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Macroeconomic Report: Economic Recovery On Hold

Special Topic: Determinants of Job Creation in EU11: Evidence from Firm Level Data

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Acknowledgments

This Regular Economic Report (RER) is a semiannual publication of the Europe and Central Asia Region, Poverty Reduction and Economic Management Department (ECA PREM), The World Bank. It covers economic developments, prospects, and policies in 10 European Union (EU) member states—Bulgaria, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, the Slovak Republic, and Slovenia—and one forthcoming member, Croatia. Throughout the RER, for simplicity, we refer to this group of eleven countries as EU11.

The RER comprises two parts: a Macroeconomic Report, and a Special Topic on an issue of economic policy interest in EU11. The Macroeconomic Report is co-authored by Ewa Korczyc, Matija Laco, Sanja Madzarevic-Sujster, and Gallina A Vincelette (team lead), with inputs from: Stella Ilieva, Catalin Pauna, Emilia Skrok, Dilek Aykut, Raquel Letelier, Deborah Winkler, Thomas Farole, and Hernan Winkler. The Spotlight on "Employment Expectations as Indicators of Labor Demand in EU11" is co-authored by Erwin Tiongson and Ferhat Bilgin. The Spotlight on "Assessing Progress toward Achieving the Europe 202 Poverty and Social Exclusion Targets in EU11" is co-authored by Ihsan Ajwad, Kenneth Simler, Mehtabul Azam, and Basab Dasgupta. The Special Topic "Determinants of Job Creation in EU11: Evidence from Firm Level Data" is co-authored by Harald Oberhofer and Gallina A Vincelette. Maria Andreina Clower, Christopher Pala, and Budy Wirasmo provided invaluable assistance in editing and designing this report.

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Macroeconomic Report: Economic Recovery on Hold

Summary

The economic recovery of the EU11 countries was put on hold in 2012 as the external environment weakened and domestic demand subsided.[1] All EU11 countries, with the exception of Latvia, grew slower than in 2011. The overall GDP growth of 0.8 percent in 2012 was just a quarter of the pace recorded the year before. Domestic demand, in particular investment, abated, leaving net exports as the sole driver of growth. In addition, the number of EU11 countries in recession doubled to four, after the Czech Republic and Hungary joined Slovenia and Croatia.

Weak economic activity resulted in further job losses. Prolonged uncertainty, corporate-sector restructuring and recession in some EU11 countries led to increases in the unemployment rates across the region. After stabilizing at around 10 percent for most of 2010–11, the unemployment rate passed 11 percent in early 2013. Employment growth was negative throughout 2012, affecting especially construction, industry and public administration.

Even though net exports supported economic growth in 2012, the EU11 trade performance was disappointing. Both exports and imports decelerated as global trade was put on hold because of slow economic growth in the high-income countries and recurring bouts of uncertainty over the future of the euro. In early 2013, the EU11 region's imports and exports started declining as intra-EU trade flows decelerated. While the non-EU markets expansion continued to help generate favorable trade results for EU11, it was not able to compensate for the weakened export demand from the EU.

Net FDI flows to the EU11 countries remained stable. Gross external debt increased only modestly due to sovereign borrowing. Public debt-to-GDP ratios also increased slightly in 2012 on the back of slower-than-planned fiscal consolidations.

While the pace of fiscal tightening slowed in 2012, the EU11 governments largely delivered on their fiscal commitments. In addition, they continued to pursue medium and long-term fiscal structural reforms aiming at strengthening public finances.

EU11 central banks stepped up their expansionary monetary policies from an already accommodative stance in 2012. Despite substantial improvements in international financial markets since the summer of 2012, EU11 bank lending conditions to the real economy remained tight. The share of EU11 non-performing loans was still elevated, suppressing real credit growth. Inflation subsided due to weak domestic demand and a significant decline of energy prices.

There are indications that growth will return in 2013. The second half of the year is expected

1 EU11 refers to the 10 European Union (EU) member states—Bulgaria, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, the Slovak Republic, and Slovenia—and one forthcoming member, Croatia. Throughout this Regular Economic Report (RER), for simplicity, this group of eleven countries is referred to as EU11.

to bring the beginning of a firm economic recovery in Europe. Provided that the Euro area economy gains strength, the near-term outlook for the EU11 countries is also expected to gradually improve. While in 2013, the EU11 growth will still be below its potential—hampered by weak domestic demand, ongoing fiscal tightening, muted credit growth, and challenging external environment—it is projected to pick up in 2014. The labor market is likely to recover only in the medium term.

Maintaining prudent fiscal policy and supporting sustainable economic growth in EU11 remain a priority to mitigate the adverse impact of potential shocks from the Euro area. Fiscal policy is set to remain contractionary, but the speed of fiscal consolidation is expected to further slow and hence its effect on economic growth will be less negative as compared to 2012. Monetary policy will stay supportive of economic growth, with further cuts in policy rates in some EU11 countries and unconventional measures in others, even though the scope for further monetary easing is already tight.

Given the limitations of fiscal and monetary policy to boost growth, the EU11 governments should focus their attention on the unfinished structural agenda aimed at increasing their countries' economic potential. Reforms in the areas of labor markets and education, public administration, the business environment, public finance management and investment planning are some of the priority areas for the EU11 countries going forward.

GDP

Percent

	2012	2013	2014
EU11	0.8	0.8	2.0
Bulgaria	0.8	1.2	2.1
Croatia	-2.0	-0.4	1.5
Czech Republic	-1.3	-0.4	1.6
Estonia	3.2	3.0	4.0
Latvia	5.6	3.6	4.1
Lithuania	3.6	3.0	3.5
Hungary	-1.7	0.3	1.5
Poland	1.9	1.0	2.0
Romania	0.7	1.7	2.2
Slovenia	-2.3	-2.3	-0.1
Slovak Republic	2.0	0.7	2.0

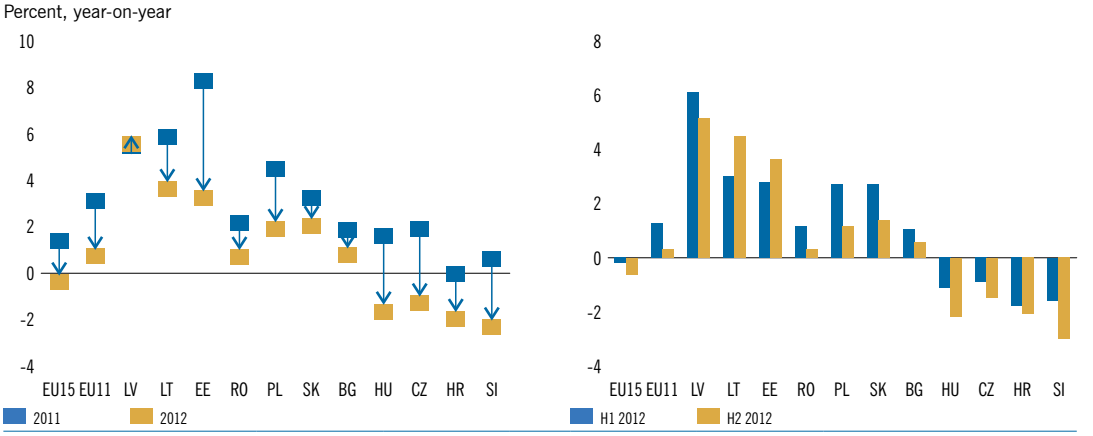
EU11 Recent Economic Developments

Lackluster Domestic Demand

The EU11 economic growth continued to slow down in 2012 to reach a mere 0.8 percent, a quarter of what it was the previous year. Domestic demand, in particular investment and lately household consumption, abated, leaving net exports as the sole driver of growth. Sectorally, what little growth there was stemmed from market services, with a marginal contribution of industry.

A slowing global economy, especially the recession in the Euro area, decelerated economic growth in the EU11 countries (Box 1).[2] Overall, EU11 year-on-year growth rate dropped from 3.1 percent in 2011 to 0.8 percent in 2012 (Figure 1). In EU15, economic activity contracted 0.4 percent last year. During the year, economic growth slowed in all EU11 countries, except in Estonia and Lithuania, which in the second half of 2012 recorded fast GDP growth. Even though Latvia's GDP growth slowed down in the course of 2012, it was the only EU11 country to grow marginally faster in 2012 than in 2011. Hungary and the Czech Republic went into recession in 2012, joining Slovenia and Croatia.

Figure 1. GDP rate of change in EU15 and EU11 Countries



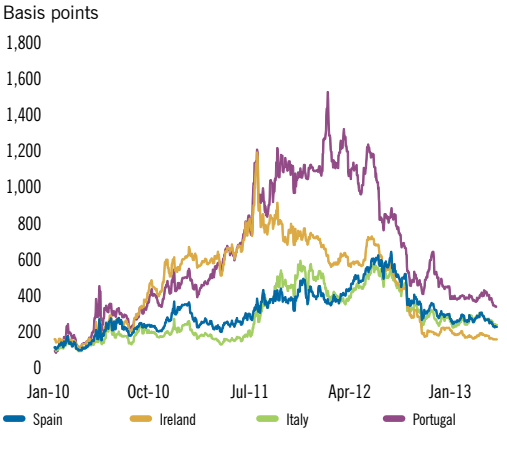
Source: Eurostat; World Bank staff calculations.

2 EU11 refers to the 10 European Union (EU) member states—Bulgaria, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, the Slovak Republic, and Slovenia—and one forthcoming member, Croatia. Throughout this Regular Economic Report (RER), for simplicity, this group of eleven countries is referred to as EU11. The group of EU15 countries comprises: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden, and the United Kingdom.

Box 1. External Developments in 2012[3]

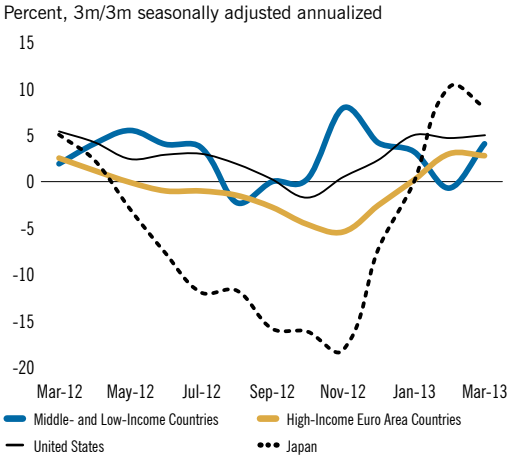
The economic policy efforts to restore financial stability in the high-income countries have led to improved financial market conditions, especially in Europe. Financial conditions have eased and remained stable after the European Central Bank's President (ECB) commitment in the summer of 2012 to do the necessary to save the Euro. Yields on Euro area- and sovereign-debt holdings have fallen from their mid-2012 peaks (Figure 2). The uncertainty generated by the Cyprus rescue effort, worries about Slovenia, and the elections in Italy have had only limited impacts on financial conditions in the rest of the Euro area.

Figure 2. Credit Default Swap Rates



Source: Bloomberg; World Bank staff calculations.

Figure 3. Industrial Production



Source: Datastream; World Bank staff calculations.

However, the economic policy measures are unevenly translating into real-sector growth (Figure 3). The progress in the Euro area towards assuring fiscal sustainability and the bold monetary policy steps taken by the Federal Reserve Bank in the United States (US), the Bank of England, the Bank of Japan and the ECB have started to have an impact in some high-income countries. The US economy grew by 2.5 percent in the first quarter of 2013 on the back of an improved housing market and net job creation. In Japan, loose monetary and fiscal policies have supported a rebound, with industrial production expanding by 8 percent in the first quarter of 2013 after contracting 7.2 percent in the last quarter of 2012.

However, while macroeconomic imbalances have narrowed, the policies are yet to deliver economic growth in the Euro area. The area remains mired in recession. But the pace of contraction has somewhat eased: the economy shrank by 0.2 percent in the first quarter of 2013, compared with 0.6 percent in the last quarter of 2012. Euro area trade imbalances have improved.[4] Fiscal imbalances are also on the mend, with Greece expected to balance its primary budget by the end of 2013 after showing a deficit of 10.5 percent four years ago.

3 Based on World Bank (2013). Global Economic Prospects. (June 2013).

4 Southern European EU members have narrowed their current-account deficits and Germany has decreased its surplus For example Portugal's current account deficit shrunk to 1.5 percent in GDP in 2012 from 12.6 percent of GDP in 2008. Over the same period, Greece's current account deficit fell to 3 percent of GDP from 15 percent four years earlier.

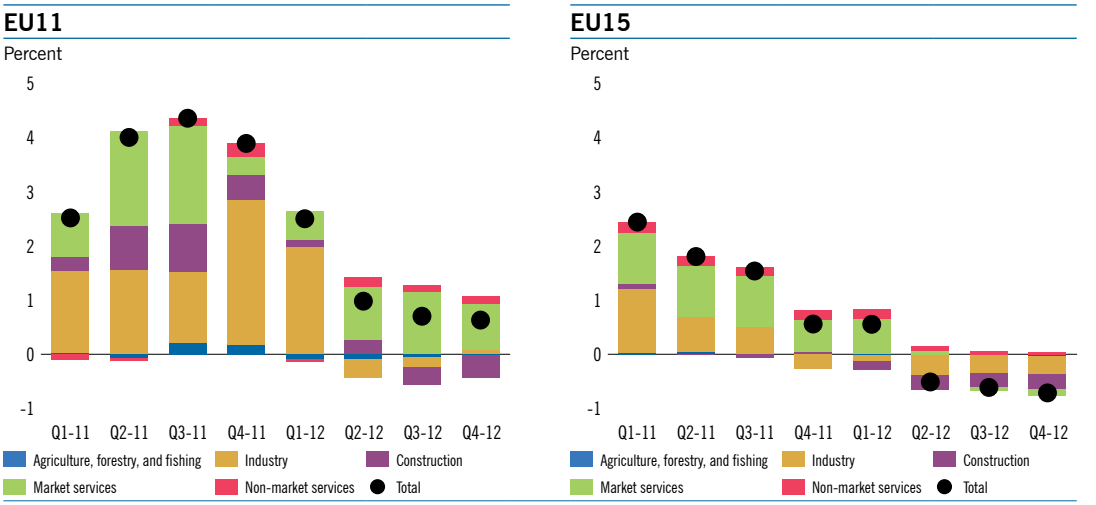
Middle- and low-income countries continued to grow in 2012, though unevenly.[5] The acceleration in output by 7.5 percent in 2012 in Asia led the rebound of global economic activity. China, Indonesia, and Thailand grew at a pace of 7.8, 6.2, and 6.4 percent respectively in 2012. Driven by strong consumption and high oil prices, the economic expansion in Russia (at a rate of 3.4 percent) in 2012 was faster than in Argentina (1.9 percent), Brazil (0.9 percent), and Turkey (2.2 percent).

5 Middle– and low-income countries include countries with income of less than $12,276 GNI per capita in 2010.

The pace of economic growth in EU steadily slowed over the past two years. The EU11 economic growth rates hit a three-year low as they declined from 3.4 percent in the third quarter of 2011 to mere 0.2 percent the end of 2012. The EU15 real GDP growth rate contracted for the last three consecutive quarters at roughly the same pace.

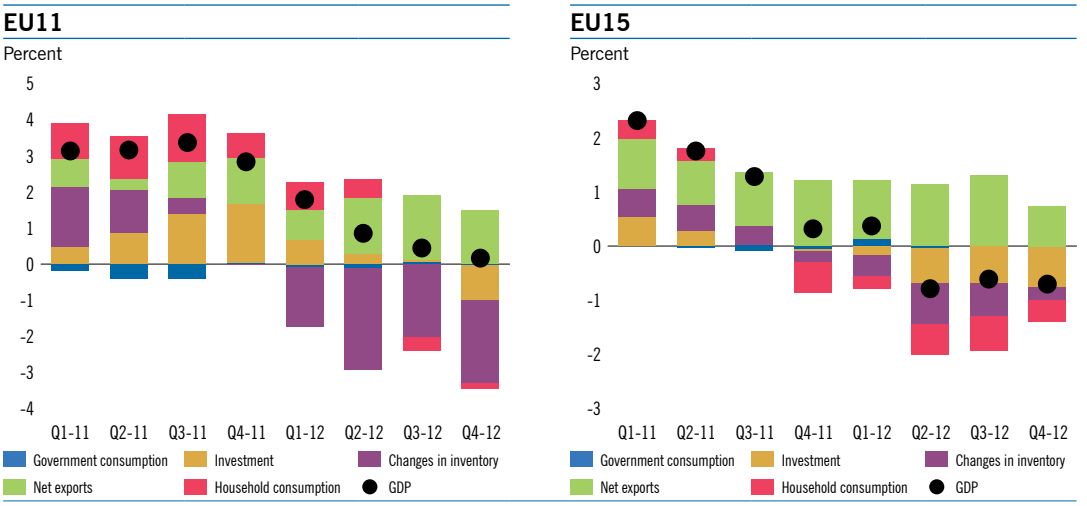
The decline in EU11 economic activity was driven by slowed industrial and construction sectors. In both EU11 and EU15, manufacturing and construction contributed most to the slowdown. The strongest fall in construction was recorded in Slovenia, Croatia, Lithuania, and Poland. The deterioration of sectoral activities mirrored the high deleveraging needs of the corporate sector in Slovenia and Croatia as well as the private sectors' delayed investment decisions and the inventory cuts in Lithuania and Poland. Unlike in EU15, a strong upward push in economic activity came from value added in certain services, in particular trade, transport and tourism-related activities in Bulgaria, Lithuania, and Poland. Information and communication activities supported growth in Latvia, Hungary, and Slovakia, while financial intermediation in Poland.

Figure 4. Contributors to GVA annual rate of change, EU11 and EU15



Source: Eurostat; World Bank staff calculations.
Note: In EU11 aggregate, Romania is excluded as there is no information for not seasonally adjusted data (reference year 2005).

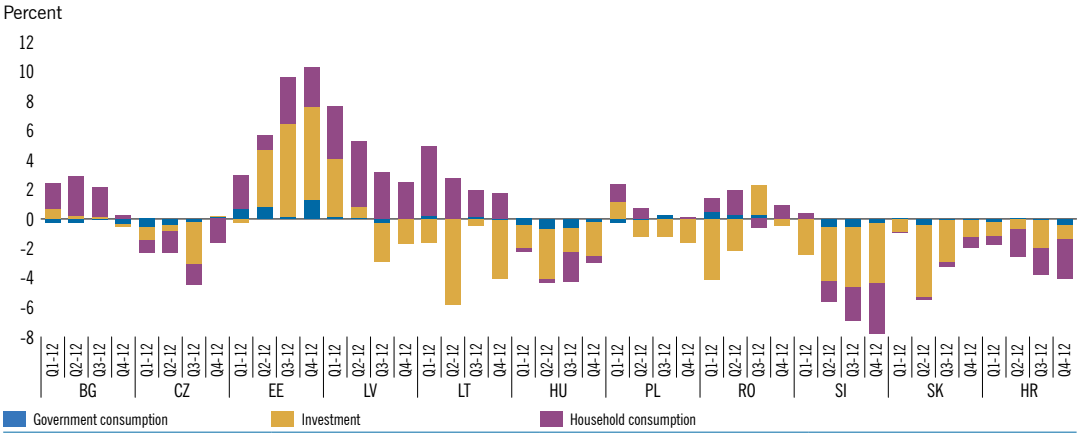
Figure 5. Contributors to GDP rate of change, EU11 and EU15



Source: Eurostat; World Bank staff calculations.
Note: The sum of contributions may not add to overall GDP due to statistical discrepancy.

Net exports were the sole engine of growth in both EU11 and EU15 in the second half of 2012. The contribution of exports to growth was positive in the EU11 region, but it concealed differences at the country level. In 2012, Bulgaria, Estonia, and Romania were the only EU11 countries where declining net exports reduced growth. In Bulgaria and Romania, this was due to the negative export growth, while in Estonia, to the strong import growth. In both EU11 and EU15, domestic demand registered a negative contribution to economic growth in 2012, strongly influenced by the inventory cycle on the back of ongoing

Figure 6. Contributors of Domestic Demand to GDP Growth, EU11 Countries, by quarters in 2012



Source: Eurostat; World Bank staff calculations.
Note: In the case of Bulgaria data refers to gross fixed capital formation, hence changes in inventories are not included.

destocking. While throughout the year investment in the EU11 countries fuelled by projects co-financed by the EU fostered growth, by the end of the year its contribution turned negative. Investment activity remained negative in the EU15 countries amid sluggish near-term growth prospects and tight credit conditions. Even though household consumption had been subdued since mid-2011 in the EU11, it was still an important driver of growth up to the second half of 2012, when it turned negative.

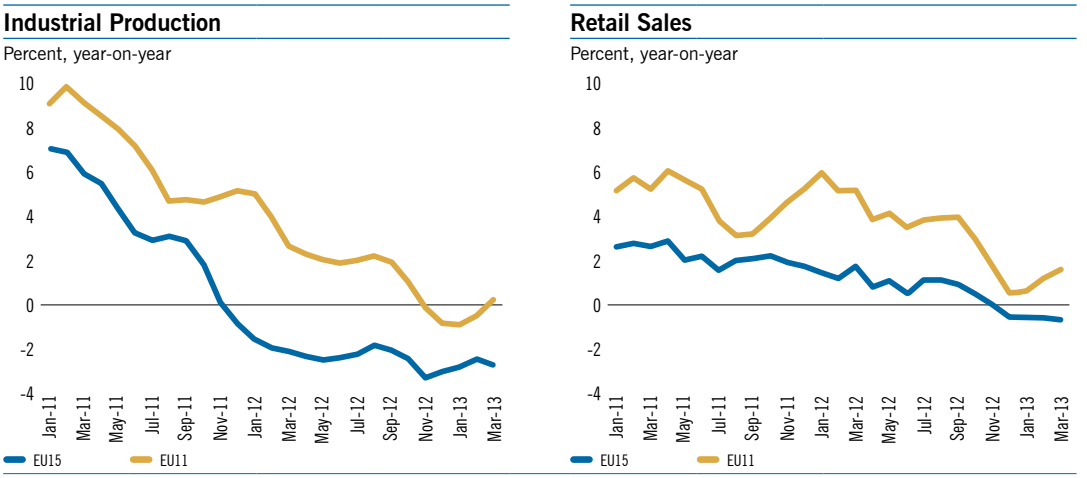
The EU11 economy lacked strong sources of demand growth in 2012. Most of the EU11 countries saw a reduction of their domestic demand, driven by decreases in private and public investment. Slovenia's economic growth in 2012 was the weakest among all EU11 countries, as its economy shrank by 2.3 percent on the back of steadily declining domestic demand. The Hungarian economy entered a second recession, with GDP contracting by 1.7 percent, which was led by a 3.7-percent fall in domestic demand, in particular destocking. Similarly, due to a strong downturn in consumer confidence, a drop in public investment and a weaker external environment, GDP declined by 1.3 percent in the Czech Republic. However, domestic demand did support the economic activity in some countries (Estonia and Latvia) where growth stemmed primarily from robust private consumption and in the case of Estonia very strong investment growth.

The EU11 economic activity remained weak in the first quarter of 2013. GDP estimates for the first quarter of 2013 point to a slight increase in the EU11 output. The GDP is expected to have increased at a rate of 0.6 percent, up from 0.2 percent in the fourth quarter 2012. This was due to the rebound of the Hungarian economy and to the higher-than-expected economic growth in Romania. In contrast, Poland's economy grew at a record low 0.5 percent. The pace of expansion also declined in Estonia and Lithuania, albeit from much higher levels.

Short-term, high-frequency indicators improved toward the end of the first quarter of 2013 in EU11. In 2012, the aggregate EU11 industrial production expanded by 1.4 percent, driven by manufacturing (Figure 7). However, the expansion was not uniform across the EU11 countries. While the industrial production surged by 8.1 percent in Slovakia and 6.8 percent in Latvia, it fell on average in 2012 in Bulgaria and the four countries in recession. Throughout the year, the pace of industrial growth weakened, but gained some strength in the beginning of 2013. Retail sales showed similar dynamics, slowing towards the end of 2012 and increasing somewhat in early 2013, driven by strengthened consumer confidence (Figure 7).

