings and also present further results demonstrating why the composition of austerity measures matters. They find that progressive taxation and targeted social benefits and subsidies introduced in the context of a broader decline in spending can help offset some of the adverse distributional impact of consolidation. In addition, they conclude that fiscal policy can favourably influence long-term trends in both inequality and growth by promoting education and training among low- and middle-income workers.

On the other hand, various structural reform measures adopted in parallel to fiscal austerity measures could alleviate the negative impact of fiscal consolidation on poverty. OECD (2011) finds that regulatory and institutional changes exerted a significant impact on the employment rate, and thereby on poverty. Yet, most policy and institutional reforms also contributed to widening wage disparities, as more low-paid people entered employment and the highly skilled reaped greater benefits from a more dynamic economy resulting from the reforms.

By analysing data up to 2010, OECD (2013) finds that taxes and benefits effectively compensated for part of the overall increases in market income inequality and poverty. But their impact varied for different population groups. On average, relative income poverty increased among children, youth and adults, but it fell among the elderly.

Therefore, fiscal austerity and poverty trends have to be put into the broader context of the determinants of poverty and the other measures, such as structural reforms, as the mere coincidence between various fiscal indicators and an increase in poverty does not necessarily imply causality. But even if there is causality (and we argue below that there is), conclusions for policy should be drawn very carefully.

Co-movements between relevant indicators

Establishing causal links between austerity measures and poverty is extremely complicated, as we have discussed, and is beyond the scope of this paper. We do, however, assess the co-movements of various indicators, which might shed light on the impact of fiscal consolidation and adverse social conditions.

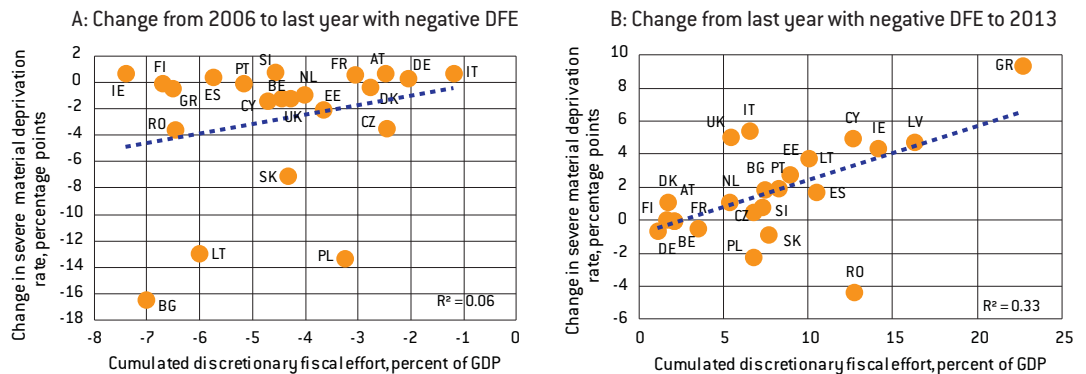
Figure 9 assesses the coincidence between the fiscal adjustment and the change in the severe material deprivation rates in two sub-periods: Panel A shows the expansionary fiscal policy period while Panel B shows the fiscal consolidation period. For each country we checked the start of the fiscal consolidation period and therefore set the exact timing of the variables shown on the two panels. During the first phase of the crisis, when most countries implemented fiscal stimuli (ie the

discretionary fiscal effort was negative), there was practically no relationship (Panel A). However, the relationship is more pronounced in the period of fiscal consolidation (Panel B), suggesting that more fiscal consolidation is associated with greater increases in poverty.

The relationship between fiscal consolidation and unemployment is similarly ambiguous in the period of fiscal expansion (Figure 10, panel A). In the period of fiscal consolidation, however, there is a strong relationship: more consolidation is strongly associated with greater increases in unemployment, indicated by Panel B of Figure 10.

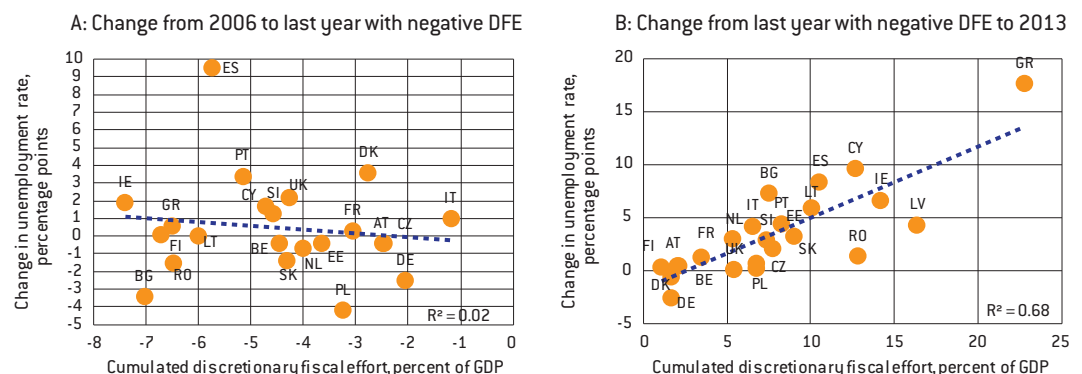
Furthermore, there is also a strong negative relationship between fiscal consolidation and GDP growth, as shown by Panel B of Figure 11; this relationship is corroborated by a more comprehensive empirical study by Blanchard and Leigh (2013).