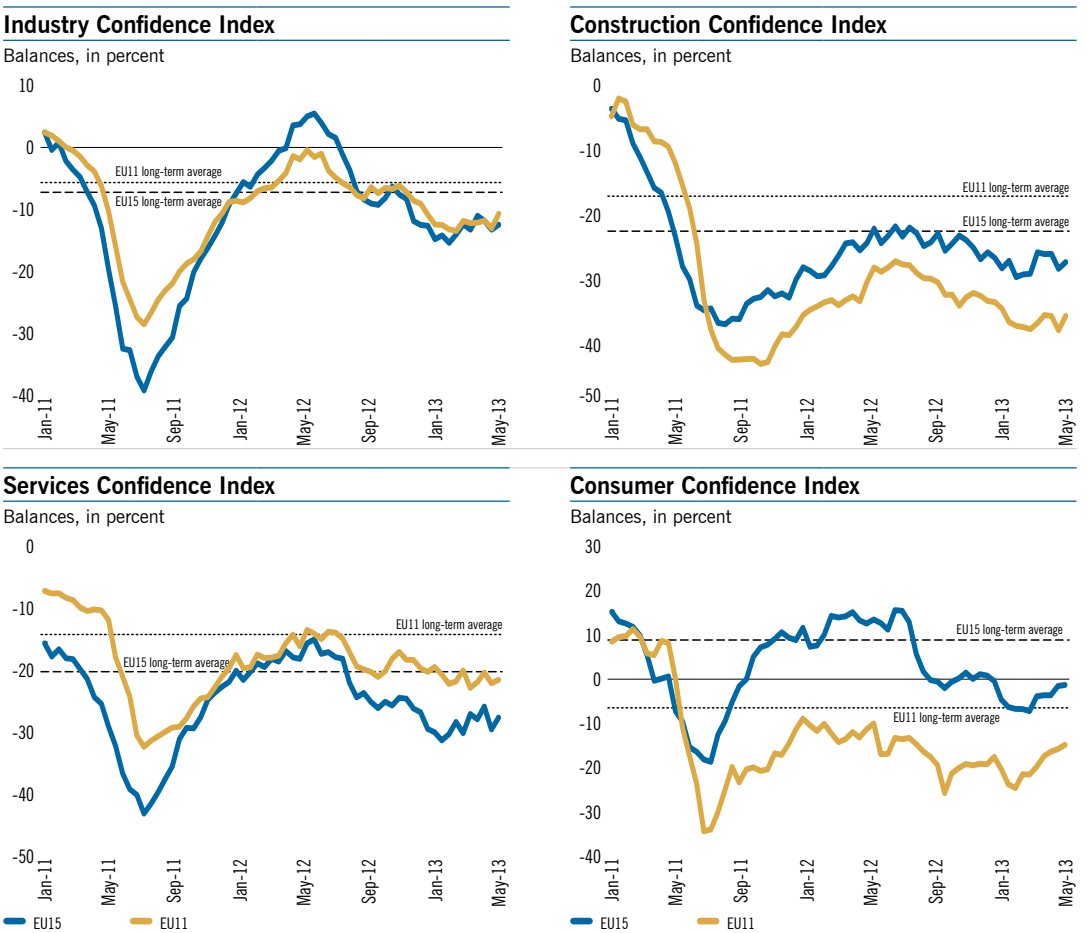
Business and consumer surveys paint a mixed picture. Confidence in industry remains below the long-term average, but the negative trend from late 2012 was put on hold in early 2013. Similarly, construction confidence decreased in 2012 based on weaker employment expectations and assessments of future orders, but has leveled-off recently. Survey indicators suggest subdued prospects for both private consumption and investment activity in the near future. Although consumer confidence recently improved, its current level remains below its long-term average. Weak confidence indicators in the retail sector persisted in the first quarter of 2013.

Figure 7. High-Frequency Indicators, working day adjusted, EU11 and EU15



Source: Eurostat; World Bank staff calculations.

Figure 8. Selected Economic Sentiment Indicators, EU11 and EU15



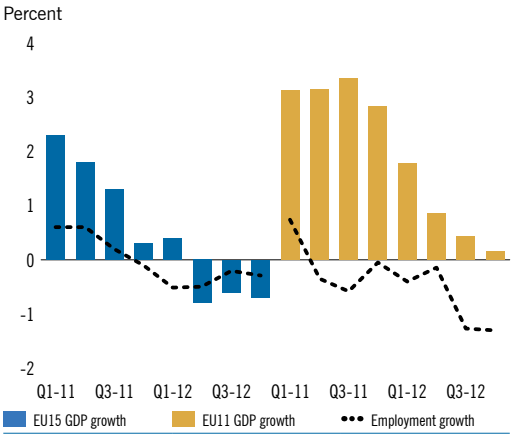
Source: European Commission services, World Bank staff calculations.
Note: Long-term average refers to the period from Dec-2002 to May 2013.

Further Job Losses

Economic activity in the EU11 was too weak to generate new jobs in 2012. Employment fell for a seventh consecutive quarter, affecting especially construction, industry, and public administration. The unemployment rate increased in the second half of 2012, driven by the economic slowdown and the continuing restructuring of the corporate sector.

Economic growth in the EU11 countries remained too sluggish to create jobs. The last quarter of 2012 was the seventh consecutive one of negative employment growth for EU11 (Figure 9). In 2012 alone, the region shed around 340,000 jobs, for a total of 840,000 since mid-2011. The losses in EU11 were higher than in EU15. Employment growth was either negative or close to zero in EU11 countries, except in Estonia, Latvia, and Romania. In these three countries, employment grew supported by relatively strong economic performance in the two Baltic countries and changes to the labor code in Romania. Despite recessionary pressures, employment growth was also positive in the Czech Republic.[6]

Figure 9. GDP and Employment Growth in EU11 and EU15, Year-on-Year



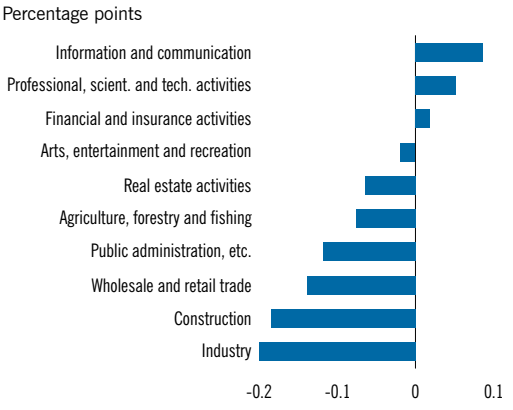
Source: Eurostat; World Bank staff.
Notes: Employment according to Eurostat, LFS.

Most sectors recorded job losses in 2012. Apart from the growing sector of market services, employment growth declined in all sectors (Figure 10). Jobs were lost in industry and construction, where the corporate restructuring was most pronounced. Employment in public administration also suffered as governments continued fiscal consolidation efforts, also through the public sector wage bill. In contrast, employment increased slightly in information technology and communications, in professional, scientific and technical activities, in administrative and support service activities and in finance and insurance. But these increases were not sufficient to compensate for the layoffs in industry and construction. Both employees and the self-employed contributed to the decline in employment growth. In EU15, the number of self-employed rose slightly (Figure 11).

The EU11 regional unemployment rate increased further in the second half of 2012. Then it reached 10.8 percent in March 2013, from 10.4 percent a year ago. While it

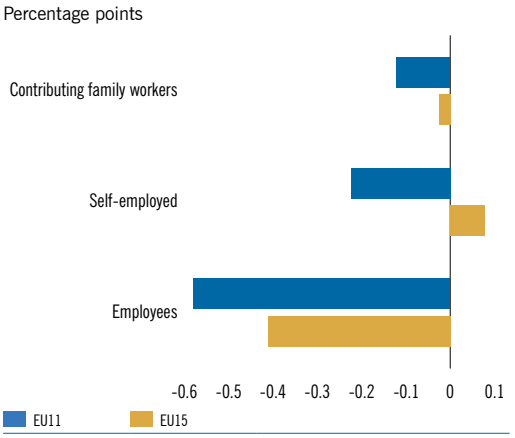
6 In the case of Czech Republic, the outcomes of the 2011 Census result in a break in the LFS series in 1Q 2012, but according to adjusted series employment growth was positive.

Figure 10. Sectoral contribution to employment growth in 2012 in EU11



Source: Eurostat; World Bank staff.
Notes: Employment according to Eurostat, domestic concept.

Figure 11. Contribution to employment growth by professional status in 2012 in EU11 and EU15

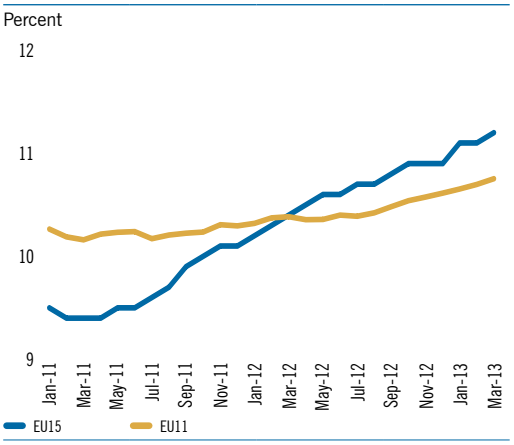


Source: Eurostat; World Bank staff.
Notes: Employment according to Eurostat, domestic concept.

remained lower than in EU15, there were over five million unemployed in EU11. The increase in unemployment over the last year was more pronounced in the EU15 (+0.8 percentage points) than in the EU11 (+0.4 percentage points).

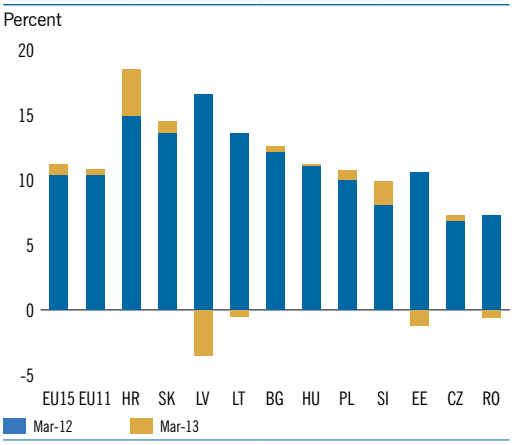
The regional aggregate concealed differences across the EU11 countries. Unemployment rates continued to fall substantially in the Baltic countries (albeit from very high levels) as these economies kept growing. Unemployment rate in Latvia went down by more than 3 percentage point since March 2012 and reached 12.4 percent in March 2013. In Romania, it

Figure 12. Unemployment rates, EU11 and EU15



Source: Eurostat; Monthly unemployment based on EU LFS, seasonally adjusted; own aggregation.

Figure 13. Unemployment rates in EU11 countries, March 2012–March 2013

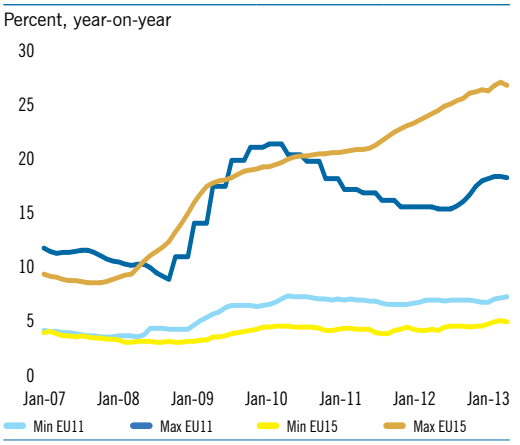


Source: Eurostat; Monthly unemployment based on EU LFS, seasonally adjusted; own aggregation.

fell slightly on the back of employment gains in agriculture and market services. In parallel, unemployment rates increased substantially in Croatia and Slovenia due to the prolonged recession and the ongoing restructuring of the corporate sector. The economic slowdown in Poland and Slovakia led to increases in the unemployment rate of around 1 percentage point over the last year. In Bulgaria and the Czech Republic unemployment rates remained fairly stable.

The differences in unemployment rates across the region reflect divergent macroeconomic performance of EU11 countries. With some EU11 countries growing strongly and some in midst of recession, the gap between the highest and the lowest unemployment rate in the region widened. While in March 2012, the unemployment gap in EU11 was 8 percentage points, it reached 12 percentage points in March 2013. In EU15, this gap was even larger at 20 percentage points reflecting growing divergence between the North and the South of the Euro Area (Figure 14).

Figure 14. Maximum and minimum unemployment rates in EU11 and EU15

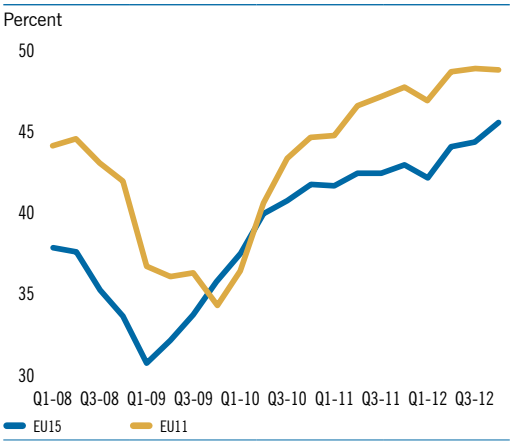


Source: Eurostat; World Bank staff.

Long-term unemployment in the EU11 continued to rise in 2012. Long-term unemployment (i.e. the share of people unemployed for longer than 12 months in total unemployment) in the EU11 has been on the rise since the end of 2009 (Figure 15). By the end of 2012, it climbed to nearly 50 percent in the EU11from 44 percent before the crisis. The recent hikes stemmed from weakening economic activity in 2012 and a negative employment creation. By the end of 2012, the share of long-term unemployed among the unemployed remained very high: the largest rate, close to 70 percent, was recorded in Slovakia, followed by Croatia with 64 percent. The lowest one was about 41 percent in Poland. Overall, EU11 long-term unemployment remained consistently higher than in EU15.

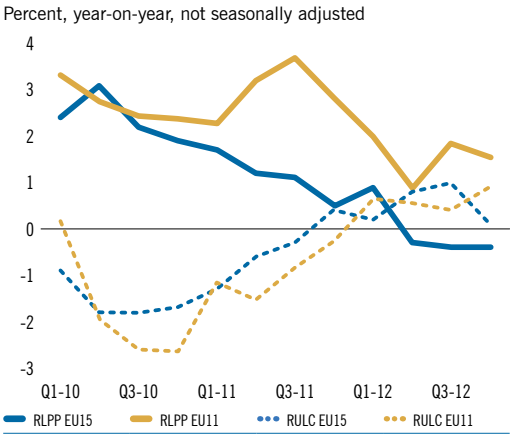
Growth in labor productivity continued to outpace growth in labor costs, thereby strengthening the EU11 region's competitive position in 2012, albeit with notable country-level differences (Figure 17). At the end of 2012, Lithuania, Bulgaria, and Latvia recorded

Figure 15. Share of long-term unemployed in total unemployed



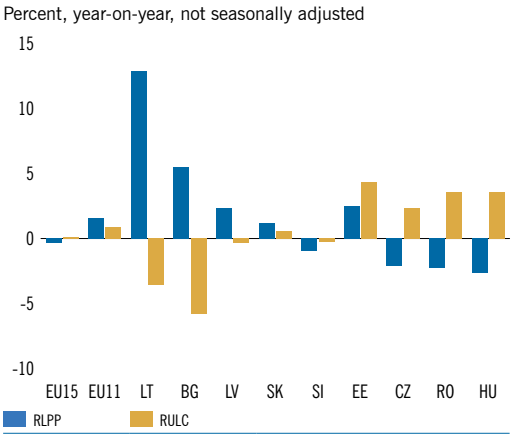
Source: Eurostat; World Bank staff.

Figure 16. Real Labor Productivity Per Person Employed and Real Unit Labor Costs, EU11 and EU15



Source: Eurostat; World Bank staff.
Note: EU11 without Romania and Croatia; EU15 after 1st Quarter 2011, without Greece.

Figure 17. Growth in Real Labor Productivity and Real Unit Labor Costs in 4th Quarter of 2012



Source: Eurostat; World Bank staff.

significant gains in productivity coupled with a fall in real compensation. However, in a number of other EU11 countries, real wages grew at a faster pace than productivity. In Hungary, Romania, and the Czech Republic, real wages continued to grow while productivity declined. The loss of productivity in these three countries was ascribed to an increase in the net employment creation. In Hungary, the rise in real wages did not translate in recovery of overall domestic demand, while in Romania its effect was marginally positive on household consumption. In the case of Czech Republic, the positive growth of real wages is to be attributed to one-off effect related to tax avoidance—a higher tax burden on high-income workers effective from 2013 resulted in exceptional bonuses paid out already at the end of 2012.

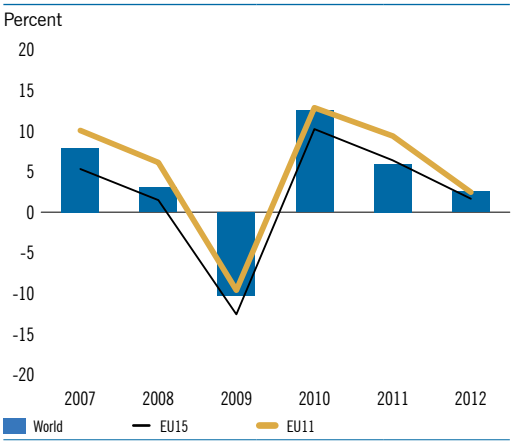
Weak Foreign Trade and Narrowing External Imbalances

While overall exports and imports in EU11 declined markedly towards the end of 2012, stronger linkages to non-European markets helped to generate favorable trade results and compensated partly for the weak import demand from the Euro area. Current account balances improved in the EU11 as trade balances continued to narrow. Net FDI flows to the EU11 remained stable and gross external debt increased modestly due to higher sovereign borrowing.

Despite global trade sinking to record low levels in 2012, it remained crucial for both EU11 and EU15. Global trade lost momentum in the second half of 2011 on the back of the slowdown in advanced economies, especially in the Euro area. The negative trends continued into 2012, with the volume of trade recording its slowest rate of growth since early 2000s (excluding the decline in 2009). Both exports and imports in EU11 and EU15 grew slower than the average global rate (Figure 18 and Figure 19). Nevertheless, even this modest growth in trade was a major contributor to economic growth in most of the EU11 countries.

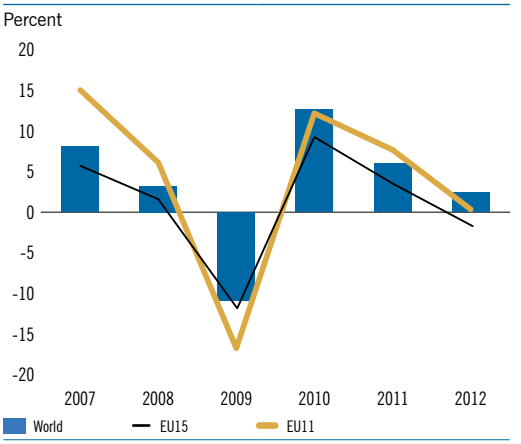
While overall EU11 trade performance weakened steadily in 2012, there was significant variation across countries. Exports from Latvia, Lithuania, and Slovakia grew by double digits due to record-high harvests in the two Baltic countries and an increase in car exports from Slovakia. But exports were either stagnant or decreased slightly in Croatia, Slovenia, and Romania. On the import side, the Baltic countries and Bulgaria recorded the highest growth rates among the EU11 countries (Figure 21), driven by household consumption coupled with investment in Estonia. The declining trend in trade performance continued

Figure 18. Exports volume growth in 2007–2012



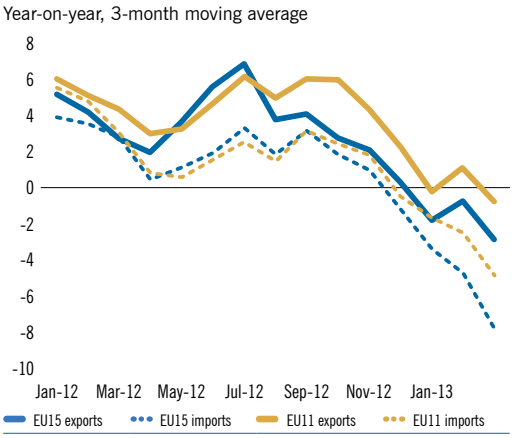
Source: Eurostat, World Bank staff estimates and calculations.

Figure 19. Imports volume growth in 2007–2012



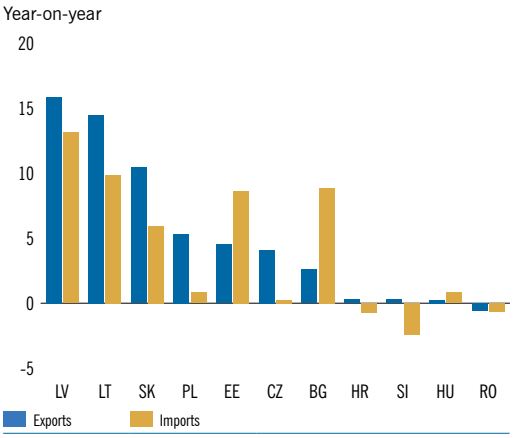
Source: Eurostat, World Bank staff estimates and calculations.

Figure 20. Exports and Imports Growth in EU11 and EU15



Source: Eurostat, World Bank staff estimates and calculations.

Figure 21. Exports and Imports Growth in EU11 countries in 2012



Source: Eurostat, World Bank staff estimates and calculations.

into 2013, when both exports and imports declined.

Trade was fueled by strengthened links with non-EU markets. Export growth started to decelerate in mid-2012, falling to zero in EU15 and 2 percent in EU11 by the end of 2012 because of the contracting Euro area economy (Figure 20). The positive export dynamics in EU11 were to a large extent driven by gains of new market shares in non-EU countries. The non-EU trade contributed over one half of the growth in exports in EU11 (Figure 21). Bulgarian exports of energy and base-metal products to non-EU countries contributed strongly.

Box 2. EU11 Goods Export Growth: The Changing Role of Traditional EU15 Markets

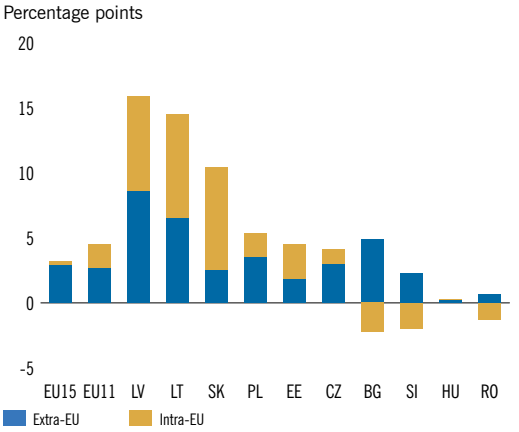
In 2012, non-EU15 countries accounted for more than 87 percent of the EU11 export growth. (Figure 22). Exports of EU11 goods grew by 4.5 percent on average in 2012. However, this rate masked strong differences between traditional EU15 and non-EU15 export destinations. Geographically, while EU11 intra-regional exports alone contributed a quarter to the overall EU11 export growth between 2011 and 2012, the biggest contributors outside the region were Russia (22.7 percent), Germany (11.9 percent), the United Kingdom (10.7 percent), Ukraine (6.4 percent), and the US (4.7 percent).

Sectorally, the groups of food and machinery accounted for almost one half of total EU11 export growth. Food and live animals contributed more than a quarter, followed by machinery and transport equipment, which accounted for more than 20 percent of the EU11 export growth (Figure 23).

Food and live animals:

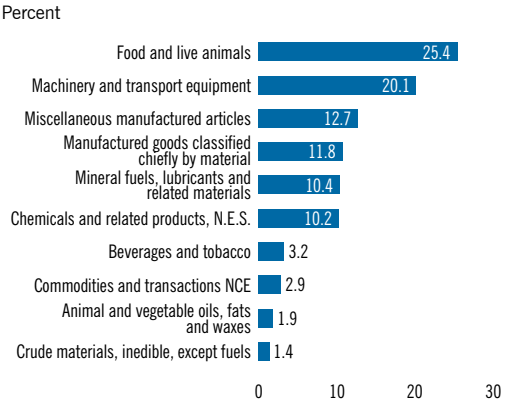
Both EU15 and non-EU15 destinations contributed a similar share to EU11 export growth

Figure 22. Contribution to Exports Growth, 2012



Source: Eurostat, World Bank staff estimates and calculations.

Figure 23. EU11 export contribution by product in 2011–12



Source: Eurostat, World Bank staff estimates.

(45 percent and 55 percent, respectively). Food export growth to non-EU15 markets was driven by cereals, sugars, vegetables and fruits. The most important destinations for food export growth were Iran, Germany, Russia, Libya, and Italy, confirming the importance of both non-EU15 and traditional EU15 markets in this sector.

Machinery and transport equipment:

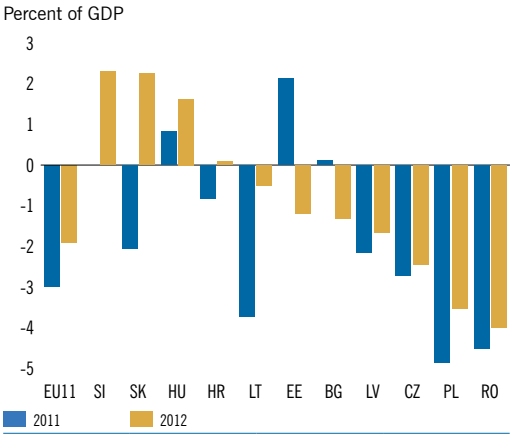
In this category, export growth was entirely driven by demand from the non-EU15 countries (32 percent), mainly Russia. This more than compensated for the 11-percent decline in demand from the EU15 markets. At the product level, growth of machinery and transport equipment exports to non-EU15 countries was mixed. The largest contributor was road vehicles, accounting for almost a third of export growth, followed by electrical machinery, general industrial machinery and equipment, and office equipment. Telecommunications, by contrast, fell 15.4 percent.

The EU11's exports to Russia alone, dominated by machinery and transport equipment, accounted for more than half of its export growth. While road vehicles accounted for almost 37 percent of the growth in this category, specialized and general industrial machinery contributed 13.4 and 12.6 percent, respectively. Electrical machinery contributed 10.2 percent and office equipment 9.3 percent.

Russia's WTO accession was a key factor driving the recent diversification of EU11 exports. Its strong contribution to EU11 machinery and transport equipment export growth is likely to have been influenced by the lower import tariffs in this sector, after the country's WTO accession in mid-2012. Russian tariffs (weighted average) on machinery and transport equipment in 2011 were generally lower than for other imports, ranging from 2.9 to 12.7 percent in Poland. But they varied strongly across products and exporters, so it remains unclear if tariffs alone explain Russia's growing importance as an importer of EU11 goods.[7]

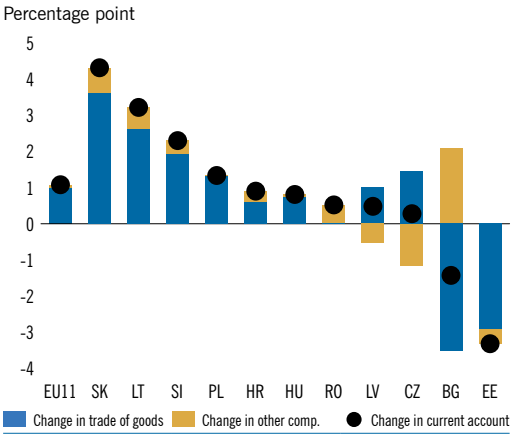
7 2011 is the latest year for which tariff data were available.

Figure 24. Current Account Balance 2011–12



Source: Eurostat, World Bank staff estimates and calculations.

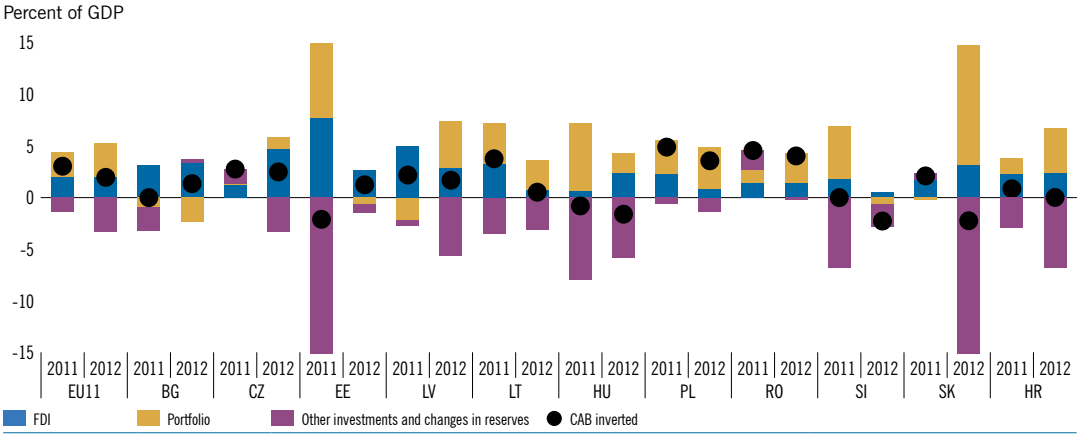
Figure 25. Change in Current Account Balance 2011–12 by components



Source: Eurostat, World Bank staff estimates and calculations.

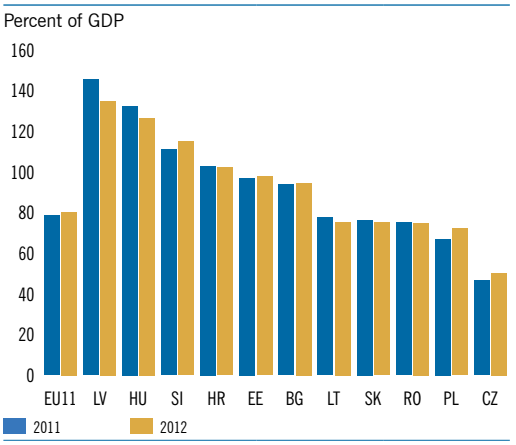
The EU11 current-account deficit narrowed in 2012 thanks to a positive trade performance. The overall current-account deficit shrank from 3 percent of GDP in 2011 to around 2 percent of GDP in 2012. All countries but Estonia and Bulgaria recorded improvements in their current-account positions, which were almost entirely attributed to changes in their trade balances (Figure 24, Figure 25). Changes in other components—notably improvement in the services account—further supported the narrowing of current account deficits in the EU11 countries, except in the Czech Republic, and Estonia. In the case of Romania and Bulgaria, the reduction in the income deficit (reflecting lower dividend payments abroad) helped cut the current-account deficit, though in Bulgaria, it was not enough to compensate for the widening trade deficit.

Figure 26. Current Account Financing



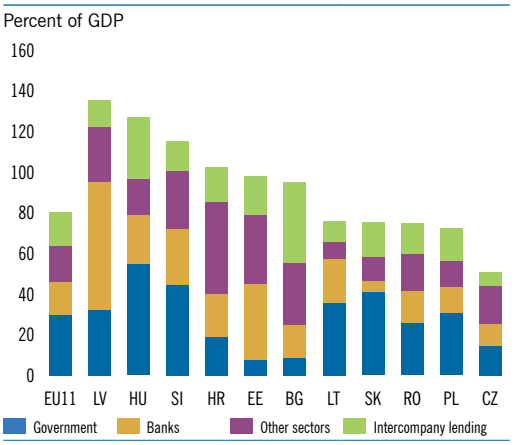
Source: Eurostat, World Bank staff estimates and calculations.

Figure 27. Gross external debt developments 2011–2012



Source: Central Banks, World Bank staff estimates and calculations.
Note: For Hungary data excluding SPEs.

Figure 28. Structure of the gross external debt in December 2012



Source: Central Banks, World Bank staff estimates and calculations.
Note: External debt of monetary authorities is included in the government sector.

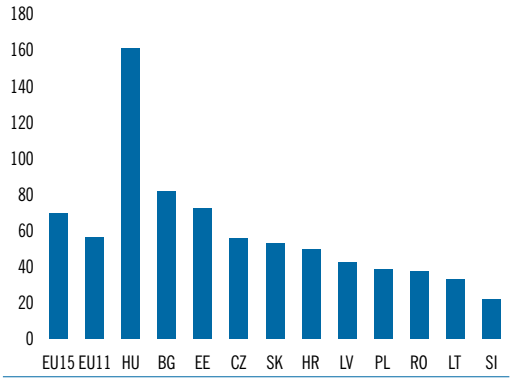
Current-account deficits remained adequately funded through FDI investments and capital transfers from the EU. Net FDI inflows to the region were stable in 2012 because of the relatively good economic performances of major investor countries (see Box 3) and fully covered the deficits in most EU11 countries. In Poland and Romania, large portfolio inflows in 2012, stemming from acquisitions of government bonds by non-residents, supported the financing of the current account deficits. Overall, portfolio investment increased in 2012, primarily driven by bond issuances by EU11 sovereigns (Figure 26).

Gross external debt-to-GDP ratios increased slightly over the last year, largely due to public-sector borrowing. In EU11, external debt increased marginally from 78.6 percent of GDP at the end of 2011 to 80.4 percent of GDP at the end of 2012 (Figure 27). Government external debt went up in all EU11 countries, most steeply in Slovenia and Poland. Banks continued to deleverage throughout 2012 in all EU11 countries. For the EU11 region, the increase in government external debt in 2012 contributed to a shift in the structure of total external debt. In Hungary, Lithuania, and Slovakia, public external borrowing at the end of 2012 comprised around one half of total external debt (Figure 28). In contrast, public external debt remained particularly low in Bulgaria and Estonia.

Box 3. Where does FDI come from?

Geographical breakdown of FDI flows helps to assess the patterns and volumes of foreign direct investment as well as the increasing interconnectedness of economies.

Figure 29. Stock of inward FDI as share of GDP, end-2011



Source: IMF Coordinated Direct Investment Survey, World Bank staff estimates.

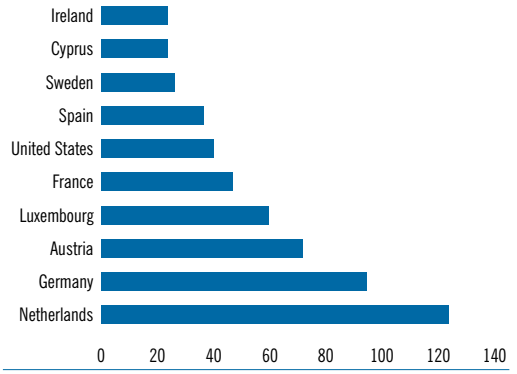
In recent years, the EU11 countries have been successful in attracting FDI. By the end of 2011, the stock of inward FDI in EU11 was 56 percent of aggregate GDP, with large differences across countries. Hungary's share of incoming FDI was well above 150 percent of GDP, while in the case of Slovenia it was mere 22 percent (Figure 29).[8]

The Netherlands, followed by Germany and Austria, was the top country of origin for the EU11 FDI inflows.[9] Among the top ten sources of FDI, which constituted over 70 percent of total FDI inflows to the EU11, the only non-EU country was the US (Figure 30). Both Netherlands and Luxembourg were considered "transit" sources as both have special legislations that provide incentives for multi-nationals to use them as pass-through.

Figure 30. Top ten sources of EU11 Inward FDI

in EU11

US$ millions

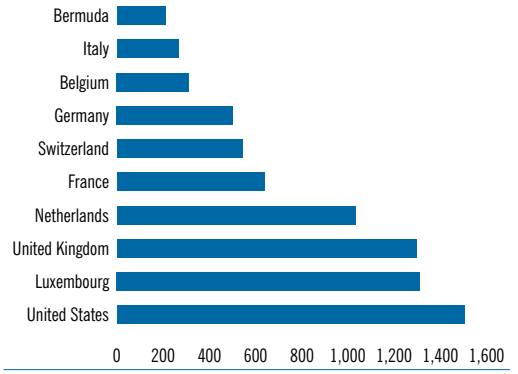


Source: IMF Coordinated Direct Investment Survey 2011; World Bank staff calculations.
Note: Top ten investors represent 70 percent of total FDI inflow worth 793 million US$ at the end-2011.

Figure 31. Top ten sources of EU15 Inward FDI

in EU15

US$ millions



Source: IMF Coordinated Direct Investment Survey 2011; World Bank staff calculations.
Note: Top ten investors represent 65 percent of total FDI inflow worth 11.4 billion US$ at the end-2011.

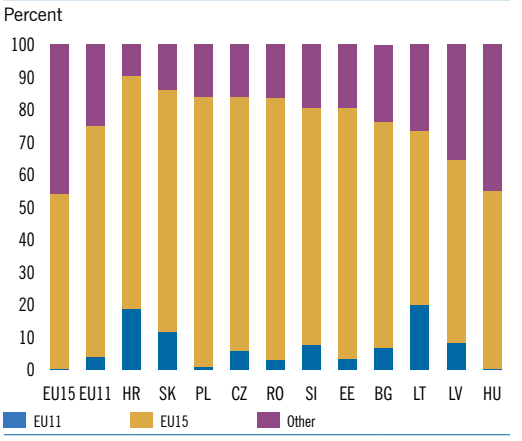
8 Data includes SPEs.

9 See IMF's Coordinated Direct Investment Survey (2011).

The high degree of EU concentration can be attributed to the integration of the European economies and geographic proximity. At the end of 2011, the EU11 region had a close to USD 800 million in inward investment positions and had invested USD 260 million abroad. In the case of the EU15 region, the top source of inward FDI was the US, followed by Luxembourg and the UK (Figure 31). The degree of FDI concentration in EU15 was somewhat lower than in EU11, with some 65 percent of FDI stemming from top ten source countries. At the end of 2011, the EU15 attracted FDI of close to USD 11.5 billion and it invested over USD 14.4 billion abroad.

The EU15 region was a major source for FDI for the EU11 countries, with wide cross-country differences. Overall, in EU11, over 70 percent of total inward FDI came from EU15 countries, while 4 percent represented intraregional FDI inflows and 25 percent came from other countries (Figure 32). In the case of EU15, intraregional FDI inflows represented over a half of total inflows, 46 percent came from other countries, while the share of EU11 inflows into EU15 countries was negligible (0.4 percent). In the EU11, Croatia had the highest share of European FDI—over 90 percent of FDI in Croatia came from the EU (with Austria having the largest share), but also with a hefty contribution from other EU11 countries (mainly due to Hungarian investment in oil industry). By contrast, in Hungary the large share of FDI (over 45 percent) came from non-EU countries, primarily the US, Canada and China, and also large resources originating from offshore financial centers such as Bermuda and Cayman Islands[10]. In the Baltic countries, the largest single source of FDI was Sweden. Germany was the top investor in Hungary, while Austria was in Slovenia and Croatia. In the rest of the EU11 countries, the prime investor was the Netherlands.

Figure 32. Share of incoming FDI in EU11 countries by regional origin, end-2011



Source: IMF Coordinated Direct Investment Survey 2011; World Bank staff calculations.

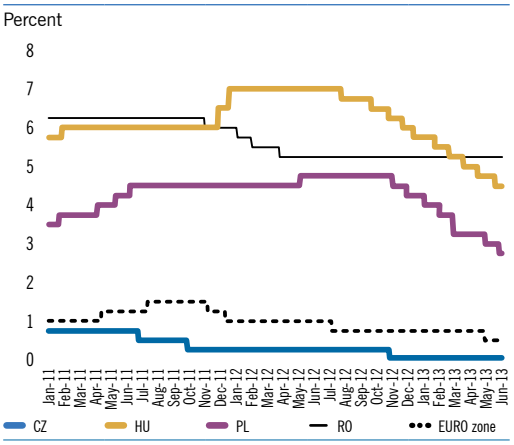
10 In the case of Hungary, FDI flow without SPE, suggest that over 70% of FDI stock originated in Germany.

Subdued Inflation and Further Monetary Easing

Monetary policy remained accommodative in EU11 throughout 2012, with policy interest rates further declining in 2013. Cuts in policy rates and declining sovereign risk delivered reductions in lending rates in some EU11 countries, while in others the results were muted because of the heightened risk aversion of lenders on the local market. Inflation subsided due to weak domestic demand and a significant decline of energy prices.

Macroeconomic weaknesses coupled with subdued bank lending warranted monetary easing in the Euro area. Against weak economic sentiment, the ECB's monetary policy stance remained accommodative. By May 2013, the ECB cut the interest rate on its main refinancing operations to 0.5 percent (Figure 33). This brought the policy rate to a historic low after eight months in which the rate was kept unchanged at 0.75 percent. In addition, the ECB committed to continue conducting its refinancing operations as fixed-rate tender procedures with full allotment, which aim to ensure ample liquidity for the banks.

Figure 33. Policy Interest Rates in Selected EU Countries



Source: Central banks; World Bank staff calculations.

Monetary policy in EU11 was also accommodative. Policy rates declined in an environment of ample liquidity, low inflation, and below-potential output. The central banks of Hungary and Poland were most active in reducing policy interest rates, attempting to support a recovery in output growth in each country (Figure 33). After the beginning of 2013, the Central Bank of Hungary decreased its policy rates five times, to 4.5 percent. Similarly, the Central Bank of Poland eased its monetary policy stance, in five steps in 2013 by reducing the policy rate from 4 percent at end of 2012 to 2.75 percent in June 2013. The Romanian Central Bank did not change its policy rate in the past months in order to anchor inflation expectations, capital flows and exchange rate volatility, but it pursued non-conventional measures to ease monetary policy.[11]

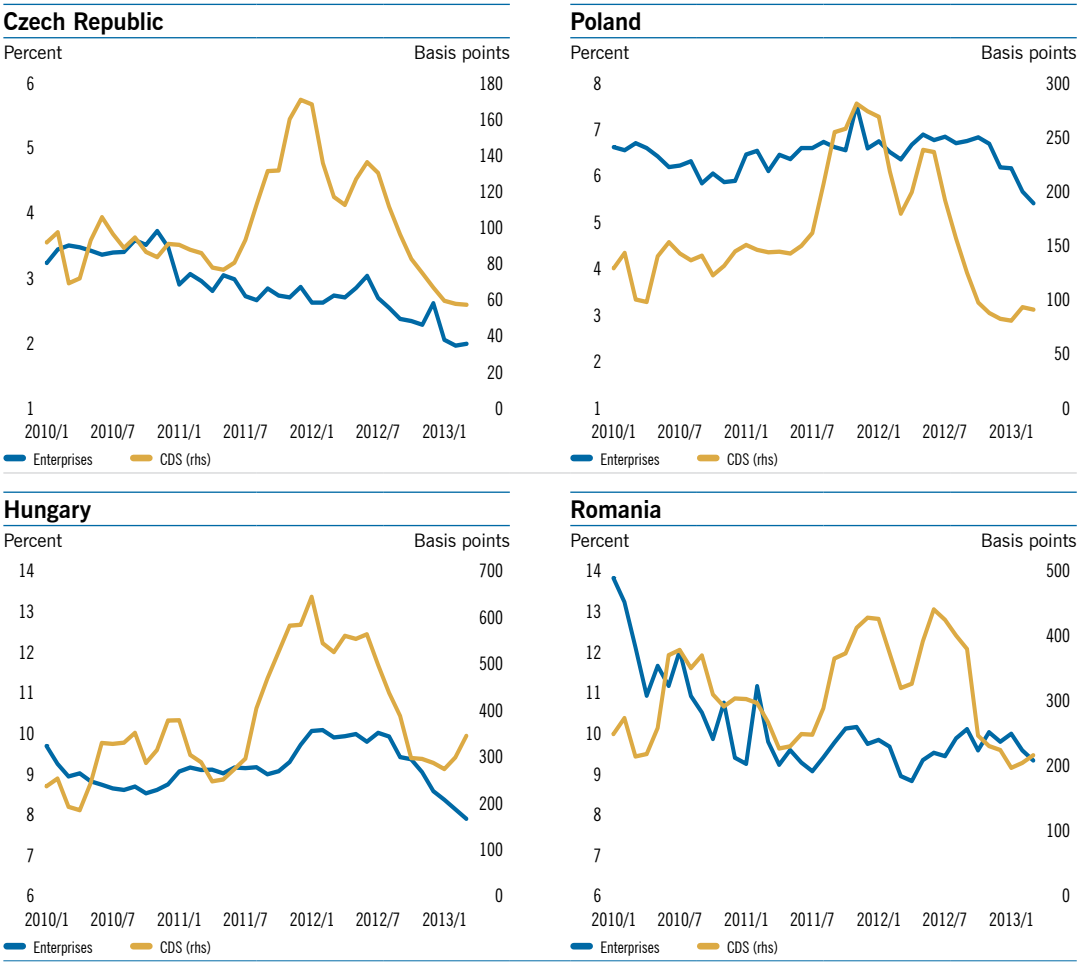
The monetary-policy easing worked with mixed results in EU11. In the Czech Republic, Hungary and Poland, lending rates declined as banks passed on their funding savings to their corporate clients while sovereign risks followed

11 To temper interest rates volatility on the money and banking markets, the NBR narrowed the symmetrical corridor by 1 percentage point around the monetary policy rate, thus reducing the NBR's lending facility to an annual 8.25 percent and increasing its deposit facility to 2.25 percent.

the policy rates' downward path since mid-2012 (Figure 34). In Romania, in contrast, the lending rate remained high (between 9 and 10 percent) while sovereign risk declined (Figure 34). Overall supply-side constraints may have impeded new lending in EU11 countries where local market lenders' risk aversion was high because of the inability to restore the quality of their balance sheets.

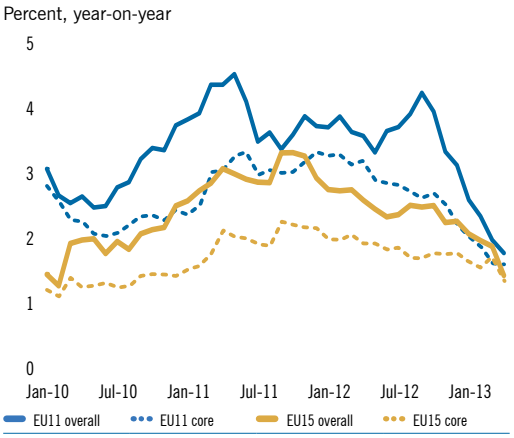
Inflationary pressures eased in the second half of 2012 and early 2013 in most EU11 economies as domestic demand weakened. The inflationary pressures of the first half of 2012, stemming from administratively set prices and food price hikes in global markets, gradually declined at the beginning of 2013 (Figure 35). The overall inflation rate in EU11 in the first four months of 2013 stood at 1.4 percent, around half the mid-2012 level, reflecting a significant fall in energy prices (Figure 36). In fact, Latvia registered annual deflation in April 2013, joining Greece—the only two countries in EU to record deflation.

Figure 34. Interest rates on new lending to enterprises and CDS spreads in selected EU11 countries



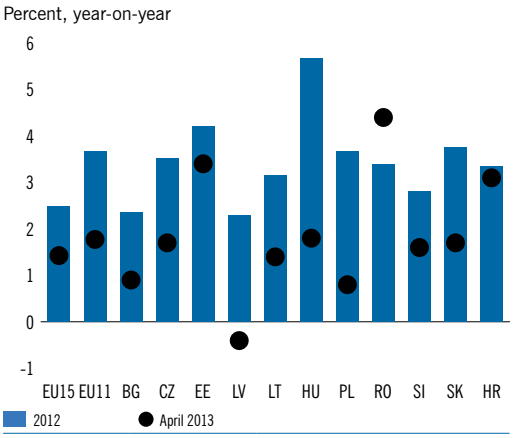
Source: EU11 Central banks; Bloomberg; World Bank staff calculations.

Figure 35. Harmonized Consumer Price Index (HICP), Overall and Core, EU15 and EU11



Source: Eurostat; World Bank staff calculations.
Note: Core inflation is defined as overall index excluding energy and unprocessed food.

Figure 36. Average HICP, EU15 and EU11

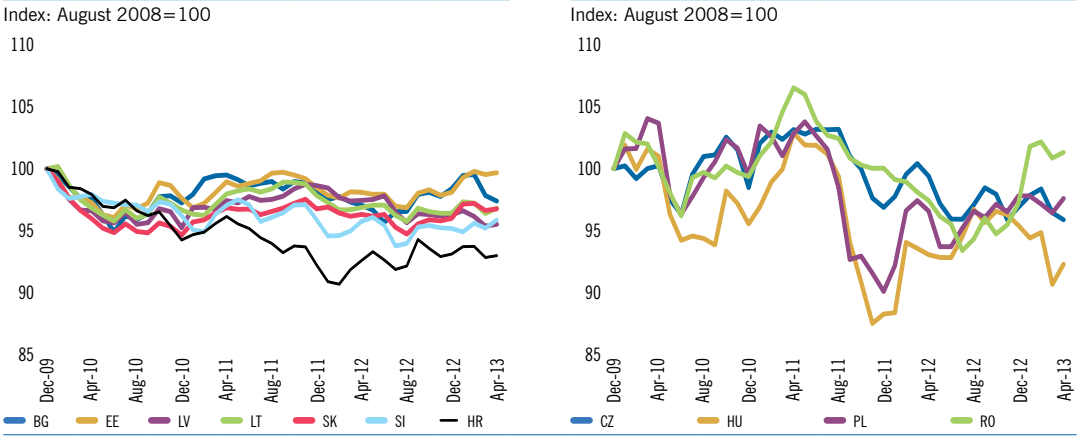


Source: Eurostat; World Bank staff calculations.
Note: Core inflation is defined as overall index excluding energy and unprocessed food.

The EU11 core inflation remained on a downward trend as well, reaching 1.6 percent in April 2013.

The real effective exchange rate (REER) in the EU11 countries followed divergent dynamics in 2013 (Figure 37). While price competitiveness improved in the first four months of 2013 in some countries, in others it deteriorated due to appreciation pressures. Compared to the end of 2012, the depreciation was most pronounced in Hungary (3.3 percent in April 2013). Export price competitiveness also improved in Bulgaria and the Czech Republic. Signs of real effective appreciation were evident in Romania in particular, where

Figure 37. Real Effective Exchange Rates, CPI Deflated



Source: BIS (broad indices comprising 61 economies); World Bank staff calculations.
Note: REER are deflated by CPI. Movement upward denotes real effective appreciation.

REER appreciated by 4.2 percent in April 2013 since the beginning of the year. In the same period, the REER appreciated by 0.7 in Slovenia, 0.8 in Slovakia, 1.6 percent in Estonia. The Euro area's REER inched up 0.5 percent.

A New Banking Model Emerging

Despite improved financial markets conditions and accommodative monetary policy, progress on the lending side was muted, with private-sector credit growth still subdued. On the funding side, the risk of disorderly deleveraging receded and banks continued to gradually shift their funding toward local sources. But a decline in credit coupled with rising levels of non-performing loans impaired the private sector's contribution to growth in EU11.

EU11 financial markets remained relatively calm and conditions stayed near the levels registered at the end of last year (Figure 38). In 2013, the financial markets continued to differentiate among the EU11 countries on the basis of their economic fundamentals and/or perceived risks. As such, Credit Default Swap (CDS) spreads for a number of EU11 countries remained around the 100bp level. In others, such as Slovenia, Hungary, Croatia, and Romania, they stayed at higher levels. In the beginning of 2013, CDSs registered spikes in these four countries due to their particular economic and political circumstances, although they have now returned to levels below 300bp (Figure 38). Currently, Slovenia has the highest CDS spreads in the region, reflecting the perceived risk in its economic outlook. For the rest of the EU11, CDSs spreads were by and large in line with sovereign credit ratings (Figure 39).

The ample availability of global liquidity did not translate into improved capital inflows to EU11 in 2012. Gross capital flows to the EU11 countries amounted to €12.5 billion in 2012marking a contraction of more than two-thirds relative to the same period of 2011 (Figure 40). While FDI remained stable throughout 2012, cumulative bank-related debt flows continued falling, but at a slower pace towards the end of the year (Figure 41). Portfolio investments remained robust, as capital market remained supportive of sovereign bond issuances.