Figure 9: Discretionary fiscal effort and severe material deprivation



Source: Bruegel using data from European Commission (2013) and Eurostat. Note: missing DFE values for Greece (2007-10), Hungary (2007-09) and Luxembourg (2007-11) completed with the change in structural primary balance. Last year with an expansionary DFE: 2008: Bulgaria, Estonia, Ireland, Lithuania, Latvia, Romania; 2009: Belgium, Czech Republic, Germany, Greece, Spain, France, Italy, Netherlands, Slovakia, Great Britain; 2010: Austria, Cyprus, Denmark, Poland, Portugal, Slovenia; 2011: Finland.

Figure 10: Discretionary fiscal effort and the unemployment rate



Source: Bruegel using data from Eurostat and European Commission (2013). Note: see notes on DFE under Figure 9.

Unsurprisingly, GDP and unemployment developments moved strongly together, as labour conditions are well known to be intrinsically related to the business cycle. This relationship holds both before and after 2009, as indicated by Figure 12.

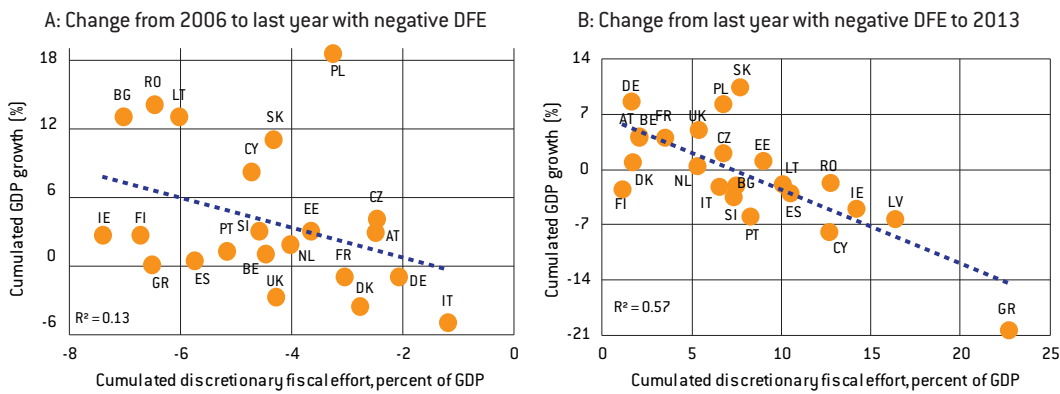
Consequently, to the extent that fiscal consolidation measures weakened GDP growth and increased unemployment, and if unemployment is a main determinant of poverty, one can conclude that fiscal consolidation has led to an increase in poverty. Gallie, Paugam and Jacobs (2003) and Matsaganis (2013) also established a link between long-term unemployment and poverty. Using a panel regression, Duiella and Turini (2014) found that long-term unemployment appears the most significant and robust explanatory factor for relative and absolute poverty, stronger than income-per-capita variables. They also found that social protection expenditure has a significant impact.

CONCLUDING REMARKS

Europe faces major social challenges: the share of severely materially deprived people, unemployment and the share of children living in jobless households is high, and European citizens perceive that poverty has increased. Within Europe, the degree of polarisation between the south and the north in terms of social indicators has widened, while the east-west gap, which was generally wide before the crisis, is narrowing according to some indicators but widening according to others. Whatever the reasons behind adverse social developments, the sad conclusion is that EU membership was not enough to guarantee social protection for many citizens.