European foreign banks continued to deleverage in the EU11 countries. Compared to end-2011, the international exposure by foreign banks dropped in EU11 banking and corporate sector as parent banks continued to reduce their presence in the region especially

Figure 38. 5Y CDS, EU11 Countries

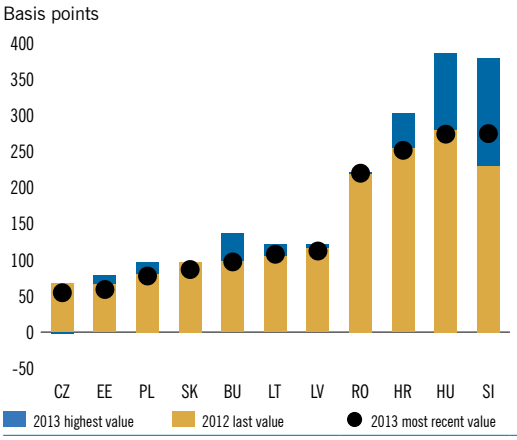
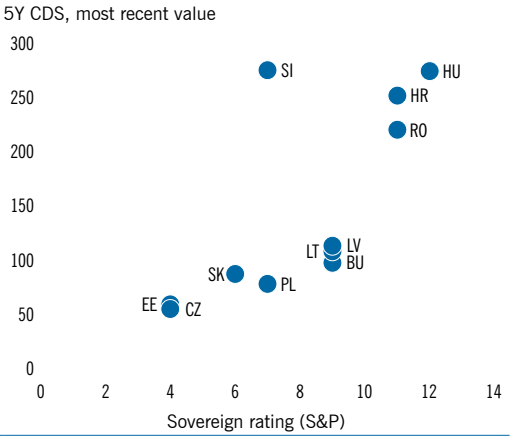
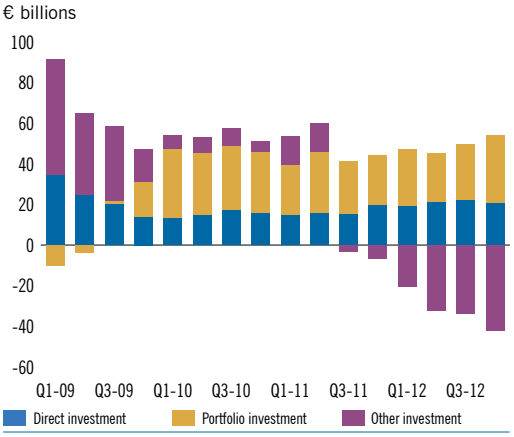


Figure 39. Sovereign credit ratings and 5Y CDS spreads



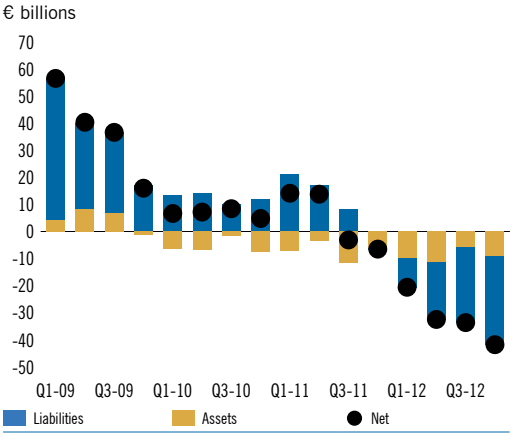
Source: Reuters; Bloomberg; World Bank staff calculations.
Note: Data as of May 7, 2013. Sovereign ratings were converted into points, with a lower value indicating a higher sovereign rating. The ratings range from 4=AA- to 12=BB.

Figure 40. Cumulative Gross Capital Inflows, EU11



Source: Eurostat; World Bank staff calculations.

Figure 41. Cumulative Other Investments, EU11



Source: Eurostat; World Bank staff calculations.

in the last two quarters of 2012 (Figure 42).[12] Throughout 2012, claims to the corporate sector declined by 6 percent to €242 billion, while those to banks decreased by close to 10 percent to €37 billion. In contrast, claims to the public sector increased by almost 10 percent to €79 billion. The picture varied substantially among the EU11 countries (Figure 43). Slovakia managed to attract sizeable inflows, especially to the public sector; while Poland and Hungary faced significant outflows from

12 As reported by BIS, cross-border institutions such as EBRD and EIB as well as institutional investors are not factored in these cross-border flows, and they are significant creditors of the EU11 countries. For more detailed information on banks deleveraging see the latest CESEE Deleveraging Monitor published by the Vienna Initiative – www.vienna-initiative.com

Figure 42. Total International Claims by Sectors

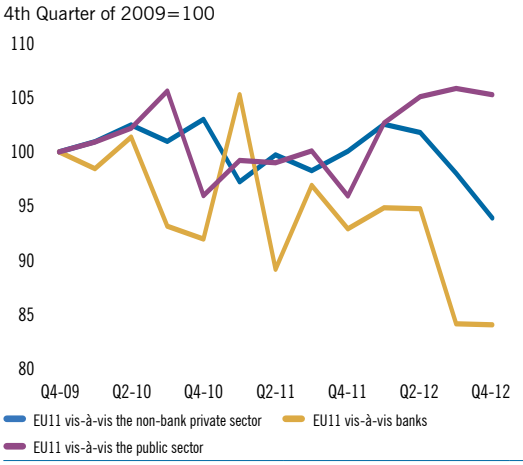
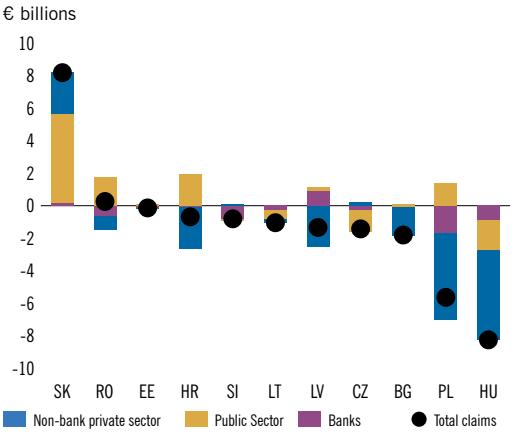


Figure 43. Change in Total International Claims by Country and Sector, 4th Quarter of 2011 to 4th Quarter of 2012



Source: Bank for International Settlements; World Bank staff calculations.
Note: International claims include cross-border and foreign currency claims on local residents.

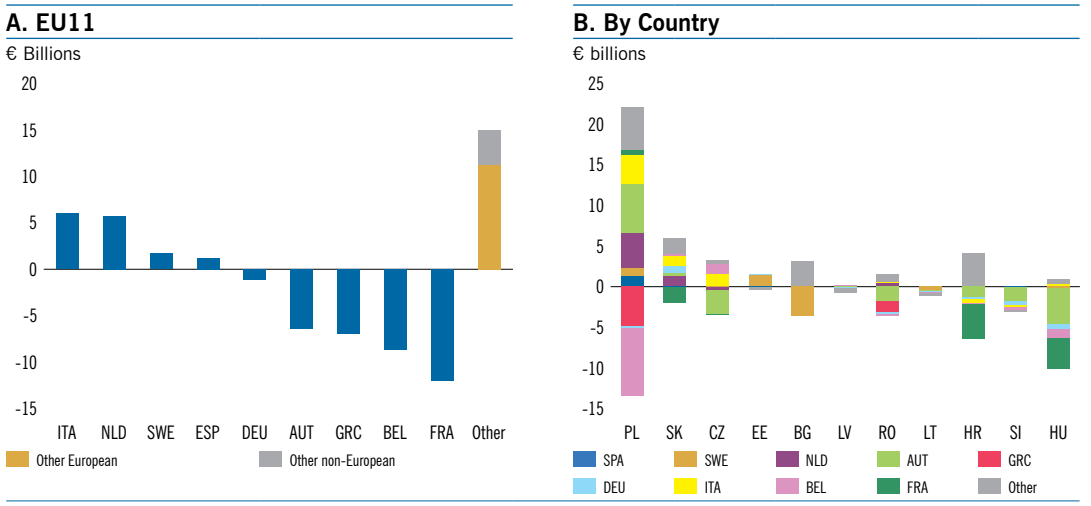
the corporate sector.[13] In Slovenia, almost the entire 2012 capital outflow came from the banking sector, which decreased by about a quarter compared to 2011.

Non-European countries increased their presence in EU11, while West European banks deleveraged selectively. During 2012, claims from non-European countries increased by 23 percent (Figure 44, A) to €20 billion, although they still represented less than 3 percent of total claims in the region. Claims from European countries decreased by 1.4 percent to €661 billion, but with variations depending on the country of origin. While Italy increased its exposure to the EU11 countries by 5 percent and The Netherlands by 16 percent, France and Greece reduced their positions by more than 20 percent (Figure 44, B). Austrian banks maintained their overall posture, while increasing their stake in Poland and reducing it in Hungary, Slovenia, the Czech Republic and Romania. Belgian banks did the opposite, reducing their exposure to Poland and increasing it in the Czech Republic.

Despite improved global financial market conditions, the continued deleveraging of European banks led to an increased reliance on local funding in EU11. Banks increasingly financed their loan books with core domestic deposits as deposits grew faster than loans in most EU11 countries (Figure 45). This trend is expected to persist, given that parent banks remain under market and regulatory pressures that prevent them from expanding their balance sheets at the group level and encourage their subsidiaries to keep diversifying their sources of funding. In fact, foreign liabilities, which include both parent and wholesale funding, decreased in the past 12 months and were partly compensated by the growth in local deposits (Figure 46). Notable exceptions were

13 In the case of Poland, the decline in claims to banks is due to the sale of stakes at Bank Pekao SA (owned by UniCredit) and BZ WBK (owned by KBC and Santander).

Figure 44. Change in Foreign Claims, 4th Quarter of 2011 to 4th Quarter of 2012



Source: Bank for International Settlements; World Bank staff calculations.
Note: Foreign claims include cross-border and local claims.

Figure 45. Annual growth in deposits and loans, 2012

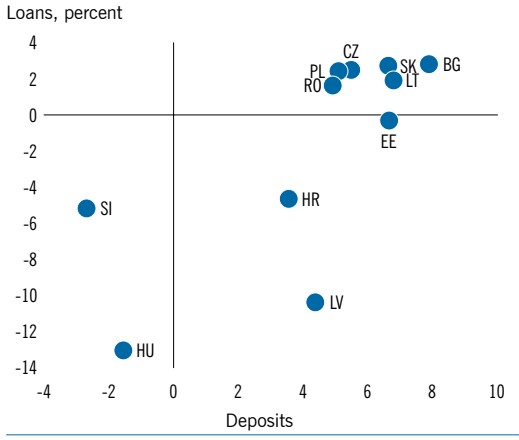
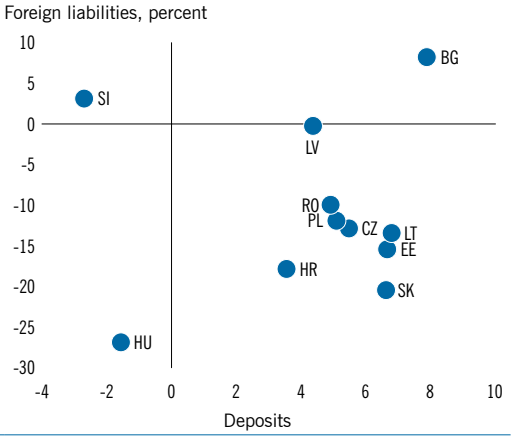


Figure 46. Annual growth in deposits and foreign liabilities, 2012



Source: IMF International Financial Statistics; World Bank staff calculations.
Note: Foreign liabilities of Euro area countries are liabilities to non-Euro area residents. In Bulgaria, the positive foreign liabilities growth was due in full to an one-off operation made by a single bank in November 2012.

Hungary and Slovenia, which showed negative deposit and loan growth. Slovenia increased its foreign liabilities in 2012 as foreign-owned banks recapitalized. However, the Slovenian system as a whole remained undercapitalized, particularly its dominant state-owned banks.

Despite notable cuts in policy rates throughout 2012 and 2013, real credit growth in the EU11 did not recover. Overall bank lending remained weak. After some signs of a pick-up in private real credit growth in 2012, the trend lost momentum in the beginning of 2013 and contracted by 2.7 percent year-on-

Figure 47. Real Credit Growth, EU11 and EU15

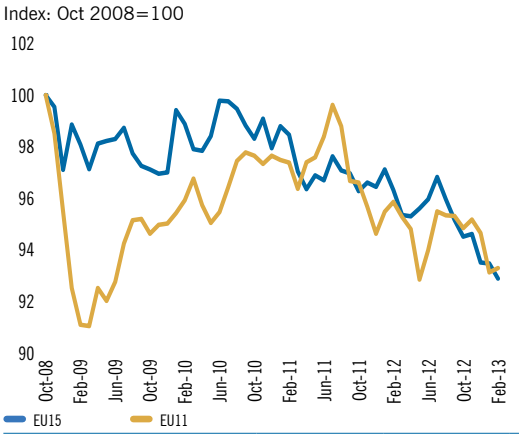
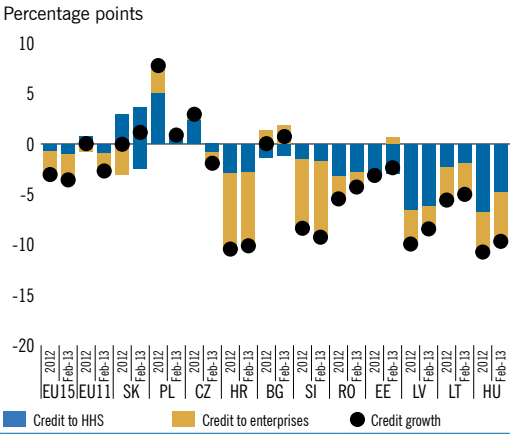


Figure 48. Contribution to Real Private Sector Credit Growth



Source: European Central Bank; World Bank staff calculations.
Note: In countries with floating exchange rates, exchange rate effects are excluded. Data on credit growth is CPI deflated.

Figure 49. Emerging Europe Bank Lending Conditions Index, by Categories

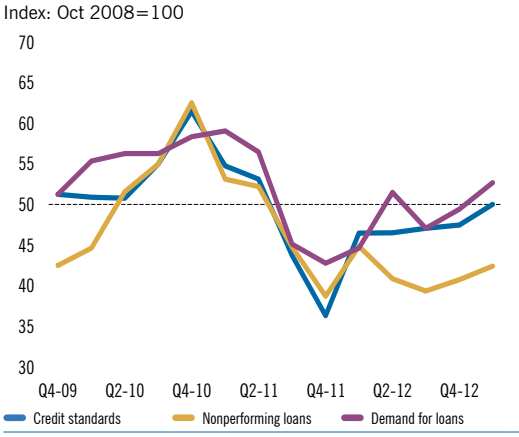
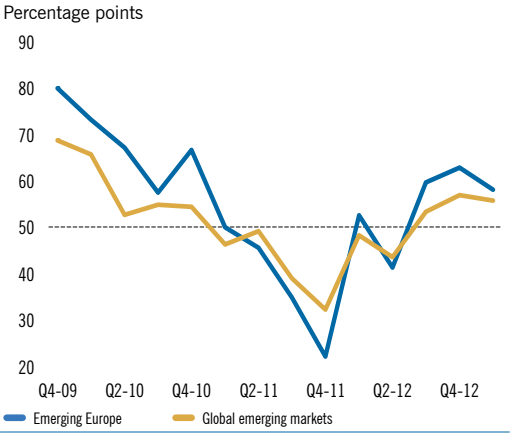


Figure 50. Funding Conditions in Local Markets, by Region



Source: IIF, World Bank staff calculations.
Note: 50=neutral

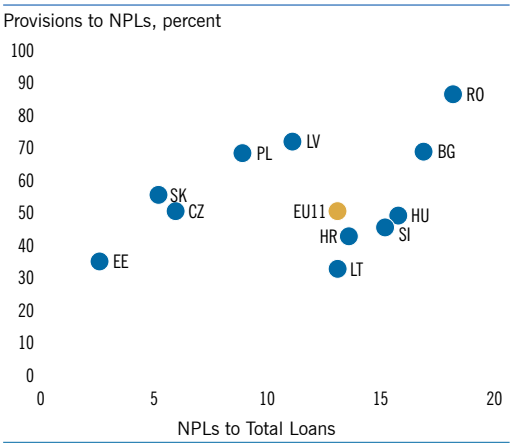
year. At the country level in 2013, real credit grew only in Slovakia on the back of credit to households. It accelerated at a rate of 8 percent in Poland in end-2012 but slowed to less than 1 percent in 2013. Croatia and Hungary experienced declines, and Slovenia and Latvia saw their credit contract (Figure 48). While in Croatia and Slovenia, the reduction was mostly due to a fall in lending to enterprises, in Hungary and Latvia it was blamed on curtailed access to finance of households. Real credit to non-government borrowers in Hungary continued a decline that began in 2009.[14]

14 For Croatia, the negative credit growth to enterprises reflects the assumed shipyards' loan liabilities, and the transfer of bad placements of one bank to a connected company. Thus, the nominal contraction excluding those effects would amount to -2.1 percent.

Overall lending conditions in EU11 improved in the first quarter of 2013, but not yet sufficiently to jump-start credit growth. The recovery in lending conditions in EU11 was mainly due to improvements in overall funding conditions, credit standards, and demand for loans (Figure 49). Domestic funding conditions eased substantially in comparison with other emerging regions (Figure 50). Additionally, banks relaxed credit standards on residential mortgages and stopped tightening their standards on business and consumer loans in the first quarter of 2013. The latest Emerging Markets Bank Lending Conditions Survey by the Institute for International Finance (IIF) suggested that the credit-tightening cycle might be coming to an end. Finally, demand for loans in EU11 was once again above the "neutral" threshold, partly due to the reduction of policy rates and the consequent decline in lending rates.

Non-performing loans (NPLs) remained elevated in 2012, further dampening credit growth. Reflecting challenging macroeconomic situation, NPLs reached worrying levels of above 15 percent of total loans in Romania, Bulgaria, Hungary and Slovenia by the end of 2012 (Figure 51). Their rise was driven by a mix of weak economic activity and borrower vulnerabilities such as foreign currency loans to unhedged borrowers and loans to construction and retail sectors. In contrast, NPLs decreased in the Baltics due to bad-loan resolution efforts. The loan-loss provisioning covered half of NPLs on average in the EU11 countries in 2012, with notable differences among the countries ranging from 33 percent in Estonia to 87 percent in Romania at the end of 2012.

Figure 51. Nonperforming Loans and Provisioning to Total Loans, EU11 countries, 4th Quarter 2012



Source: IMF Global Financial Stability Report April 2013; EU11 central banks; World Bank staff calculations.

Continued Fiscal Consolidation in a Challenging Environment

Against the backdrop of faltering growth across the region, the EU11 governments continued their fiscal retrenchment in 2012, but failed to meet their targets. Revenue underperformance, in particular from indirect taxes, delayed the fiscal adjustment. Public debt-to-GDP ratios increased further in 2012 as fiscal efforts proved insufficient to stabilize debt levels.

Despite faltering growth, EU11 governments proceeded with fiscal consolidation. The EU11 fiscal deficit was reduced by 0.4 percentage points of GDP to reach 3.4 percent of GDP in 2012. An adjustment of the same magnitude occurred in EU15, albeit from a higher initial level. With the exception of Poland and Lithuania, other EU11 countries required to correct their excessive deficits (Hungary, Latvia and Romania) managed to keep them under the threshold of 3 percent of GDP by the end of 2012.[15] Lithuania's fiscal deficit of 3.2 percent of GDP in 2012 proved to be in line with the EDP target. Lithuania implemented systemic pension reform allowing it to deduct the cost of the pension reform from the fiscal deficit. The Czech Republic, Slovenia, and Slovakia (another set of EU11 countries under the Excessive Deficit Procedure) recorded fiscal deficits of around 4 percent of GDP in 2012, which they planned to correct by the end of 2013.

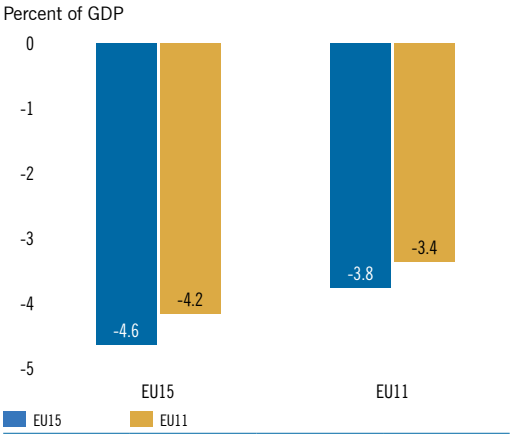
While the continuing fiscal consolidation in 2012 further strengthened the fiscal balances in the EU11 region, the speed of the adjustment was lower than had been planned in April 2012. When governments drafted their Stability and Convergence Programs in April 2012, both EU11 and EU15 had embarked on ambitious fiscal consolidation programs. But macroeconomic conditions deteriorated throughout the year and the fiscal adjustments turned out smaller than envisioned. In the case of the EU11 countries, the fiscal adjustment was 0.5 percentage points of GDP lower than originally planned compared to 0.9 percentage points for the EU15.

The slower-than-planned fiscal consolidation reflected revenue underperformance rather than an expansion in spending. In EU11, diminished revenue collection was the sole reason for a weaker fiscal balance (Figure 54). The decline in domestic consumption lowered receipts of indirect taxes and took a toll on revenue collection in 2012. Lower-than-planned expenditures did not compensate for the drop in revenues. By contrast, higher spending was the primary factor contributing to a higher than expected fiscal deficit in EU15.

Even though the EU11 fiscal deficit was wider than expected in 2012, five countries recorded better fiscal outcomes than they had planned. In Bulgaria, lower investment

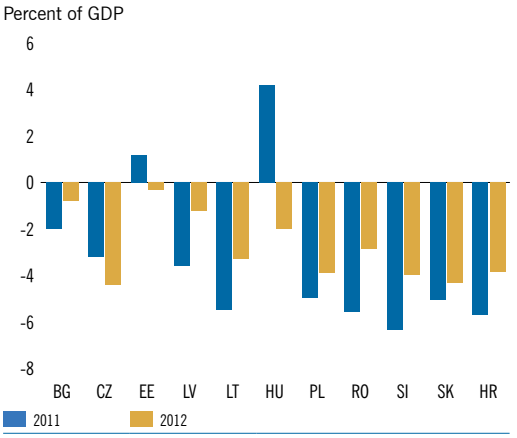
15 If a Member State exceeds the deficit ceiling, the excessive deficit procedure is triggered. This entails several steps—including the possibility of sanctions—to encourage the Member State concerned to take measures to rectify the situation by the deadline set by the European Council.

Figure 52. General government fiscal deficit, 2011–2012 in EU11 and EU15



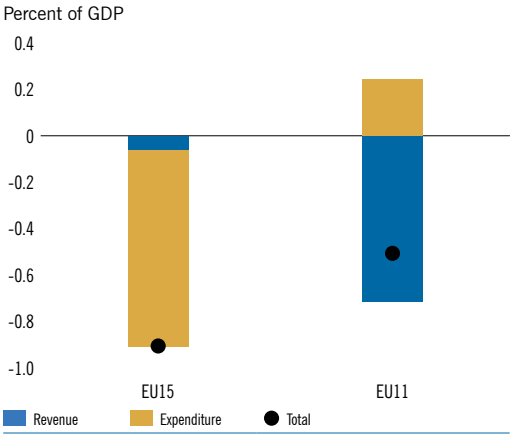
Source: Eurostat; Convergence/Stability Programs 2013, World Bank staff calculations.

Figure 53. General government fiscal deficit, 2011–2012 in EU11



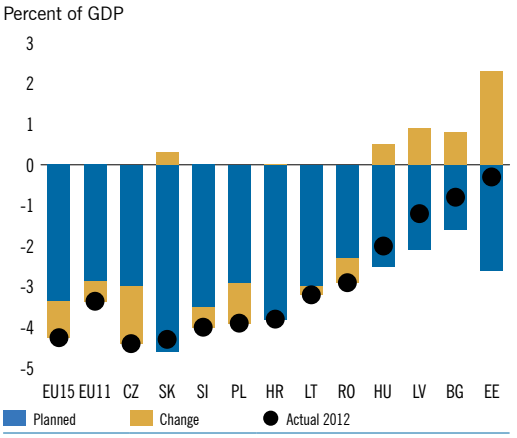
Source: Eurostat; Convergence/Stability Programs 2013, World Bank staff calculations.

Figure 54. General Government Fiscal Deficit Reduction in 2012, difference between planned and actual



Source: Eurostat; Convergence/Stability Programs 2012 and 2013, World Bank staff calculations.

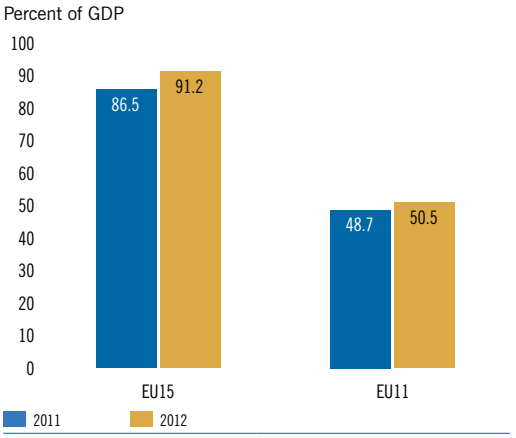
Figure 55. General Government Fiscal Deficit in 2012, planned vs. actual



Source: Eurostat; Convergence/Stability Programs 2012 and 2013, World Bank staff calculations.

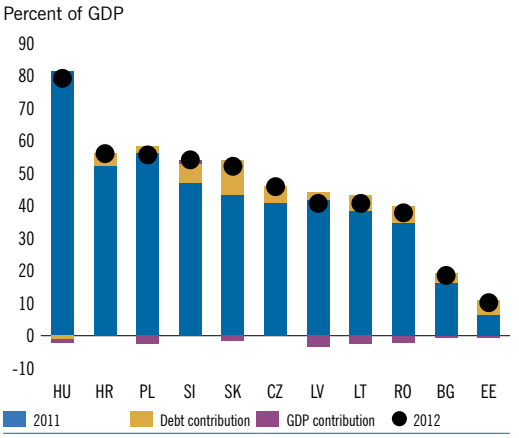
spending coupled with exceptionally strong VAT revenues helped reduce the fiscal deficit. Similarly, strong tax revenue collection and smaller-than-expected expenditures brought considerably better fiscal outcomes in Estonia. In Latvia, it was strong economic growth and a robust labor market recovery that pulled in higher-than-expected revenues, despite a mid-year cut in the VAT standard rate by 1 percentage point. In Hungary higher than expected savings on expenditure side overcompensated the loss of revenue, while in Slovakia, better-than-planned outcomes was due to a combination of revenue and expenditure measures.

Figure 56. Public debt in 2011–12 in EU11 and EU15



Source: Eurostat; World Bank staff calculations.

Figure 57. Contribution to changes in public debt in EU11 countries, 2011–12



Source: Eurostat; World Bank staff calculations.

In contrast, the fiscal outcomes in the Czech Republic, Poland, Slovenia, and Romania were worse than projected. In Poland, this was due to an unexpected decline in indirect tax revenues. In the Czech Republic, it stemmed from the adoption of the one-off financial compensation to churches (amounting to 1.5 percent of GDP) and the corrections related to the EU funds investment (0.3 percent of GDP)[16]. Similarly in Romania the corrections related to the EU funds resulted in wider fiscal deficit. For Slovenia, which undertook a large fiscal effort in 2012, the smaller slippage (as compared to its April 2012 plan) was due to higher expenditures on public wages and intermediate consumption.

In spite of the fiscal consolidation efforts in 2012, public debt-to-GDP ratios in EU11 and EU15 increased. The EU11 indebtedness rose of around 1.8 percentage points of GDP compared to 4.7 percent for the EU15. In addition, the public debt relative to the size of the overall EU11 economy remained far lower than in EU15. While Hungary, Poland, and Latvia recorded public debt-to-GDP ratios declines in 2012, public indebtedness increased in the rest of the EU11 countries. Except for Hungary, public borrowing increased and in most cases was not offset by the growth in nominal GDP. In the case of the Euro area countries, the contributions to the European Financial Stability Facility and to the European Stability Mechanism increased their debt.[17]

16 In the case of Czech Republic, the fiscal deficit corrected by one-off expenditures would amount to 2.5 percent of GDP in 2012 and not 4.4 percent of GDP.

17 Contributions to the ESM and the EFSF are based on Euro area member state shares in the paid up capital of the ECB.

Some Progress on Structural Reforms

Despite the ongoing macroeconomic challenges, the EU11 countries made progress in introducing structural reforms in 2012 aimed at increasing their growth potential. The structural agenda remains unfinished, however, to give EU11 a competitive edge in the world market.

Removing structural barriers in EU11 remains crucial to economic growth and job creation. Growth and income convergence with the rest of Europe are the ultimate goals of the structural reforms agenda in the EU11 countries. In 2012, the EU11 governments took steps towards achieving the goals recommended by the Council, in the following six priority areas.[18]

First, the EU11 countries undertook reforms to ensure sustainability of their public finances over the medium- and long-term. Six out of eleven countries worked on containing the cost of pension systems, including through the revision of disability pensions. Seven introduced measures to control the overall public-sector wages. Given the rise in unemployment, social benefit and employment policy reforms were focused on protecting the vulnerable and facilitating employment of the youth and elderly. Three countries raised the minimum wage in 2012 and two followed suit in 2013 to protect the low income cohorts.

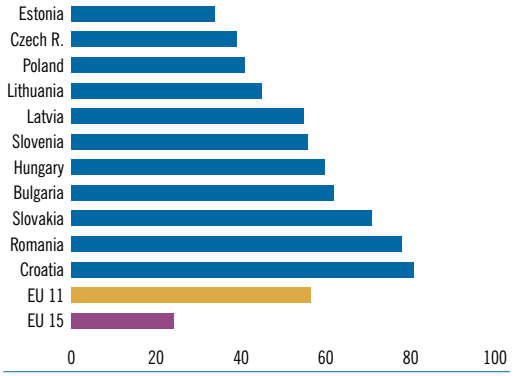
Second, in the area of public service delivery and administration, the EU11 countries made progress in improving public procurement and removing bottlenecks to the absorption of EU funds. Countries made efforts to optimize hospital costs, improve prevention, develop online health care, and step up training in human resources. Meanwhile, the analytical capacities of key ministries continued to be reinforced and regional offices were reorganized to make the management of public funds more transparent.

Third, EU11 countries continued pursuing reforms to make it easier to do business by simplifying business regulation, addressing lingering governance issues, and strengthening the enforcement of contract and property rights.[19] In the last year, five EU11 countries streamlined construction permits issuance and business registration, simplified trade-license issuance or improved access to financing for SMEs and startups. In the judiciary, real-time centralized and authorized access to judicial services showed signs of improvement and efforts are made to shorten the duration of court proceedings. Programs were launched to provide extra support to green firms for the development of innovative products and to introduce tax incentives for job-creation. Finally, several countries made efforts to raise the efficiency of their energy markets.

18 The reform progress in each priority area below is presented as reported in the EU11 governments' National Reform Programs (2013).

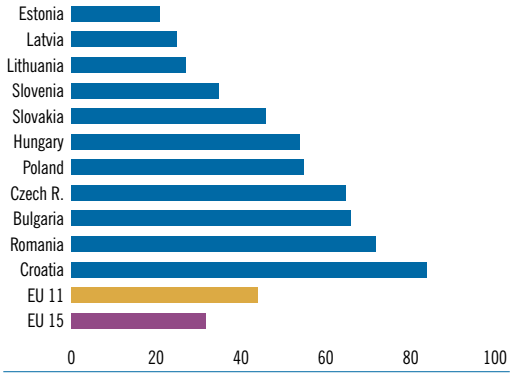
19 On the importance of business-friendly institutional environment in EU11, see the Special Topic Paper in this issue. Also, the World Bank (2013) Europe and Central Asia Flagship Report on Jobs.

Figure 58. Global Competitiveness Country Ranking, 2012–2013



Source: World Bank.

Figure 59. Ease of Doing Business Country Ranking, 2013



Source: World Bank.

Looking ahead, the EU11 countries need to continue their reforms in order to gain a competitive edge in the world market. Today, with some exceptions, the EU11 economies are still considerably less competitive than the rest of the EU[20], despite the continuous pursuit of economic reforms. They lag behind the EU15 average across all competitiveness components. Estonia has the highest overall competitiveness score among the EU11 countries, followed by the Czech Republic and Poland, while Slovakia, Romania and Croatia have the lowest rankings (Figure 58). In terms of the ease of doing business, Estonia, Latvia, and Lithuania perform better than the EU15 average while Romania and Croatia again rank last (Figure 59).

20 World Economic Forum (WEF) Competitiveness Survey 2012–2013 and Doing Business 2013.

EU11 Near-Term Outlook

Tepid Economic Recovery

Overall, the EU11 economic growth is expected to increase in 2013 by 0.8 percent before accelerating in 2014. Economic activity will remain constrained by weak domestic demand and unfavorable labor-market conditions. Net exports will likely remain the driver of economic growth in the near term. Fiscal consolidation will continue to dampen growth, but to a lesser extent than in 2012. Monetary policy is expected to continue to support growth, with different effects on the individual EU11 countries.

Overall, the EU11 economic performance is projected to gradually stabilize in 2013, before it picks up steam in 2014. The EU11 economies are expected to grow at 0.8 percent in 2013 (Table 1). The EU11 countries will retain their relatively stronger growth performance over EU15, which is, in the aggregate, contracting.

Table 1. EU11 Growth Prospects

Percent

	2012	2013	2014
EU15	**-0.4**	**-0.2**	**1.4**
EU11	**0.8**	**0.8**	**2.0**
Bulgaria	0.8	1.2	2.1
Croatia	-2.0	-0.4	1.5
Czech Republic	-1.3	-0.4	1.6
Estonia	3.2	3.0	4.0
Latvia	5.6	3.6	4.1
Lithuania	3.6	3.0	3.5
Hungary	-1.7	0.3	1.5
Poland	1.9	1.0	2.0
Romania	0.7	1.7	2.2
Slovenia	-2.3	-2.3	-0.1
Slovak Republic	2.0	0.7	2.0

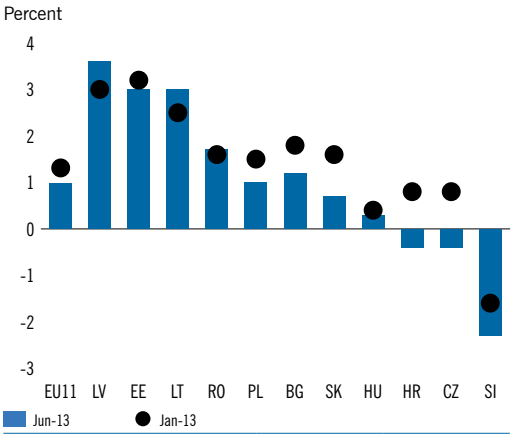
Source: World Bank staff.
Note: Forecasts for the EU15 and for the Czech Republic are from the Spring 2013 European Economic Forecast.

In mid-2013, prospects for EU11 look weaker than they did at the end of 2012. Weak domestic demand and the continuing recession in the Euro area have led to a less optimistic forecast compared with the one issued last January (Figure 60). With the exception of Latvia, Lithuania, and Romania, the 2013 outlook for all EU11 countries has been downgraded.

Economic outcomes in 2012 will influence the EU11's 2013 growth prospects. The weak outcome in 2012 suggests there will be a negative carry-over effect on 2013 economic growth for the Czech Republic, Hungary, Croatia, and Slovenia (Figure 61).[21] In comparison to the EU15 countries, where the carry-over is expected to subtract 0.4 percentage points from output in 2013, its overall effect will be neutral in EU11. However, the aggregate neutrality hides significant differences among the EU11 countries. While in the Czech Republic,

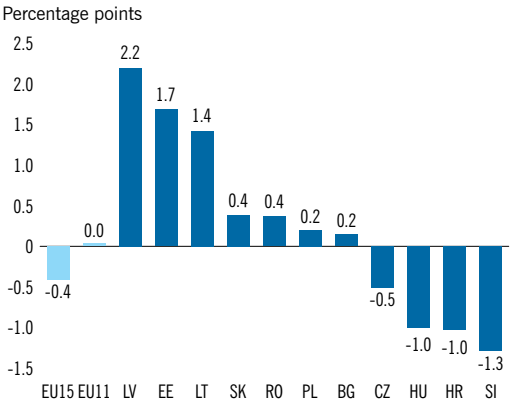
21 Carry-over measures the contribution to annual growth in the current year, of the quarterly expansion during the previous year. It is defined as the rate of growth that would be observed if quarterly GDP in the current quarter remained unchanged from the level of the fourth quarter of the previous year.

Figure 60. GDP Forecasts for 2013



Source: World Bank staff estimates.
Note: Jun-2013 presents the current estimate of economic growth; Jan-2013 refers to the 2013 estimate at the end-2012, as presented in the World Bank. 2013. EU11 Regular Economic Report (Issue 26).

Figure 61. Carry-over effects in EU15 and EU11 Countries



Source: Eurostat, World Bank staff estimates and calculations.
Note: Carry-over effects are calculated using Eurostat seasonally and working day adjusted GDP data.

Hungary, Croatia, and Slovenia, 2013 economic growth will be highly influenced by a negative carry-over effect, a positive carry-over effect will result in higher economic growth in the rest of the EU11 countries.

Weak domestic demand in the EU11 and the ongoing recession in the Euro area are likely to hamstring the overall EU11 economic growth in 2013. In most EU11 countries, domestic demand will remain weak due to the ongoing fiscal tightening and muted credit growth. In many countries, the 2007–2013 EU Financial Framework will still be driving up public investment, although insufficiently to compensate for the lackluster private-sector investment growth. Without a pronounced and lasting recovery in the Euro area, private investment is not expected to contribute strongly to economic growth in EU11. Despite low inflationary pressures and higher disposable income of households, private consumption will remain low until the labor market recovers. Faced with the ongoing economic uncertainly, households will continue to build up precautionary saving rather than spend. The Baltic countries, Bulgaria, and Romania are likely to be the exceptions to this trend; private consumption will remain a significant contributor to growth there.

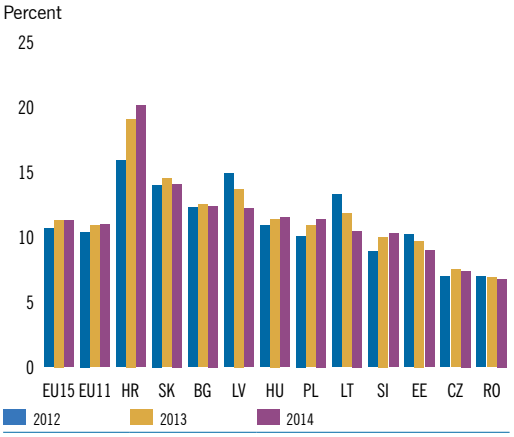
In the near term, the EU11 net exports will continue to support economic growth, but not as strongly as in 2012. EU11 trade flows are expected to remain depressed in the near term. Overall, net exports will continue to support growth in the near term, even though this is likely to be a result of the higher contraction in imports rather than an increase in exports. Weak domestic demand is expected to reduce import growth. And with the ongoing recession in the Euro area, EU11 export growth is not expected to increase to those countries. However, non-European trade diversification is likely to continue to prop up EU11 exports, suggesting further gains in market share for those countries.

Net job creation prospects for the near term remain bleak in EU11. In 2013, employment growth will exceed 1 percent only in Lithuania and Latvia. For the majority of the EU11 countries it will be close to zero (Slovakia, Romania, Hungary[22], and Estonia) or shrink (Croatia, Slovenia, Poland and Bulgaria). Overall, EU11 employment is projected to decline by 0.3 percent in 2013, against a contraction of 0.5 percent in EU15. For 2014, some employment growth is foreseen. However, due to a lag, the anticipated acceleration in economic growth is unlikely to sizably boost job creation in the near term. Most recent Business Expectation Surveys indicate that employment prospects for the EU11 are generally not back to their pre-crisis levels. Most recent expectations data suggest stronger expected hiring activities in the retail and other services sectors than in construction and manufacturing in the next couple of quarters (see Spotlight 1). The EU11 average unemployment rate will rise to about 11 percent in 2013 and stay elevated during 2014 as well (Figure 62). In the EU15, it will rise marginally to just over 11.5 percent in 2013 and stay at a similar level in 2014.

Capital flows to the EU11 region are projected to accelerate in the near future. Given the favorable financial market conditions, ample liquidity, and stepped-up foreign investors' risk appetite, capital inflows to the EU11 countries are likely to increase in the near term. These countries still face large borrowing needs in 2013 and beyond, which will drive up debt-portfolio flows (Figure 63). At the same time, equity portfolio investment will also increase as foreign investors search for returns. In addition, privatization deals in the services sector are expected to materialize in several EU11 countries, which will further support FDI. External debt levels are projected to remain at current levels.

22 In Hungary, the Government expects positive employment growth in 2013 on the back of Job Action Plan.

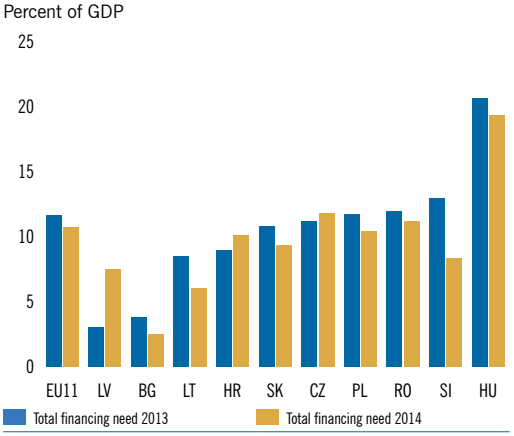
Figure 62. Unemployment rates 2012–14



Source: Eurostat; World Bank staff.

Although the fiscal policy stance is set to remain contractionary, the EU11 public debt will continue to increase in the near term. Most EU11 countries are pursuing pro-cyclical fiscal tightening, even though the

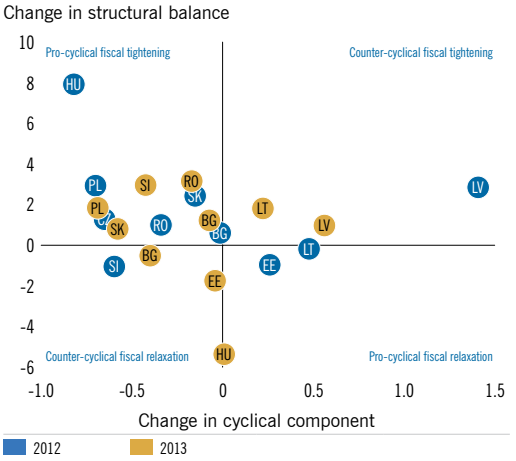
Figure 63. Public sector financing needs



Source: IMF Fiscal Monitor April 2013, Stability/Convergence Programs 2013; World Bank staff calculations.

output gaps continue to be large and economic cycle is making consolidation efforts more difficult (Figure 64). Since the speed of fiscal adjustment in 2013 in the EU11 countries will slow compared to 2012, its effect on economic growth will be less negative than in 2012. Therefore, in the countries with low market pressures, there is some scope for a neutral fiscal stance, but it should remain in line with the medium-term reform plans anchored in adjusting structural imbalances. The fiscal consolidation efforts currently envisaged will not be sufficient to reduce the public debt ratio before 2015.

Figure 64. Fiscal policy stance in 2012 and 2013



Source: European Commission, Spring Forecast, May 2013, World Bank Staff.

Overall in the EU11 region, monetary policy will continue to shelter the economy against external shocks, but its impact on growth will remain muted. Slow economic growth and weak price pressures suggest that there is further space for cuts in policy rates in 2013 in EU11. However, the scope for loose monetary policy varies among the individual countries: for example, further conventional easing in the Czech Republic is unlikely given the near-zero policy rate levels. However, in Poland, where financial market volatility is limited, a further reduction in policy rates is plausible. Reduction in policy rates will increase the disposable income of households holding mortgages with variable interest rates. Importantly, policy rate cuts may not deliver in full the desired effect on domestic demand. Given falling inflation and credit constraints on both the demand- and the supply side, private credit growth is not expected to contribute to private sector growth in EU11. As all stakeholders (households, corporations, financial intermediaries, and the public sector) continue to repair their balance sheets in the near term, bank lending is likely to remain low, weighing depressing on economic activity.

Downside risks to the near-term EU11 macroeconomic outlook exist, stemming from both external and domestic sources. In addition to the risks surrounding the global economic outlook (Box 4), the key external risks affecting the EU11 prospects for growth relate to the Euro area. They include a deeper–than-expected and protracted recession; inability to overcome the impaired monetary policy mechanism in the Euro area; and insufficient progress in structural reforms implementation. These external factors, if materialized, will affect negatively the prospects for growth in the EU11 countries by dampening confidence and delaying the recovery. On the domestic side, the key challenge for the EU11 countries is in the lack of policy options, especially on the fiscal side, to spur growth. Given subdued domestic demand in a number of countries and falling inflation, implementation of counter-cyclical policies would be warranted. However, there is limited scope for fiscal loosening, given

the rising levels of public debt. Accommodative monetary policy could still play an effective role. However, the transmission mechanism operates with a considerable lag and has not necessarily delivered the expected results in recovery of credit growth, given the counter-effect of inflation, deleveraging, and tightened standards.

Box 4. Near-Term Global Outlook and Risks[23]

Overall, global GDP is projected to expand 2.3 percent in 2013 and strengthen to 3.0 and 3.3 percent in 2014 and 2015. High-income countries' growth will remain a weak 1.2 percent in 2013, but should firm to 2.0 and 2.3 percent in 2014 and 2015, respectively. The fragile Euro-area economy is expected to stabilize by the end of 2013 and to gain some traction in 2014. Economic growth is likely to accelerate gradually in the middle- and low-income countries to 5.1 percent in 2013, and to 5.6 and 5.7 percent in 2014 and 2015—roughly in line with their underlying potential. Growth in regions such as East Asia and the Pacific, Latin America and the Caribbean and Sub-Saharan Africa, where economies are already operating at close to full capacity, is not expected to strengthen significantly in the next couple of years. Although many European countries outside the Euro area are expanding at rates close to their potential, they are not growing strongly enough to quickly reduce post-crisis output gaps and unemployment.

The expected modest global recovery faces downside risks. The severity and likelihood of downside risks have declined from a year ago, but not disappeared. They include:

- **The risks of slowing the implementation of announced policy measures in the Euro area remain.** While important structural and fiscal consolidation reforms have been undertaken over the past years, the pace of progress has slowed, as some of the fiscal targets in the Euro area have been relaxed.[24]
- **Accommodative monetary policy by the ECB has not spurred private sector credit growth in in the southern part of Europe, leading to financial fragmentation within the Euro area.** The reduced bank lending and risk appetite there increases risks to the economic recovery of the Euro area as a whole.
- **Over the past year, energy and metals prices have been easing in response to supply- and demand-side substitution induced by high prices.** If prices decline further, it would put a considerable pressure on the finances of exporting economies, heavily dependent on commodity-related revenues, and push down their GDP growth.
- **Quantitative easing has benefited low- and middle-income countries by stimulating high-income-country GDP, lowering borrowing costs, and avoiding a financial-sector meltdown.** Once high-income countries begin to pursue quantitative easing less actively or begin to unwind long-term positions, interest rates are likely to rise. Higher interest rates will increase debt-servicing costs.

23 Based on World Bank (2013). Global Economic Prospects. (June 2013).

24 The IMF estimates that by the end of 2013, two thirds of the Euro area economies have already gone through enough fiscal adjustment to achieve debt sustainability and debt reduction in the medium term. See IMF. 2013. Fiscal Monitor: Fiscal Adjustment in an Uncertain World. April, 2013. Washington, DC.

A Structural Reform Agenda to Restore Growth in EU11

While combatting the ongoing macroeconomic challenges, the EU11 governments plan to focus their reform agendas toward restoring economic growth and increasing their growth potential. Structural reforms in the areas of labor markets and education, the business environment, EU finds absorption, and public administration are some of the priority areas for the EU11 in the medium term.

The EU Action for Stability, Growth and Jobs calls for lasting, sustainable growth and higher living standards that can only be built on sound public finances, deep structural reforms and well-targeted investments. The Europe 2020 strategy emphasizes specific measures in three priority areas: (i) *smart growth* based on knowledge and innovation; (ii) *sustainable growth* promoting competitiveness, resource efficiency, and a low-carbon economy; (iii) *inclusive growth* that fosters poverty reduction and social inclusion through higher employment rates and improved human capital development (see Spotlight 2).[25] The EU national governments have submitted their 2013 national reform programs and medium-term convergence programs (2013–16), aligned with the Europe 2020 strategy, where they outline the priorities and structural measures to boost growth and employment.[26]

A structural reform agenda is being planned in each of the EU11 countries to restore growth and competitiveness. The following structural reform areas have gained priority in EU11, as reported in their national reform programs and the country specific recommendations proposed by the European Commission to the EU Council (Table 2):

- High and rising unemployment and job losses, especially in the low-skilled segment of the labor market, suggest *structural challenges of the EU11 education system and labor market*.[27] A comprehensive set of labor-market measures may be necessary to address the skills mismatch problem, while reforms in life-long learning, vocational training and higher education should be pursued in parallel (in particular in Latvia, Slovakia and Croatia).
- *Improving the EU11 business environment* would attract more investments in productive sectors and would improve future economic growth prospects.[28] The business climate could benefit from further reduction in administrative costs and red tape (Lithuania and Croatia) and from improving the efficiency of the judiciary (Romania, Slovakia, Hungary, Latvia, Bulgaria and Croatia) to ensure a level

25 European Union, "Europe 2020: Commission proposes new economic strategy in Europe," Europa Press Release IP/10/225, Brussels, March 3, 2010. Available online at: http://europa.eu/rapid/press-release_IP-10-225_en.htm.

26 Spotlight 2 focuses on assessing the EU11 countries' progress toward achieving the Europe 2020 poverty and social exclusion targets.

27 See Spotlight 2.

28 See the Special Topic Paper on jobs in the EU11 countries in this EU11 RER issue.

Table 2. EU11 – Country Specific Recommendations for 2013–14

Country	Public finances				Financial sector		Structural reforms					Employment and social policies					
	Sound public finances	Pension and healthcare systems	Fiscal framework	Taxation	Banking and access to finance	Housing market	Network industries	Competition in service sector	Public admin. and smart regulation	R&D and innovation	Resource efficiency	Labor market participation	Active labor market policy	Wage setting mechanisms	Labor market segmentation	Education	Poverty and social inclusion
BG	√	√	√	√	√		√	√	√		√	√	√			√	√
CZ	√	√		√				√	√		√	√	√			√	
EE	√		√	√			√	√	√	√	√	√	√			√	
HR*	√	√	√	√	√		√	√	√	√	√	√	√	√	√	√	√
HU	√		√	√	√		√	√	√	√		√	√			√	√
LT	√	√	√	√			√		√		√	√	√		√	√	√
LV	√		√	√			√		√	√	√	√	√			√	√
PL	√	√	√	√			√	√	√	√	√	√	√		√	√	√
RO	√	√		√	√		√	√	√	√		√	√			√	√
SI	√	√	√	√	√			√	√			√	√	√	√	√	
SK	√	√		√			√		√	√	√	√	√			√	

Source: European Commission - http://ec.europa.eu/europe2020/index_ent.htm, World Bank staff.
Note: EC's recommendations presented on May 29, 2013 for 2013–2014.
* For Croatia, World Bank staff estimate based on the EC's separate assessment since Croatia participated in the European Semester only voluntarily.

playing field. Civil justice systems needs to be improved in many countries, in particular by reducing backlogs, speeding up judicial proceedings and introducing alternative forms of dispute resolution. Enhancement in the insolvency framework could prove useful for increasing business confidence along with the improvement of the corporate sector legislation and its application by the judicial system. Opening up the network industries such as energy, railways, postal services and telecoms to competition to deliver better services at better prices for business and citizens is planned along with the greater independence for the regulators (Bulgaria, Estonia, Croatia, Hungary, Poland, Romania, Slovakia, Lithuania and Latvia). Removing unjustified restrictions in provision of non-tradable services should improve competition, increase investments and make services more accessible for lower income groups.