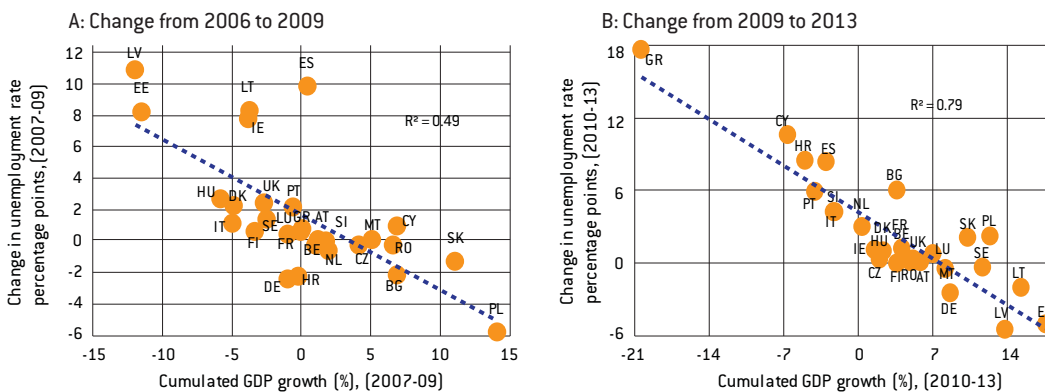
Poverty and unemployment have a negative impact on the current living conditions of a large segment of society, and also have major negative impacts on medium- and long-term economic growth. Long spells of unemployment erode skills and discourage labour market participation,

Figure 11: Discretionary Fiscal Effort and GDP growth



Source: Bruegel using data from Eurostat and European Commission (2013). Note: see notes on DFE under Figure 9.

Figure 12: GDP growth and unemployment rate



Source: Bruegel using data from Eurostat and AMECO database (February 2014).

thereby undermining a country's long-term growth potential. Youth unemployment is especially alarming because a long period of unemployment after graduation, when a worker should acquire the first skills in the workplace, can undermine whole careers – creating a lost generation and also having trickle-down effects on fertility rates and child support. Unemployment-related income uncertainty reduces fertility and when children grow up in families in which parents do not work for long periods or work irregularly, their opportunities are curtailed compared to children whose parents work.

One reason for the increased social hardship is fiscal consolidation. The high budget deficits and rising public debt levels that followed the global and euro-area financial and economic crises led most EU states to embark on a series of fiscal retrenchment strategies to stabilise their public finances. However, it is not easy to derive a conclusion for policy from this observation. EU countries should be divided into two major groups and conclusions for policy are different for each group.

- In one group, in which budget deficits were exceptionally high and public debts started to increase at a very rapid pace, there was no alternative to fiscal consolidation: the question was its speed and composition.
- In the other group, which includes most of the EU, the fiscal situation was within reasonable limits and macroeconomic stabilisation would have called for fiscal support at a time when the cyclical position of the European economy was deteriorating. In these countries fiscal consolidation, which started around 2009 and 2010, was premature.

The aggregate of country-specific fiscal strategies resulted in an overly tight fiscal stance for the EU as a whole. Since there is no fiscal authority at the EU or at least euro-area level to manage the aggregate fiscal stance, it is unlikely that the fiscal behaviour of the EU aggregate will be more conducive to cyclical stabilisation in the future.

When looking at the composition of fiscal adjustment, we found that spending on social protection was shielded relative to other spending categories, which suggests that governments have

tried to cushion the social impact of the crisis. This is good news. But we also concluded that bank rescue was very expensive for taxpayers. Bank rescue limited the fiscal resources available for other purposes and resulted in greater fiscal consolidation needs, with a negative impact on the economy and social conditions in Europe. The changes in taxes broadly followed the advice of the European Commission by moving the tax burden away from labour toward consumption, but since labour taxes are typically progressive (except in a number of central European member states), while the impact of consumption taxes is regressive (the poor consume a larger share of their income than the rich), such tax changes might have adversely impacted the poorest segments of the society.

Last but not least, the crisis has brought to the fore an increasing generational divide. Within social spending, elderly people were protected most during the crisis, possibly due to pension rules or their better ability to assert their interests. Social indicators for the elderly showed little deterioration and in fact the severe material deprivation rate for elderly people has declined during the past five years, which is certainly a benign development. However, social spending on families and children was preserved less than spending on the elderly, and social indicators suggest that the younger generation has suffered seriously: children who live now in households in which their parents no longer work and young people who are not in work or education. Spending on education was also cut substantially in the more vulnerable countries, which can have adverse impacts on the young. There is now a serious danger that a lost generation might develop in several member states, which would undermine medium- and long-term growth prospects for the whole continent, adding to social and human costs.

Forceful policies are needed, well beyond what has been announced so far, to improve social conditions in Europe and limit polarisation. These should include bold structural reforms, better use of the European economic governance framework, more demand promotion, and a revision of national tax/benefit systems for improved efficiency, intergenerational equity and fair burden sharing between the wealthy and poor¹⁴.

14. Our policy proposals are detailed in Darvas and Wolff (2014a and 2014b).

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