- *Better EU funds absorption by the EU11* would help reduce the need for external payments and indebtedness through the capital account and would have a positive effect on future growth (this is particularly important for Bulgaria, Croatia, Hungary, Romania and Slovenia).
- *Public administrations* remain under fiscal pressure across all of the EU11. Apart from introducing e-government services and simplifying administrative processes, governments will have to embark on organizational innovations to enhance public service delivery. Sharing best practices

and opening public procurement markets by actively seeking cross-border tenders would also stimulate new opportunities, processes and innovation in the delivery of public services.

While restoring financial and macroeconomic balances is a top policy priority for all EU11 countries, the structural-reform agenda will have to be pursued vigorously. For most EU11 countries, the priority is now to correct their excessive deficits and ensure long-term sustainability of public finances. The EC has put a proposal to abrogate the EDP for Hungary, Latvia, Lithuania and Romania in front of the Council, which would bring the number of countries under the EDP within the EU11 down to 4, with Croatia likely to enter at end-2013. However, the medium-term economic growth potential of the EU11 countries can only be realized if structural barriers to economic activity are removed.

Spotlight 1: Employment Expectations as Indicators of Labor Demand in EU11[29]

Typically, there is no real-time information on job creation and labor demand. As the EU11 region confronts the challenge of sluggish job creation, identifying the sectors that can lead employment growth and job creation in the fragile post-crisis period is important. However, real-time data on employment growth in the enterprise sector are typically not available and labor demand is difficult to predict *ex ante*.

To assess employment growth prospects in the enterprise sector, one option is to use employment expectations information from high-frequency business-expectations surveys. Rather than allocate large amounts of resources to collect new information, the idea is to make better use of firm-level data already collected regularly by the authorities. Data from Business Expectations Surveys (BES)—sometimes referred to as Business Confidence or Business Tendency Surveys—include detailed information about employment expectations of respondent enterprises and represent an under-utilized source of information on employment growth prospects.

Expectations data as possible leading indicators of labor demand

Central Banks routinely conduct expectations surveys using a broad cross-sectional sample of enterprises. These companies often number a thousand or more, are from different sectors, and together are representative of the entire enterprise sector. The surveys are conducted on a quarterly or monthly basis, usually by the Central Banks. The results of the surveys are usually consolidated into an aggregate index of business confidence, the movements of which are reported alongside real-time information on financial and economic variables. This confidence index is underpinned by information provided by enterprises about their economic and financial outlook, including their expected output, planned purchases, scheduled investment activities and expected hiring and firing activities over the coming quarter or over the coming year.

In the literature on business expectations, there is compelling evidence that aggregate business confidence indicators correlate well with aggregate economic activity. Over the past decade, a number of empirical studies of business confidence indicators using time-series techniques have been conducted in

29 Based on Bilgin, Dorofeev and Tiongson (2013), prepared as a background paper for *From Jobless Growth to Growing Jobs* (forthcoming, World Bank 2013)

high-income economies.[30] The results suggest that business confidence indicators are closely correlated with contemporary indicators of aggregate economic activity or can serve as leading indicators of domestic demand and are shown to have significant predictive content. A small but growing literature has emerged the last few years that provide evidence, though weaker, that business confidence indicators may have predictive content.[31]

Together, these two strands of the literature imply that employment expectations data drawn from BES may have predictive value as well. To date, however, there are only three such studies, all using data from high-income economies.[32] Of the three, the most compelling is a cross-country study of managers' employment expectations. The research finds that such expectations are significantly correlated with employment growth, for the economy as a whole and for the service and industry sectors. The correlation with construction sector employment is much weaker and the data suggest that employment expectations are coincident indicators, rather than leading indicators, of employment.

The results of the econometric analysis of employment expectations in selected EU countries provide preliminary evidence that employment expectations can help predict employment growth. Box 5 describes the steps taken to conduct an assessment of the predictive value of employment expectations using monthly or quarterly sector-level manufacturing and construction data from the OECD Business Tendency Survey over the period 2000 to 2011. The data are from the responses to a specific question about next-quarter employment. They measure the net employment balance of expanding and contracting firms.[33] They are then merged with data on actual employment growth, by sector and by quarter, over the entire period. However, the strength of this relationship varies by country and by sector, as reported in Box 5. In general, some sectors (manufacturing and construction) yield stronger statistical relationships between employment expectations and actual employment than other sectors (retail). The lag structure may differ as well; in some cases expectations help predict next quarter employment growth, while in others, they help predict employment growth a couple of quarters later.

30 See, for example, Nilsson, R. and E. Guidetti. (2008), "Predicting the Business Cycle: How good are early estimates of OECD Composite Leading Indicators?" Statistics Brief, February, No. 14 (Paris: OECD); Nilsson, R. (2006), "Composite Leading Indicators and Growth Cycles in Major OECD Non-Member Economies and Recently New OECD Members Countries", OECD Statistics Working Papers No. 2006/05 (Paris: OECD). http://dx.doi.org/10.1787/118143571177; Park, A. (2011), "Business Surveys and Economic Activity", Reserve Bank of Australia Bulletin; Taylor, K. and McNabb, R. (2007), "Business Cycles and the Role of Confidence: Evidence from Europe," Oxford Bulletin of Economics and Statistics, 69(2): pp. 185–208. There is strong evidence that household confidence indicators also help predict macroeconomic variables. See for example Kuzmanovic, M. and P. Sanfey (2013) "Can Consumer Confidence Data Predict Real Variables? Evidence from Croatia," Croatian Economic Survey, Vol. 15, No. 1(April):pp. 5–24.) on consumer confidence and retail turnover in Croatia.

31 See for example Soric, P. and M. Markovic (2010), "Predicting Downturn: Are tendency Surveys a Good Estimator of Retail Activity in Croatia?" Ekonomski Pregled, 61 (9–10): pp. 559–579 and Cizmesija, M., Erjavec, N., Bahovec, V. (2010), "EU Business and Consumer Survey Indicators and Croatian Economy", Zagreb International Review of Economics and Business, Vol. 13, No. 2, pp. 15–25. They provide contrasting evidence of the usefulness of business expectations indicators in Croatia. In Hungary, the industrial sentiment index may have been useful to anticipate an economic slowdown but gave no indications of its depth.

32 Pashourtidou and Tsiaklis (2011); Jonsson, A. (2007), "Managers' Employment Expectations," EU Workshop on Recent Developments in Business and Consumer Surveys, European Commission, Directorate General for Economic and Financial Affairs, November 2007; Claveria, O., E. Pons and R. Ramos (2007) "Business and Consumer Expectations and Macroeconomic Forecasts," International Journal of Forecasting, Vol. 23: pp. 47–69.

33 The net balance is calculated by subtracting the percentage of firms that expect an employment increase from the percentage of firms that expect an employment decrease for each period.

Box 5. Testing the predictive content of employment expectations data

This empirical exercise conducts a preliminary assessment of the predictive value of employment expectations using monthly or quarterly sector-level manufacturing and construction data from the OECD Business Tendency Survey over the period 2000 to 2011.[34] The data are from the responses to a specific question about next-quarter employment ("How do you expect your firm's total employment to change over the next 3 months?" "It will ... '+' increase, '=' remain unchanged, '-' decrease"), calculated as the net balance (subtracting the percentage of firms that expect an employment increase from the percentage of firms that expect an employment decrease) for each period. They are then merged with data on actual employment growth, by sector and by quarter, over the entire period (2000 to 2011). In order to match the data, the quarterly BES data are calculated by taking the arithmetic average of the monthly data. The tests, however, could only be conducted for a sample of EU11 countries, for which all the required and comparable data for assessment exist.[35]

To investigate the predictive content of the survey data on the actual values of the corresponding variables, co-integration analysis and Granger causality tests are conducted. As a first step of the analysis, the stationarity of the variables is examined using Augmented Dickey Fuller (ADF) test and Phillips Perron (PP) test. The results show the following time-series characteristics of the data. In the construction sector, the employment and the future tendency of employment (the survey data) are non-stationary in levels, but stationary in the first difference in the sample period in the cases of Poland, Hungary, Slovenia, Slovakia, Czech Republic and Estonia. In the case of Bulgaria, the employment is the first difference stationary, while the future tendency of employment is stationary in level. In the manufacturing sector, the employment and the corresponding survey data are stationary in the first difference in the cases of Poland, Slovenia, Czech Republic and Estonia. And in the cases of Slovakia, Slovenia and Hungary, the employment series are stationary in the first difference and the future tendency of employment is stationary in levels.

In a second step, the Johansen test for co-integration is used to investigate the long-term relationship between the actual employment and the survey on employment for all the cases in which both variables are integrated or order one, or I(1). The test results indicate that there exist a long-run equilibrium relationship between the actual employment and the future tendency of employment in the construction sectors of Poland, Hungary, Slovenia, the Czech Republic and in the manufacturing sector of Poland and Estonia (Figure 65).

In a third step, the Granger Causality test is employed to examine the short-term "causal" relationship between the actual employment and the corresponding survey data. In conducting this test, the survey data is recorded for the period in which the survey is taken. For example, if the survey is taken in the first quarter of 2000 and it is about the employment prospects in the second quarter of 2000, the data is recorded for the first quarter of 2000. Such data entry practice allows the Granger Causality procedure to be used in testing the predictive

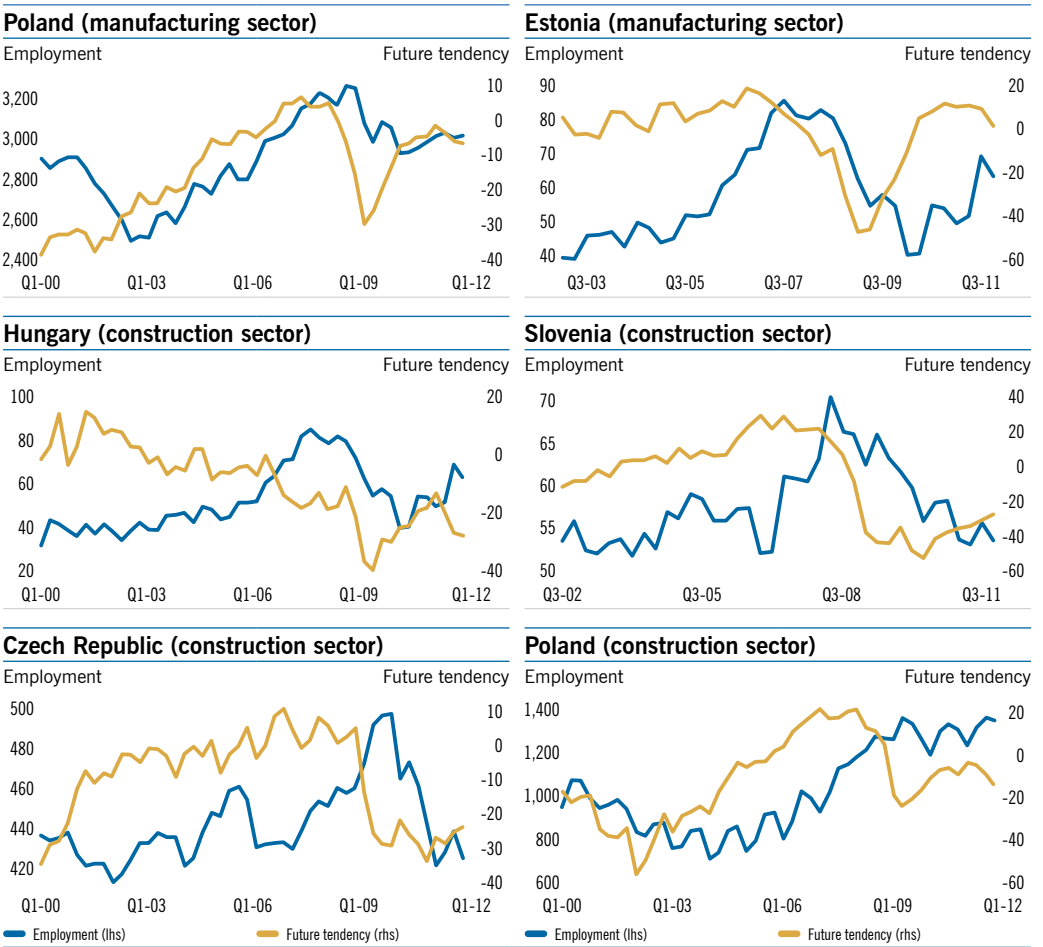
34 Employment expectations data from the other sectors in the OECD database (retail and services) are yet to be tested, pending the availability of more complete information.

35 The employment data are from Eurostat for all countries except for Bulgaria, for which the data are taken from the Bulgarian national statistical service.

power of survey data over the corresponding actual employment. In all the cases, apart from the construction sector of Bulgaria, for which all the required and comparable data exist, the employment survey data Granger "cause" the actual employment. In other words, the past values of expected future tendency of employment provide information that is useful for forecasting actual employment, beyond that contained in the past values of employment. The lag structure, however, varies across countries. In the case of Bulgaria, it is found that there is mutual "feedback" between the two variables.

In sum, the results of the time-series tests, which are described above, suggest that business expectations—in particular, the survey component related to expected hiring activities in a coming quarter—do have predictive value. The results suggest that not only there exists a long-run equilibrium relationship between the employment expectation survey and the corresponding actual employment, but also there are short-run "causal" relationships between the expectations data and real employment data.

Figure 65. Actual Employment and Expected Future Tendency, 2000–2012 (in selected cases)



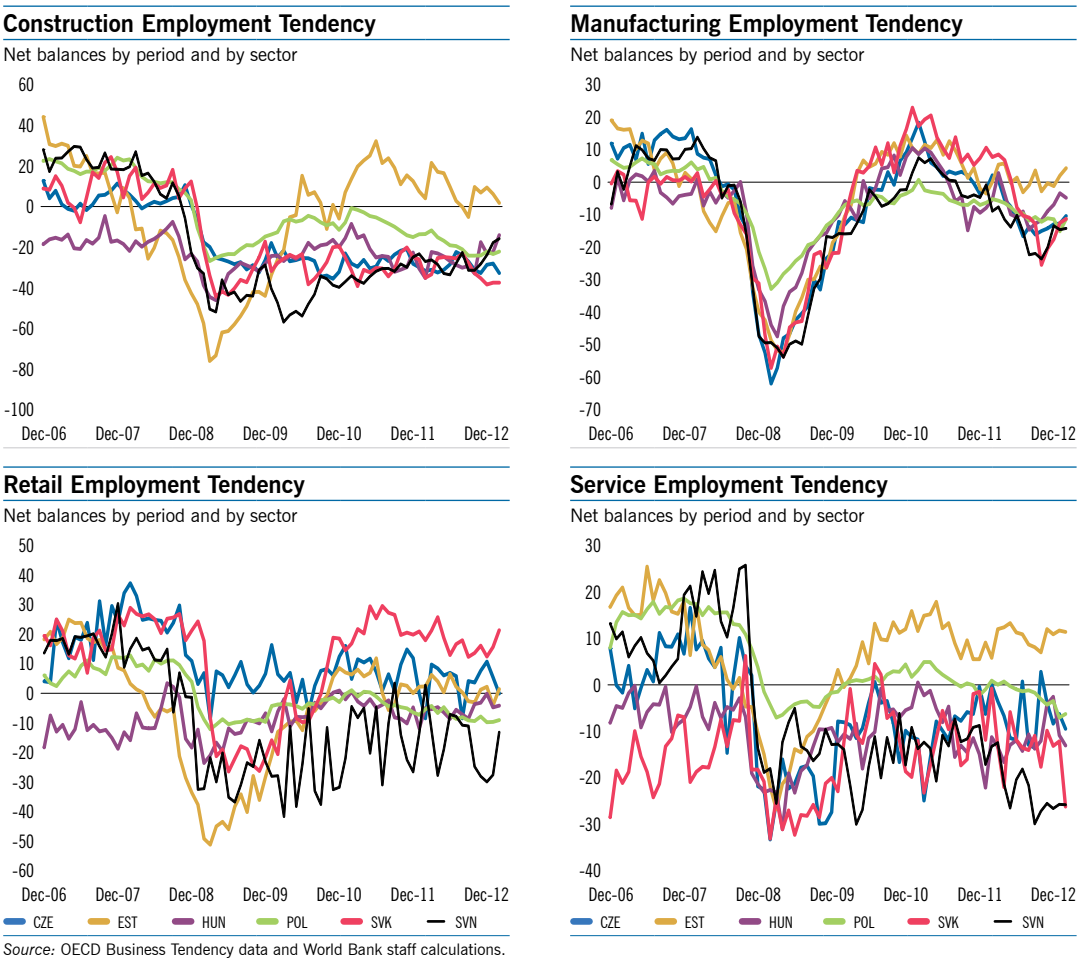
Source: World Bank staff estimates using consolidated OECD data and employment data from national authorities.

Implications for Near-Term Employment Growth Prospects in EU11

Expectations data suggest that aggregate employment prospects remain dampened in EU11. On average, the BES data indicate that employment prospects are generally not yet back to their pre-crisis levels. Summary data for the period 2006 to 2013 are presented in Figure 1. Summary data from alternative sources (for example, from a private firm, Manpower Group, that conducts employment outlook surveys across a broad sample of countries worldwide) suggest that net employment outlook for selected EU11 countries is indeed down, well below its pre-crisis peak. These results are also consistent with the OECD Business Tendency data.

Across sectors, however, employment expectations in EU11 are diverse (Figure 66). For example, employment prospects in the manufacturing sector across countries in the sample have moved almost in lock-step since the boom years—uniformly plunging during the global financial crisis, recovering

Figure 66. Net Employment Expectations: Selected Sectors and Countries



Source: OECD Business Tendency data and World Bank staff calculations.

slowly after, diminishing again in late 2011 and showing some signs of recovery since late 2012. In contrast, service sector employment has been more volatile and heterogeneous, though falling during the crisis as well. The retail and construction sectors are somewhere in-between. The interpretation of this diversity requires some caution: the diversity may reflect both differences in employment prospects over time across countries as well differences in the degree of difficulty of anticipating employment changes across sectors.

Recent EU11 expectations data suggest that some sectors may be approaching their pre-crisis employment expectations levels. In the retail and other services sector in EU11, the net employment balances among countries in the sample are on average hovering around zero. However, in the case of the Slovak Republic's retail sector, expectations are approaching pre-crisis levels through the first quarter of 2013. Data on the Slovak Republic's aggregate service sector employment from the ILO through the end of 2012 indeed suggest stronger employment numbers in this sector, compared to the construction and manufacturing sectors. Meanwhile, net balances in the construction sector, a key driver of job creation in the boom years in most countries, are still hovering around zero through the first part of 2013, far below their pre-crisis peak of about 16 percent. Similar patterns can be seen in the manufacturing sector, though employment expectations in Estonia seem slightly more positive than those of other countries.[36]

In sum, the available BESs for the EU11 countries suggest that business expectations—in particular, the survey component related to expected hiring activities in a coming quarter—do have predictive value. While aggregate employment prospects remain dampened, some sectors (such as retail and other services) are showing signs of recovery in the near term. However, the BES data suggest that more traditional sectors, such as manufacturing and construction, are expected to remain below their pre-crisis peaks.

36 Pre-crisis employment growth indicators in the EU11 suggest the general decline in manufacturing employment, except in a couple of countries including Estonia. See Gill, I. M. Raiser and others (2012) Golden growth: Restoring the Lustre of the European Economic Model. Washington: The World Bank.

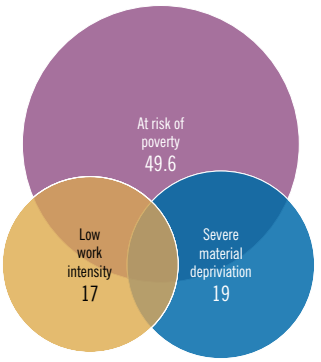
Spotlight 2: Toward Inclusive Growth in Europe

Assessing Progress toward Achieving the Europe 2020 Poverty and Social Exclusion Targets in EU11[37]

In an effort to strengthen the European Union's growth model and confront the harsh effects of the global economic crisis on the member countries of the EU, a ten-year economic strategy known as Europe 2020 was launched in early 2010 with specific measures in three mutually reinforcing priority areas: (i) ***smart growth*** **based on knowledge and innovation; (ii)** ***sustainable growth*** **promoting competitiveness, resource efficiency, and a low-carbon economy; (iii)** ***inclusive growth*** **that fosters poverty reduction and social inclusion through higher employment rates and improved human capital development.[38]** When the Europe 2020 strategy was approved in June 2010, the European Council chose three measures of poverty and social exclusion: (i) *the at-risk-of-poverty rate*, which is a measure of relative poverty defined as the percentage of the population with disposable incomes lower than 60 percent of the national median income after social transfers; (ii) *the index of severe material deprivation*, which is the percentage of people who cannot afford a number of necessities that are considered essential in order to live decent lives in Europe;[39] and (ii) *low work intensity*, which is the percentage of people living in households in which adults worked less than 20 percent of their potential.

As of 2008, 120 million people were at risk of poverty or social exclusion in the EU.[40] According to a recent study on income and living conditions in Europe, as of 2008

Figure 67. People at risk of poverty or social exclusion in the EU, 2008



Source: Eurostat and Atkinson and Marlier (2010).
Note: Diagram is not to scale.

37 Based on Ajwad, Simler, Azam, and Dasgupta (2013) "Poverty Prospects in Europe: Assessing Progress towards the Europe 2020 Poverty and Social Exclusion Targets in the New European Union Member States." Croatia is not included in this study because it did not collect EU-SILC data in the relevant years.

38 European Union (2010) "Europe 2020: Commission proposes new economic strategy in Europe," Europa Press Release IP/10/225, Brussels, March 3, 2010. Available online at: http://europa.eu/rapid/press-release_IP-10-225_en.htm.

39 Severely materially deprived households are those that state they cannot afford at least four of the following nine items: (i) mortgage payments, rent, or utility bills; (ii) adequate heating; (iii) unexpected expenses; (iv) meat, fish, or a protein equivalent every second day; (v) a week-long holiday away from home; (vi) a car; (vii) a washing machine; (viii) a color television set; or (ix) a telephone.

40 Eurostat Press Office, "Income and living conditions in Europe," News Release 190/2010, 13 December 2010. http://epp.eurostat.ec.europa.eu/.

81.4 million people (nearly 17 percent of the population) were at risk of poverty after social transfers, 40.4 million were severely materially deprived, and 40.3 million lived in low work intensity households (Figure 67).[41] Several million people were at risk of poverty and social exclusion by multiple criteria, including almost 7 million people suffering from all three dimensions of poverty and social exclusion used for the Europe 2020 targets.[42]

To gauge progress toward meeting the objectives of poverty reduction and social inclusion, EU-wide headline targets were set for 2020, which countries then translated into national targets reflecting their starting points and aspirations.[43] Although the protracted economic crisis has hampered progress toward meeting the Europe 2020 goals and the recovery process continues on an uncertain path, the countries remain committed to meeting their national targets. Only a few of them, however, have assessed the realism of their national targets under various scenarios. Whether the strategy's targets can be met by the stated deadline is an open question. The rest of this Spotlight focuses on this task for the EU11 countries.

To analyze the links between employment and education and between poverty and social exclusion, a simple partial equilibrium model is developed, flexible enough to be implemented in a number of different settings using widely available household survey data.[44] The simulation analysis is a useful tool to help policymakers understand how progress towards poverty reduction and social exclusion goals is likely to be achieved with the desired speed under different scenarios. The key underlying assumption of this model is that the structural relationships between poverty and social exclusion outcomes and education and employment indicators remain constant over time. The primary data source employed is EU-SILC household survey data from 2005 through 2009.

Applied to the EU11, the simulation model indicates that the Europe 2020 national employment targets are ambitious, given historical employment patterns in these countries.[45] Especially in light of the slow and uncertain recovery, labor markets remain weak and employment rates in 2020 could fall short of rates targeted by national policy makers. Under this scenario, the poverty and social exclusion goals may not be reached in many EU11 without additional policy measures.

41 Anthony B. Atkinson and Eric Marlier, eds., *Income and living conditions in Europe* (Eurostat Statistical Books), (Luxembourg, LU: Publications Office of the European Union, 2010).

42 It is important to note that the indicators of poverty and social exclusion are not mutually exclusive, and hence, there may be instances in which some families find themselves at risk of poverty or social exclusion by multiple indicators.

43 The five EU-wide headline targets set for 2020 include: (1) Employment: at least 75 percent of the population between the ages of 20 and 64 should be employed. (2) R&D: a minimum of 3 percent of the EU's gross domestic product (GDP) should be invested in research and development (R&D). (3) Climate change and energy sustainability: the EU's 20-20-20 climate and energy targets should be met. (4) Education: the rates of early school withdrawal should be below 10 percent and at least 40 percent of 30- to 34-year-olds should have a tertiary education degree. (5) Combating poverty and social exclusion: at least 20 million fewer people in the EU should be at risk of poverty and social exclusion.

44 The analysis presented in this Spotlight complements and builds upon existing analytical studies, including those produced by Anthony B. Atkinson and Eric Marlier (2010); Pascal Wolff (2010); Ive Marx, Pieter Vandenbroucke, and Gerlinde Verbist (2010); and the European Commission (2009).

45 The results relate to the at-risk-of-poverty and the anchored poverty indicators. The material deprivation indicator is not analyzed here. Numerous limitations of the severe material deprivation indicator itself have been documented, and it has been singled out as an area for revision and improvement during the 2015 mid-term review of the Europe 2020 initiative (Anne-Catherine Guio, David Gordon and Eric Marlier, 2012, "Measuring Material Deprivation in the EU: Indicators for the Whole Population and Child-Specific Indicators," Eurostat Methodology and Working Papers Series).

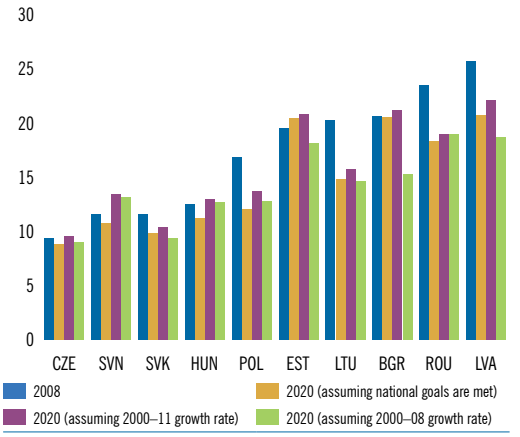
At-risk-of-poverty rate

The EU11 countries have set ambitious goals with respect to the at-risk-of-poverty indicator relative to historic trends. The employment goals set in their National Reform Programs imply a reduction of the number of people at risk of poverty by 3.7 million by 2020.

Under the scenario of employment growth at the pre-crisis (2000–08) rate, the reduction of people at risk of poverty is projected to be 3.5 million people, slightly less than the target. Should the more modest employment growth patterns seen in each of the EU11 countries during 2000–11 prevail in the run up to 2020, the number of people at risk of poverty could fall by about 2.4 million relative to the population in 2008. In the most pessimistic scenario, if the crisis period's (2008–11) employment patterns remain constant, but employment rates do not decline below rates in 2008, the number of people at risk of poverty could decline by only 1.5 million.

In most EU11 countries, the employment scenario in 2020 plays a big role in determining the at-risk-of-poverty rates in the country. Interestingly, the simulations indicate that employment patterns seen during the 2000–11 period are unlikely to reduce the at-risk-of-poverty population in Bulgaria, the Czech Republic, Estonia, Hungary, and Slovenia below the rates seen in 2008 (Figure 68). The Czech Republic, Hungary, Poland, Romania, and Slovenia are expected to achieve more favorable at-risk-of-poverty rates if they reach their Europe 2020 national targets for employment than if they reach the high growth years' (2000–08) employment scenario through

Figure 68. Simulated at-risk-of-poverty rates by employment scenario in EU11



Source: World Bank staff calculations using EU-SILC data.
Note: We assume no deterioration in employment and education indicators by 2020 relative to their rates in 2008.

to 2020, meaning that they have set ambitious employment assumptions relative to historical performance. In Slovakia, Estonia, Lithuania, Bulgaria, and Latvia, the simulated at-risk-of-poverty rate is more favorable under the high-growth (2000–08) employment scenario, which is also an ambitious assumption, than if their Europe 2020 national employment targets are reached.

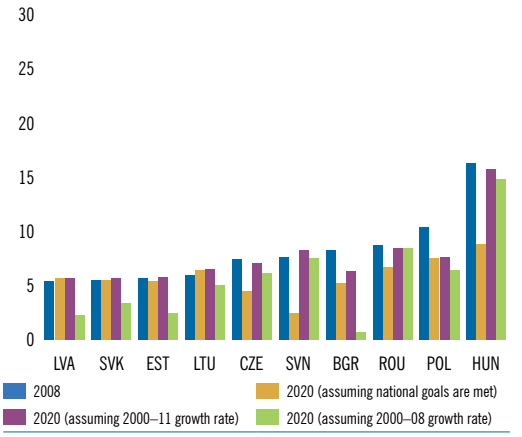
Low work intensity rate

Compared to the 2008 population, the low work intensity population in the EU11 could fall by as much as 3.0 million people if the Europe 2020 national targets for employment and education are reached or by as little as 277,000 people if the crisis period's (2008–11) employment patterns persist. In other words, employment rates in the run-up to 2020 matter a great deal when low work intensity is considered. If the 2000–

11 employment patterns are assumed to persist through to 2020, then 1.4 million people are expected to drop out of the low work intensity category. If the more optimistic employment patterns of the high growth period (2000–08) are assumed, the population living in low work intensity households could be reduced by 2.7 million people.

In almost all EU11, low work intensity rates could decrease relative to their rates in 2008 as a result of achieving the Europe 2020 national employment and education targets, but historic patterns reveal that the magnitude of the change could be small in many countries. Employment patterns seen during the 2000–11 period are unlikely to appreciably reduce the low work intensity population in the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Romania, Slovakia, and Slovenia (Figure 69). In parallel, the low work intensity population could decrease significantly if other employment scenarios take hold. For example, in Hungary, low work intensity rates could decrease from 16.2 to 8.8 percent if the Europe 2020 national targets for employment and education are achieved. In Slovenia, low work intensity rates could fall from 7.6 to 2.3 percent if the Europe 2020 national targets for employment and education are met, reflecting the ambitious targets set by the two countries. Bulgaria, a country that saw one of the fastest increases in employment rates during the 2000–08 boom years, would almost eliminate low work intensity if those employment patterns persisted through to 2020. Latvia, Lithuania, and Slovakia, however, show less promising results: Latvia's and Lithuania's low work intensity rates could increase marginally by 2020 if national targets for employment and education are achieved,

Figure 69. Low work intensity, by employment scenario, in EU11



Source: World Bank staff calculations using EU-SILC data.
Note: We assume no deterioration in employment and education indicators by 2020 relative to their rates in 2008.

and Slovakia's low work intensity rate could remain constant. This result is not surprising given that all three countries enjoy very high employment rates, and hence, achieving the national targets will not have a significant impact on low work intensity rates.

Anchored poverty rate[46]

Anchored poverty in EU11 could fall by about 9 million people by 2020 relative to anchored poverty in 2008 if either the 2000–08 employment patterns hold through to 2020 or if the Europe 2020 national targets for employment and education are met. If the 2000–11 employment patterns persist through to 2020, then anchored poverty could fall by 8.5 million people. If employment patterns of

46 Anchored poverty is defined as the percentage of people whose disposable income is less than the inflation-adjusted 60 percent of the median income in 2008. Although anchored poverty is not an explicit Europe 2020 target, it is an important indicator of progress in improving poor people's quality of life.

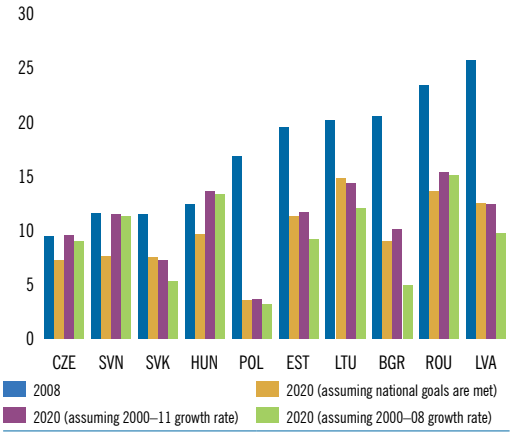
the crisis period (2008–11) are repeated, then anchored poverty could still fall by as much as 7.4 million people by 2020.

Across EU11, anchored poverty rates are more stable across employment scenarios than other poverty and social exclusion indicators. The key exceptions are Bulgaria, Romania, and Slovenia. In Romania and Slovenia, anchored poverty rates in 2020 are expected to be considerably lower under the Europe 2020 national target scenario than under any other scenario; while in Bulgaria, anchored poverty rates in 2020 are considerably lower under the 2000–08 employment growth rate scenario than under any other employment scenario (Figure 70). In the Czech Republic, Hungary, Romania, and Slovenia, achieving the Europe 2020 national targets is expected to lead to lower anchored poverty rates than in any of the other employment scenarios. In Bulgaria, Estonia, Latvia, Lithuania, Poland, and Slovakia, the lowest anchored poverty rates are achieved when the 2000–08 employment growth rates are applied.

In most EU11 countries, anchored poverty rates can be expected to decrease significantly if countries achieve their national targets for employment and education. Poland can expect a sharp reduction in anchored poverty, from 16.9 to 3.5 percent; Bulgaria from 20.6 to 9.0 percent; Latvia from 25.8 to 12.5 percent; and Romania from 23.4 to 13.6 percent. The smallest reductions are expected in the countries with the lowest initial anchored poverty rates, namely, the Czech Republic, Slovakia, and Slovenia.

In sum, increases in the employment rate and educational levels have the potential

Figure 70. Anchored poverty rates are expected to decrease significantly in countries achieving their Europe 2020 national targets



Source: World Bank staff calculations using EU-SILC data.
Note: We assume no deterioration in employment and education indicators by 2020 relative to their rates in 2008.

to contribute significantly to achieving the Europe 2020 targets for reducing poverty and social exclusion. However, the results from the micro-simulation analysis indicates that untargeted employment and education measures alone will not be sufficient to meet the Europe 2020 poverty and social exclusion targets, even under optimistic employment growth scenarios. Additional measures specifically targeted to raising the incomes of those at risk of poverty and increasing employment of those living in low-work intensity households will be needed.

Special Topic:
Determinants of Job Creation in EU11: Evidence from Firm Level Data

Abstract: This paper builds on the analysis of job creation developed in World Bank (2013) to provide an empirical investigation of the industry- and firm-specific determinants of the job creation process in the EU11 economies during 2002–2009. It relies on the Amadeus dataset of firms. The main results indicate that during the years prior to the global financial crisis, traditional industries were crucial for the net creation of jobs in EU11. However, traditional industries were the ones most severely affected by the financial crisis. In contrast, services firms were less vulnerable to the economic downturn. At the firm level, small and young firms registered the highest employment growth rates. The empirical results also indicate that more productive firms tended to be less vulnerable to economic downturns. Moreover, the results demonstrate that the perceived quality of the business climate by the EU11 enterprises correlated with not only the firms' employment growth, but also with their productivity. In the post-crisis period, poor business restrictions were also negatively associated with the creation of jobs. All these findings also hold for the group of high-growth firms that disproportionately accounted for the creation of new jobs in the EU11 economies.

* The team is grateful for comments from Omar Arias, Jesus Crespo Cuaresma, Xavier Devictor, Doerte Doemeland, Hongjoo J. Hahm, Satu Kahkonen, Ismail Radwan, Carolina Sanchez-Paramo, Erwin H. R. Tiongson, and Charles Udomsaph.

Introduction

The EU11 countries made notable gains in economic and productivity growth in the years prior to the global financial crisis (2000–2007), with some of this growth translating into job creation. However, the increase in jobs that took place was reversed by the crisis. The question which firms created the most jobs prior to the crisis and how these jobs were affected by the crisis is highly topical among economists and policy makers, trying to mitigate the effect of the crisis.[47]

In the EU11 countries, the structural change in economic activities over the last two decades involved two different developments. First, after the break-up of the former communist bloc, economic activities were re-organized into market-based economic systems. Second, as in other middle income economies, economic activity shifted away from agriculture and manufacturing to services, where the average firm size was relatively small but the number of firms large (see, e.g., Pilat et al. 2009). These structural changes had an impact on how, where and what type of jobs were created.

After the vast majority of the EU11 countries successfully reorganized their centrally planned economies, they experienced varying degrees of success in creating productive jobs. Different levels of market regulations and entry barriers were crucial determinates explaining the differences in the economic structures across the EU11 countries. In general, countries that most successfully liberalized their economies, maintained macroeconomic stability, and improved the quality of their business environment and institutions were able to create the conditions for firms to flourish and to attract the largest amounts of FDI. This, in turn, contributed not only to the structural changes in these economies, but also to the job-creation process (see, e.g., Bevan and Estrin 2004, Pournarakis and Varsakelis 2004, Fabry and Zeghni 2006 Harding and Javorcik 2011, Jimenez et al. 2011, Crespo Cuaresma et al. 2012 and Tintin 2013).

The economic downturn induced by the financial crisis may have triggered yet another structural change in EU11 and, therefore, a clear understanding of the key industry- and firm-specific determinants of job creation is important for both policy makers and entrepreneurs. A focus on the institutional framework that supports the creation of new jobs should be especially informative for informing tailored and effective policy measures to counterbalance the process of job destruction.

Accordingly, this paper builds on the work of the forthcoming World Bank report on jobs and zooms into the patterns of job creation across surviving firms in the EU11 economies. The analysis utilizes the Amadeus database (provided by Bureau van Dijk) which contains comparable and comprehensive balance sheet

47 The issue of job creation and the broader constraints that affect the Europe and Central Asia region are analyzed in a forthcoming World Bank (2013) report on jobs. The analysis on this report builds on this work for the subset of EU11 countries.

and profit and loss account data for the EU11 countries for a time period spanning from 2002 to 2009.[48] This data set is augmented with data from the World Bank's Business Environment and Enterprise Performance Survey (BEEPS) which collects information on the business environment in which the firms operate. In the EU11 economies, these surveys have been conducted in the years 2002, 2005, 2007 and 2009, allowing the analysis of dynamics of job creation at the firm level in the boom years prior to the global financial crisis as well as during the "bust". The next section presents stylized facts on job creation in the EU11 economies, while Section 3 offers a structural analysis of job creation patterns across and within-industries. The comparison of employment growth dynamics across industries allows for examining whether the EU11 economies have been successful in shifting employment to more productive sectors, while the within-industry analysis provides evidence on which firms have been most crucial for overall job creation. Section 4 re-examines this latter issue by investigating the key-industry and firm-specific characteristics of high-growth firms. Section 5 offers policy conclusions.

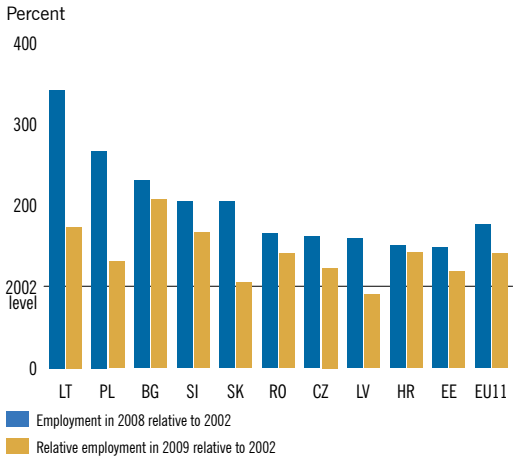
Some Stylized Facts

Many jobs created in EU11 during 2002–2008 were lost during the 2008 global financial crisis. Among the surveyed firms, the number of employees in firms that were active in 2002 increased by approximately 76 percent (Figure 71). For all countries the minimum increase in the number of workers amounted to approximately 50 percent. Lithuania, Poland, Bulgaria, Slovenia and Slovakia were able to more than double the number of employed workers. However, the global financial crisis induced an overall job loss in 2009, nearly halving the cumulative gains of the previous period (2002–2008) among the surveyed firms. In the EU11 countries, half the jobs created during 2002–2008 were lost in 2009.

While jobs were lost throughout the EU11 region, the magnitude of job destruction varied among the countries (Figure 71). In Lithuania and Poland, the number of workers employed in firms that already existed in 2002 was about threefold in 2008. The crisis, however, reversed these dynamics in 2009 to 174 percent in Lithuania and 131 in Poland of the respective 2002 level. In Slovakia and Latvia, despite notable gains in employment prior to 2008, the overall number of employees in established firms was at or below the 2002 level among the surveyed firms.

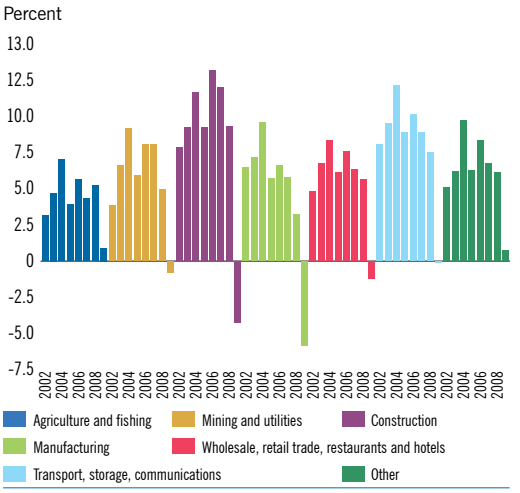
48 A detailed data description for the Amadeus database is provided in Udomsaph (2013). One should note the large variation in the coverage and representativeness across the EU11 countries in the Amadeus data base, and hence the quality of data across the EU11 countries. The results presented here pertain solely to the surveyed firms in the data base.

Figure 71. Job creation from 2002 to 2008 and Job destruction in 2009



Source: World Bank Staff calculations, based on Bureau van Dijk data.
Note: Covers all EU11 countries, except for Hungary, where the number of active firms in 2002 is too low to make reasonable comparisons. The gray 100 percent-line indicates the 2002 employment benchmark.

Figure 72. Average employment growth rate by sector and year, 2002–2009



Source: World Bank Staff calculations, based on Bureau van Dijk data.

The average job creation rates among surviving firms also substantially differed across industries (Figure 72).[49] Prior to the financial crisis, the EU11 average employment growth among the surveyed firms was smallest in agricultural and fishing and largest in construction and in the transport, storage and communications industries. Interestingly, in 2009 only two sectors registered positive employment growth rates –agricultural and fishing and other services industries. The average job destruction rate in 2009 amounted to 4.4 percent in the construction industry alone.

While the manufacturing sector experienced decent job creation rates from 2002 to 2008, it was most severely affected by the 2008 global financial crisis, with an average job destruction rate of around 6 percent in 2009.

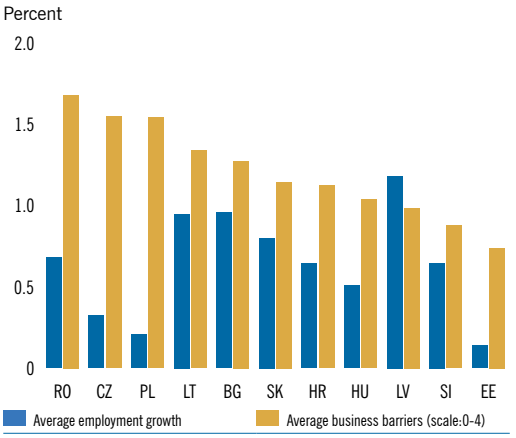
One potential reason for the differing job creation performance among the EU11 economies prior and during the global financial crises relates to the quality of the business environment in which firms operate. Among the surveyed firms, Romania was perceived to be the most unfriendly to business country (Figure 73). Romania, the Czech Republic, and Poland were all perceived to have had institutional obstacles to doing business and experienced below average employment rates in the observed period. Latvia, on the other side, was perceived as a relatively business friendly economy, that showed the highest average employment growth rates among the EU11 economies. Interestingly, however,

49 The industry categorization is based on the NACE Rev. 2 classification. Accordingly, the farming and fishing industry is based on sector A while mining and utilities aggregate the sectors B, D and E. Construction and manufacturing firms operate in the sectors F and C, respectively. The production sector, including wholesale, retail trade, restaurants and hotels, is made of sectors G and I, while transport, storage and communications includes firms from the sectors H and J. The remaining sectors from K to U are subsumed in a sector labeled other, which primarily includes services firms operating in financial and real estate industries, professional and public services. Further details on the NACE Rev 2 classification can be obtained from Eurostat (2008).

jobs in Latvia were strongly affected by the finical crisis, while employment in Romania remained relatively stable. Yet, Estonia—the most business amicable country between 2002 and 2009—saw its employment growth lag behind the other EU11 economies. Some countries such as Lithuania and Bulgaria were perceived to have relatively unfriendly business environment, but the average job creation rates of firms located in these economies were above the EU11 average.

Overall, looking at the simple relationship between the average employment growth and the perceived barriers to business at the country level does not reveal strong regularities. The question of whether firm-level employment performance differs across EU11 countries with different quality of the business institutions becomes warranted. However, the impact on employment growth of the key elements underpinning the environment for doing business, while important, may not be sufficient for sustained job creation.

Figure 73. Employment growth and perceived business barriers, 2002–2009



Source: World Bank Staff calculations, based on Bureau van Dijk data and Business Environment and Enterprise Performance Survey (BEEPS).
Note: Employment growth is measured in percent. The average business barriers index is based on questions regarding perceived barriers for doing business in the categories institutional regulations, access to finance, crime, corruption, taxation, and labor regulations. The answers to each question range from 0 (no obstacle) to 4 (very severe obstacle).

With this hypothesis in hand, the rest of the paper investigates econometrically the effect of industry- and firm-specific determinants of the job creation process in the EU11 countries.

Job Creation in EU11 prior and after the 2008 crisis

Firm and industry characteristics as well as the perceived business environment features are likely to account for some of the differences in the job creation rates across the EU11 region. A structural analysis of the relationship between the business environment and job creation is warranted. A sample of 180,986 firms of different size, vintage, sector across the EU11 countries is used. The sample captures only surviving firms, making it impossible to examine exit dynamics. Hence, the results presented here are attributable solely to the sample of surviving firms in EU11. The data is made available by Bureau van Dijk and have been standardized for the analysis forthcoming in World Bank (2013). To unveil

the firm and industry level characteristics as well as the business environment determinants of employment creation in the EU11, empirical firm growth equations are estimated for the annual average employment growth rate for surviving firms (Box 1). The main advantage of the regression framework presented in Box 1 is that it allows controlling for differences in firm-characteristics such as size when examining the impacts of industry and institutional characteristics on job creation. Given the large effect of the global financial crisis on countries, the period under investigation is divided into two: the "boom" years capturing the strong economic growth and job creation in the EU11 countries between 2002 and 2008; and a "bust" year representing 2009, the first year following the global financial crisis.

Box 6. Estimating Empirical Employment Growth Equations at the Firm Level

The regression analysis is based on empirical firm growth equations (for surviving firms) in the spirit of the *Gibrat's law* (see, e.g., Hart 2000 and Coad 2009, for surveys). A cross-sectional *Gibrat-law* type of regression can be written as (see, e.g., Geroski 2005 and Oberhofer and Pfaffermayr 2013):

$$g_{ij} = \alpha + \pi_{ij} S_{0ij} + x_{ij} \gamma + z_j \delta + \varepsilon_{ij}, \text{ where}$$

$$\pi_{ij} = \beta_0 + \beta_1 A_{ij}$$

This equation states that the average employment growth rate g_{ij} of firm i in industry j is a function of (log) initial firm size S_{0i} [50] (i.e, the number of employees in the first observed period) and other firm- and industry-specific control variables collected in x_{ij} and z_j, respectively. γ and δ are column vectors to be estimated. π_{ij} captures the (conditional) speed of convergence/divergence and is modeled to depend on firm age A_{ij}.

One standard result in the empirical firm growth literature states that the observed speed of convergence declines with age. This finding would be confirmed in this application if the estimated parameters $\beta_0 < 0$ and $\beta_1 > 0$. Economically, such a result would imply that younger and smaller firms grow faster, while old small firms would not exhibit increased employment growth dynamics.[51]

The estimation covers the time period 2002 to 2008. x_{ij} and z_j contain firm- and industry-specific variables that may affect job creation in firms located in the EU11 economies. Among the latter, industry dummy variables (based on the classification mentioned in footnote 4) and business environment indicators are included. Based on the BEEPS data, an indicator that measures the average institutional barriers within 2-digit industries and countries is constructed. The overall industry-country specific measure for institutional barriers is based on several questions on

50 The firm size is a particularly interesting (and debated) characteristic of job creation in the literature. Davidsson et al. 1998 and Neumark et al. 2011 demonstrate that small and medium-sized enterprises (SMEs) are the most important contributors to net job creation. By contrast, Haltiwanger et al. (2013) highlight the important role of business startups and young firms for job creation in the USA. Huber et al. (2012) document that in Austria large firms irrespective of their firm age positively contribute to (net) job creation, while in small firms more jobs are destroyed than created.

51 However, as stressed by Haltiwanger et al (2013), disentangling the role of firm size vis-à-vis age requires more comprehensive data than available for this paper. In particular, census data would allow for the proper estimation of employment shares and hazard rates of non-surviving firms.

perceived obstacles for conducting business that are included in the BEEPS data. In particular, the constructed indicator comprises information on the degree of institutional regulations, access to finance, crime, corruption, taxation and labor regulations. The country averages of this measure are reported as red bars in Figure 2. In the second step, the job creation effects of these specific business barriers are separately investigated.

With regard to additional firm-specific controls, (log) firm age and (log) firm's total factor productivity (TFP) are included. TFP is estimated via the approach suggested by Levinsohn and Petrin (2003), which uses a firm's demand for intermediate inputs (such as materials) in order to overcome the problem of simultaneity when estimating firm level production functions. For more details on the calculation of TFP and corresponding data restrictions see footnote 60. The interaction effect of firm size with firm age is already incorporated in π.

For the crisis year 2009, the model is re-estimated. Job creation is defined as the employment growth rate from 2008 to 2009. The firm- and industry-specific characteristics are, consequently, taken from 2008. The only exception refers to the BEEPS data which are not available for 2008. The institutional barriers variable, therefore, is based on the within-industry survey averages from 2009. Tables 2 and 3 report the corresponding estimation results for both the pre-crisis period and the year 2009.

Employment Growth at the Firm Level: The Boom Years (2002–2008)[52]

Most countries in the EU11 region enjoyed both positive economic and employment growth in the pre-2008 crisis period. [53] The "boom" years in EU11 were characterized by the transformation of domestic productive structures, accompanied by deepening of international trade and financial development.[54] To a large extent, economic growth did translate into job creation in EU11 at the macroeconomic level.[55]

At the firm level, traditional industries were the key creators of new jobs prior to the crisis. Employment growth was greatest in the construction and manufacturing industries and lowest in the service industries among the surveyed firms. When controlling for differences in firm-characteristics, employment growth was lowest in the group of other industries, which mainly consisted of services firms.[56] Across different specifications of the firm growth model, an average construction firm was estimated to grow by 3.8 (column 1 of Table 2) to 6.1 (column 6) percentage points more annually in comparison to a firm of the same size, age, and productivity in the "other sector." The comparable numbers for manufacturing firms varied between 3.2 and 4.1 percentage points. In half of specifications,

52 The presented results here are based on the above described econometric model which allows to (at least) identify partial correlations between employment growth and the included covariates. This implies that the findings might not necessarily reflect a causal relationship, but are suggestive for the modeled relationships.

53 The link between economic and employment growth for the pre- and post-crisis period is explored in detail in World Bank (2013, forthcoming). One should note, however, that employment creation rates vary significantly across countries—even countries with similar growth experiences.

54 See Raiser and Gill (2012).

55 See World Bank (2013, forthcoming).

56 The reported industry effects from the regression analysis have to be interpreted relative to the omitted group of firms, which consists of service firms.

agricultural and fishing firms were estimated to grow by approximately 3 percentage points faster than other service firms.

In contrast, while firms operating in service were important in terms of overall value added, they did not contribute much to job creation.[57] The number of firms that operate in the EU11 services sector was very large (around 72 percent of all sampled firms were service providers), but these firms were very small and not willing to grow in terms of employment. In more traditional sectors, the average firm size was larger and, therefore, they strongly contributed to overall job creation in 2002–2008. Controlling for differences in firm-specific productivity, service industries were estimated to create jobs at a slower pace than firms in the rest of the economy.

The smallest surviving firms exhibited the highest rates of job creation prior to the crisis. In line with typical estimation results from empirical firm growth equations á la *Gibrat's law* (see, e.g., Coad 2009), the average employment growth rate was largest in the initially smallest firms. More precisely, the empirical results showed that a one percent increase in the initial firm size (i.e., the firm size at the first observed year) correlates with a decrease in average annual job creation rate of 5.3 to 7.8 percentage points. Hence, in the EU11 economies, small surviving firms tended to rapidly adjust their size to market conditions.

Start-ups and (very) young surviving firms grew at the fastest pace. In line with the literature (see, e.g., Haltiwanger et al. 2013), the job creation in surviving start-ups and young firms outperformed the employment growth rates of older firms in the sampled EU11 firms.[58] In quantitative terms, one percentage point younger firms exhibited employment growth rates that are 4.6 to 7.7 percentage points higher than the rest of the surveyed firms. Here, it is important to note that, this finding holds true for both—initially small and large firms.

The employment growth performance of small-old surviving firms was substantially worse. The positive parameter estimates for the interaction effect of firm size and firm age indicates that the speed of adjustment was slower for small-old firms. Small firms contributed to job creation when they were young. In later periods, the number of their employees stabilized, indicating that they were less willing to increase their scale of production in terms of hiring new workers.

While notable improvements in the EU11 business and regulatory environment were made in prior to the crisis, an inhibitive business environment affected negatively the efficient allocation of labor across industries. In industries with heavy business restrictions and regulations, employment growth prior to the crisis was lower (Table 3). In quantitative terms, a one unit decrease in the overall level of business barriers, or put differently, a unit

57 It is worth noting that this finding applies to strictly to the surveyed surviving firms. If entry and exit dynamics systematically differ between traditional industries and services providers, this result might be reversed. For this reason, it would be crucial to reexamine the job creation analysis using census data that allow for accounting for firm entry and exit. The data used in the analysis here do not allow for accounting for firm exit.

58 However, Haltiwanger et al. 2013 and Huber et al. 2012 also document that young firms exhibit an increased exit hazard. Accordingly, an overall assessment of young firms' contribution to overall job creation would require census data that also contain information on market entry and exit. The data used in the analysis here do not account for firm exit.

improvement in firms' perception of their business environment (for example from major to moderate obstacle to business) was associated positively with job creation by approximately 1.1 percentage points (Table 3, see column 2). Had the EU11 completely removed all perceived business restrictions, these surveyed firms would have increased their average annual employment growth by as much as 4.4 percentage points.

Removing obstacles to access to financial resources, simplifying tax systems and fighting corruption positively correlates with job creation by already established firms. The econometric analysis reveals that, a one unit decrease in the perceived difficulties to obtain sufficient financial resources correlated positively (by 2.5 percentage points, on average) with job creation among the EU11 surveyed firms (Table 3, see column 4).[59] In a similar vein, restrictive business taxation rules correlate with substantial job creation. In industries with complex tax systems, employment growth rates were reduced by 1.9 percentage points (Table 3, column 7). Corruption reduced job creation among the surveyed firms (Table 3, see column 6). Interestingly, however, institutional regulations (such as customs and trade regulations and business licensing proceedings) were estimated to have increased firm's average job creation by 1.8 percentage points (Table 3, see column 3). These results were probably be driven by surveyed firms observing other firms enjoying preferences and protection on the local market from competition. While such practices seemed to have positively affected job creation in the short run, they have likely deferred the necessary structural changes for the long-run competitiveness of the EU11 economies.

Productive firms contributed positively to overall job creation.[60] In quantitative terms, a one percent increase in firm-specific total factor productivity (TFP) increases firm's average employment growth rate by approximately 1.5 percentage points (Table 3).[61] This finding is robust across all different specifications, driven by differences in the initial level of productivity. A simple explanation might be that more productive firms competed more successfully than less productive firms on the domestic and the world markets enabling them to expand their level of production. This expansion may have also increased the firms' labor demand and, therefore, accelerated job creation rates.

Prior to the crisis, labor resources seemed to have efficiently reached firms with growing productivity. The positive effect of productivity on employment growth also indicates that within-industries efficient firms were able to grow more rapidly than the rest. Moreover, the quantitative dimension of the effect points to the usefulness of creating an economic environment that stimulates productivity growth. A firm that, for example, successfully increased its level of total factor productivity by 10 percentage points (through innovation, learning-by-doing, technology adoption) expanded its employment by 15 percentage points between 2002 and 2008 (Table 3).

59 This finding is in line with the previous work on the impact of institutional barriers on firm growth which identified financial constraints as the most crucial obstacle to growth (see, e.g., Ayyagari et al. 2008).

60 The results refereeing to productivity (TFP) are based on eight out of the EU11 economies. TFP is calculated by applying the Levinsohn and Petrin (2003) approach to data on value added (or sales), inputs (i.e., labor and capital) and intermediate inputs (such as material costs). Unfortunately, the Amadeus data at hand do not contain such information for Croatia, Estonia and Lithuania.

61 In fact, replacing average firm-specific TFP by its initial value, the corresponding marginal effect amounts to 1.4 percentage points.

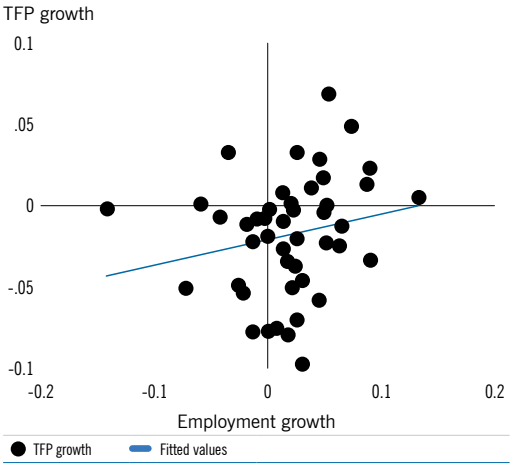
In addition to directly reducing job growth rate, an unfriendly business environment was negatively associated with firm productivity. In the period 2002–2008, the overall level of within-industry productivity was negatively correlated with perceived business restrictions and regulations. The partial correlation from a bivariate regression of TFP on the overall measure of institutional barriers amounts to -0.2, implying that each unit of reduction in institutional barriers was associated with a 0.2 percentage points increase in productivity levels. In terms of growth rates, the relationship between the employment growth and the TFP growth among the sampled firms was positive prior to 2008, but statistically insignificant (Figure 74).[62] Nonetheless, the positive association between the job growth rate and the TFP growth rate implied that the EU11 exploited the cost advantages and were increased the number of jobs without a substantial change in overall productivity.

Employment growth during the financial crisis

The global financial crisis affected asymmetrically firms operating in different industries, with the construction and manufacturing industries showing the largest job losses. The global economic crisis put a transitory stop to the 2000s' growth spurt in the EU11 countries. Financial flows dried up, commodity prices collapsed, external demand plummeted, and unemployment rates rose.[63] The effects of the crisis were felt not only at the macroeconomic, but also at the firm level. When controlling for other factors and in comparison to firms operating in other industries, surveyed construction and manufacturing firms reduced their employment by 1.8 to 7.4 percentage points more than the rest of the firms (see Table 4). Accordingly, these two sectors drove the large drop in employment in 2008–2009 (Figure 72).

In contrast, surveyed firms operating in the services sector were least affected by the global recession. Overall, surveyed firms that

Figure 74. Average TFP growth versus average employment growth, 2002–2008



Source: Amedeus data base; own calculations.
Note: Average TFP growth and employment growth plotted along with the fitted values from a bivariate regression for the seven industries and eight countries where TFP measures were constructed for the period 2002-2008. Approximately size of the sample 71,000 firms operating in eight of the EU11 countries.

62 This result is in contrast to recent empirical studies that find a negative relationship between TFP growth and employment growth over time (see, e.g., De Michelis et al. 2013). There are several reasons for this finding. First, results presented here are based on firm-level econometric TFP estimates, whereas industry and country studies typically rely on TFP measures based on growth accounting (see, e.g., De Michelis et al. 2013). Accordingly, one avenue for future research could include a systematic comparison of micro- and macro-based TFP measures. Second, in contrast to De Michelis et al. (2013), the sample in this analysis covers only less developed countries. When comparing Figure 4 below with Figure 2 in De Michelis et al. (2013), it turns out that (with the exception of New Zealand) all countries exhibit positive TFP growth. By contrast, the majority of industries in the current analysis are characterized by a decrease in TFP over time.

63 Raiser and Gill (2012).

operated in agriculture, fishing, mining and utilities industries tended to be least affected by the financial crisis. When controlling for productivity, interestingly, farms became severely affected by the financial crisis. A similar result can be inferred for the transport and storage industries as well as communications providers.

During the global financial crisis, the firms' size and vintage were negatively correlated with job creation, while the more productive firms exhibited higher employment growth rates. More precisely, (one percent) larger and older firms showed job creation rates that were approximately 7.4 and 5.5 percentage points lower than for the rest of the surveyed firms. A one percent increase in TFP, by contrast, enabled on average about 4 percentage points faster employment growth. Moreover, productivity differentials were more crucial for job creation among the surveyed firms during the economic crisis than during the "boom" years.

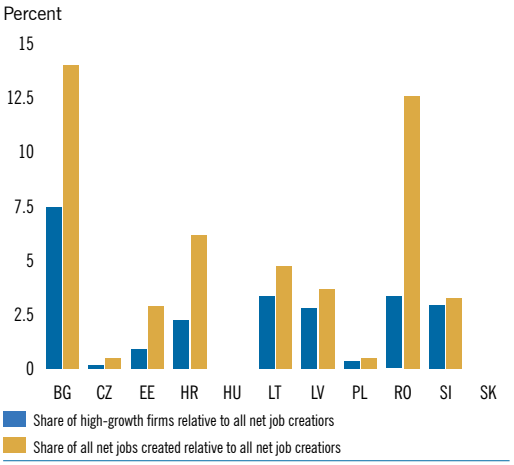
Institutional barriers and regulations negatively correlate with job creation in the EU11 economies during the financial crisis. In 2009, industries with more severe barriers in terms of taxation, labor restrictions, financial resources as well as institutional regulations exhibited lower job creation rates. A one-unit increase in institutional regulations decreased employment growth by approximately 1.8 percentage points. This result highlights, that (at least) during economic downturns institutional regulations can act as severe barriers to job creation. Moreover, the overall level of corruption also decreased employment growth by approximately 2.8 percentage points, on average. These findings suggest that EU11 economies, characterized by unfriendly business environments, were highly vulnerable to job losses in times of acute macroeconomic shocks. Finally, firms operating in sectors with perceived stringent labor regulations exhibited negative employment growth rates (Figure 72, column 8). Accordingly, in industries with a one-unit larger labor regulation, job creation was reduced by 2.7 percentage points.

The high-growth firms in the EU11 economies

As highlighted in World Bank (2013), the fastest growing firms (the *Gazelles*) were rare, but essential for providing new jobs in the EU11 economies.[64, 65, 66] The share of high-growth firms relative to all surveyed firms with positive employment growth was around 3.5 percent in the years prior to the global financial crisis. It was by far largest in Bulgaria, where approximately 7.5 percent of all net job creating firms were high-growth ones. High-growth firms were most important in Romania and Bulgaria with corresponding net job creation shares exceeding 12.5 percent. In addition to Hungary and Slovakia, the role of high-growth firms for overall job creation was negligible in the Czech Republic and Poland.

To unveil the probability of being a *Gazelle*, simple probit regressions are estimated. The methodology is described in Box 7.

Figure 75. Share and net job creation of high-growth firms, 2006–2008



Source: Amedeus data base; own calculations.
Note: Shares of high-growth firms and their contribution to net job creation from 2006 to 2008 reported. Both shares are calculated relative to all net-job creating firms. Correspondingly, all firms that examine a negative average employment growth rate from 2006 to 2008 are not included. No firms from Hungary and Slovakia fulfill the criterion to be considered as high-growth firms.

Gazelles prior to the crisis[68]

The probability to be a high-growth firm was largest in the construction, manufacturing, transport and communications industries (Table 5). In comparison to the other services sector, construction firms were between 2 and 8.2 percentage points more likely to grow with more than 20 percent annually in each year from 2006 to 2008. Moreover, and again in comparison to the other services industries sector, agricultural and fishing industries as well

64 The analysis presented here partially relies on the OECD (2009) definition of the so-called *Gazelles*. These are firms that are: (i) younger than 5 years; (ii) initially employ more than 10 workers; and (iii) experienced annual employment growth rates of (at least) 20 percent during 3 consecutive years. Given the focus of the current analysis on the distribution of high growth firms across different firm size and firm age cohorts, only the third part of the definition is applied (i.e. related to the 20 percent tri-annual growth performance). The measure of fast-growing firms, thus, is a dummy variable that takes on the value of 1 if a firm exhibits employment growth rates above 20 percent in each year from 2006 to 2008.

65 World Bank (2013) reveals evidence that net job creation in the region has typically been led by a handful of firms, many of them young firms. On average, in the Europe and Central Asia region, about 10–15 percent of all firms accounted for over two-thirds of net job creation in the years leading to the crisis. This pattern holds regardless of whether the entire enterprise sector is experiencing net job creation or net job destruction.

66 This finding is consistent with recent literature on the role of high growth firms for job creation. Henrikson and Johansson (2010), for example, provide a meta-study on the impact of Gazelles for overall job creation and confirm the few that this group of firms accounts for the vast majority of newly created firms.

68 It is worth noting again that the results presented in this section might reflect correlations rather than causal effects.

Box 7. A probability model for high-growth firms

For the econometric analysis of firm- and industry-specific determinants of a firm's high-growth probability, a simple probit model is employed. Thereby, drawing on the analysis from Section 3, the probability to be a high-growth firm is modeled as a function of the same industry- and firm-specific characteristics. The only exception is that, in this exercise, an interaction effect of firm size with firm age is not included.[67] Formally, the model is given by:

$$Pr(HG_{ij}=1 \mid \alpha, x_{ij}, z_j) = \Phi(\alpha + x_{ij}\beta + z_j\gamma), \text{ where}$$

HG_{ij}= 1,if a firm i in industry j is a high-growth firm and 0, else.

x_{ij} includes all firm-specific characteristics; z_j comprises industry-level information; β are γ are row vectors of parameters that are to be estimated; Φ denotes the cumulative distribution function (CDF) of the normal distribution which allows to apply maximum-likelihood estimation of the resulting model. This model is non-linar in the covariates and, therefore, the average marginal effects are calculated as suggested by Bartus (2005).

The probability to be a high-growth firm is captured by the dummy variable HG_{ij}, which takes on the value of 1 if firm growth exceeds 20 percent in each and every year from 2006 to 2008. The covariates of interest (collected in x_{ij} and z_j) include the initial firm size, firm age, TFP, business barriers and the industry dummy variables. They are all measured in 2005. Given the lack of observations of high-growth firms in Hungary and Slovakia in the EU11 sample, the specification for the boom years from 2006 to 2008 does not include country-fixed effects.

The model is re-run to examine a firm's probability of experiencing high-growth after the crisis, using the same model specifications and covariates. Therefore, the probability to grow with more than 20 percent in 2009 is explained by the same covariates as in the pre-crisis period, but measured in 2008. The perceived institutional barriers for doing business are taken from the 2009 survey. This specification controls for country-fixed effects.

67 Given the non-linear functional form of the probit model, the marginal firm size and firm age effects are already firm-specific making an interaction effect unnecessary.

as firms operating in the wholesale trade and retailing or providers of restaurant and hotel services were also around 2 percentage points more likely to be high-growth firms.

Prior to the crisis, smaller and younger firms were more likely to be high-growth firms. Among the surveyed firms, an increase in firm size or firm age by 1 percent affected negatively the average probability to grow by more than 20 percent annually from 2006 to 2008 by 0.1 to 0.5 and 0.8 to 1.4 percentage points, respectively (Table 5). The latter result highlights the documented crucial role of young firms for the overall job creation prior to the crisis.

Institutional barriers and regulations correlated with a lower probability of being a high-growth firm prior to the crisis. A one-unit increase in the perceived overall business friendliness by the surveyed EU11 firms increased the probability for high-growth by 2.4 percentage points. In this regard,

regulations related to the labor markets and financial restrictions correlated most strongly with the occurrence of being a high-growth firm. In a similar vein, the tax system, crime and institutional regulations, also seemed to be crucial predictors of high-growth firms.[69]

Productivity among the surveyed EU11 firms was associated with a higher probability of being a high-growth firm prior to the crisis. More precisely, an increase in a firm's TFP by 10 percent was associated with a higher probability to be a *Gazelle* by about 1 to 2 percentage points. While productivity remained one critical predictor of job creation among the surveyed firms, in quantitative terms, the firm size and the age were better predictors. Nevertheless, engaging in any productivity enhancing activities might still have resulted in a higher likelihood to become a high-growth firm. In line with the results on firm growth, more productive firms grew faster and, consequently, were more often high-growth firms.

High-growth firms in the post crisis period

In the post-crisis period, firm-specific determinants for high-growth firms were of crucial importance. In 2009, firm size, age and productivity were important restrictions to become a high growth firms. A one percent increase in size and age reduced a firm's probability of growing more than 20 percent by approximately 2.3 to 4.3 and 2.9 to 3.6 percentage points, on average. A 10 percent increase in TFP, by contrast, increased the probability to be a *Gazelle* by 3 percentage points. These findings, once more, highlight the importance of small, young, productive firms for the creation of new jobs in the EU 11 economies.

Surveyed firms in manufacturing were most severely affected by the economic downturn and were the least likely to be high-growth firms in the years after the global financial crisis (Table 6). In contrast, the probability of becoming a *Gazelle* among the surveyed firms in farming and fishing was not significantly affected by the economic crisis. Fast-growing firms in these sectors, however, comprised a very small portion of the high-growth firms in the EU11, given the small size of the agricultural and fishing industries. Firms operating in the construction sector also exhibited a relatively high probability of being high-growing firms. Coupled with the firm-growth results from above (i.e. that on average, firms in this sector performed relatively poor during the financial crisis), the regression results suggest that only the top-performing firms in the construction sector were able to grow very fast. One driving force for this result might be an increase in public demand for construction activities induced by governmental investment and EU-supported programs that aimed to mitigate the negative employment effects of the financial crisis.

69 Interestingly, in industries where corruption was identified as major obstacle for doing business the probability to observe high-growth firms was slightly increased (Table 3, column 6). There might be at least two potential reasons for this positive effect. First, corruption might allow a few very influential firms to attract an over-proportional share of business contracts allowing them to grow at a very fast pace. Second, since our measure reflects perceived corruption it might be the case that firms which, for example, did not succeed in public procurement procedures might attribute this to corruption in their sector regardless of where this was the case or not. This finding, however, was mainly driven by Romania and Bulgaria. In fact, when excluding these two countries the average marginal effect of corruption turns out to be significantly negative.

After 2008, barriers for doing business depressed the likelihood that a firm would grow fast. A one unit decrease in the overall institutional barriers perceived by the surveyed EU11 firms was associated with a 0.5 percentage point increase in the probability to be a high-growth firm (Table 6, column 2). Similar qualitative and quantitative effects were obtained for institutional regulations, access to finance, crime, corruption and labor regulations.[70]

and fishing, mining, construction and manufacturing were crucial for the net creation of jobs among surveyed firms. In contrast, while the number of firms in the services sector was large, their role in creating jobs was negligible. At the firm level, small firms as well as start-ups and young surviving firms were the most important contributors to job creation in the EU11. In addition, the results demonstrated that firm productivity and the creation of new jobs among the surveyed firms went hand in hand. Moreover, a crucial correlate of employment growth among the EU11 surveyed firms was the business environment. The perceived quality of the business climate was associated not only the firms' employment growth, but also with their productivity. All these findings were also confirmed for the share of high-growth surveyed firms, which disproportionately accounted for the creation of new jobs in the EU11 economies prior to the crisis.

Conclusions

The analysis of the industry- and firm-specific determinants of the job creation process in the EU11 economies relied on a dataset of surviving firms during 2002–2009.[71] To unveil the structural drivers of employment growth in the sampled firms and to assess the role of an adverse macroeconomic shock, it examined the process in two periods–before and after the start of the global financial crisis.

The main results indicate that during the boom years prior to the global financial crisis, traditional industries such as agriculture

Construction and manufacturing industries most severely suffered from the economic downturn. The EU11 countries that still heavily relied on these industries faced a hefty decline in their overall number of jobs. The results demonstrated that surveyed firms in the services industries were less vulnerable to the economic downturn. Accordingly, in small service firms, a substantially smaller (proportionate) number of employees was lost among the surveyed firms

70 The impact of tax related barriers for doing business on the high-growth probability was positive. Accordingly, more severe perceived tax regulations were associated with an increase in the probability to grow very fast. This effect, however, turns out to be negative and significant, when excluding both Bulgaria and Romania.

71 It is important to note that the data used in the analysis presented here relate only to surviving (small and young) firms. A proper understanding of business entry and business exit in the EU11 economies would be essential in order to tailor policies that most successfully contribute to overall job creation. The availability of firm census data for the EU11 economies should, for the future, allow for providing a comprehensive picture on job creation in these countries.

than in the rest of the economy, and especially, in the traditional sectors. The empirical results also suggest that (total factor) productivity correlated positively with employment growth among surveyed firms. Business restrictions also adversely affected the creation of jobs in the post-crisis period.

Overall, the empirical results confirm that, in qualitative terms, the analyzed firm characteristics (such as size, age, TFP, sectoral affiliation) affect job creation both during recessions and economic recoveries. They indicate that the more productive firms tend to be less vulnerable to economic downturns. Accordingly, any type of activities that increase productivity can be expected to reduce the overall exposure of the EU11 economies to recessions and, therefore, should allow firms to compete more successfully with international competitors.

In addition, the empirical results point to the key role of improving the quality of the overall business environment for job creation in EU11. The empirical evidence suggests that improving the business climate, strengthening labor and regulatory practices, modernizing institutions, and deepening access to financial advances job creation. Put broadly, improving the institutions for doing business will lead to leveling the playing field for all firms, boost overall productivity and, thus, contribute to the creation of new jobs. Also, given the importance of the business environment for FDI inflows, reducing business restrictions would also increase the EU11 economies' medium- and long-run productivity and overall competitiveness and indirectly contribute to job creation. A sound business environment, however, seems to be a necessary but not sufficient condition for sustained job creation.[72]

72 See World Bank (2013) for specific policy recommendations.

Table 3. Estimation results for annual average firm growth, 2002–2008

Variables	No regulations (1)	Overall inst. (2)	Inst. Regulation (3)	Access to finance (4)	Crime (5)	Corruption (6)	Tax (7)	Labor regulation (8)
				Firm characteristics				
Initial size	-0.053***	-0.077***	-0.078***	-0.077***	-0.077***	-0.077***	-0.077***	-0.077***
	(0.001)	(0.001)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Age	-0.046***	-0.077***	-0.077***	-0.076***	-0.077***	-0.077***	-0.077***	-0.077***
	(0.001)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Initial size × age	0.005***	0.013***	0.013***	0.013***	0.013***	0.013***	0.013***	0.013***
	(0.000)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
TFP	-	0.015***	0.016***	0.015***	0.015***	0.015***	0.016***	0.015***
	-	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
				Industry characteristics				
Agriculture	0.004	0.031**	0.021	0.015	0.032**	0.031*	0.025	0.032**
	(0.003)	(0.016)	(0.016)	(0.016)	(0.016)	(0.016)	(0.016)	(0.016)
Mining	0.043***	-	-	-	-	-	-	-
	(0.004)	-	-	-	-	-	-	-
Construction	0.038***	0.060***	0.050***	0.049***	0.060***	0.061***	0.054***	0.060***
	(0.002)	(0.012)	(0.012)	(0.012)	(0.012)	(0.012)	(0.012)	(0.012)
Manufacturing	0.032***	0.041***	0.026**	0.036***	0.039***	0.040***	0.034***	0.039***
	(0.001)	(0.012)	(0.012)	(0.012)	(0.012)	(0.012)	(0.012)	(0.012)
Wholesale	0.006***	0.016	0.005	0.008	0.015	0.014	0.007	0.015
	(0.001)	(0.012)	(0.012)	(0.012)	(0.012)	(0.011)	(0.012)	(0.012)
Transport	0.017***	0.019	0.010	0.015	0.018	0.017	0.016	0.019
	(0.001)	(0.012)	(0.012)	(0.012)	(0.012)	(0.012)	(0.012)	(0.012)
Overall inst.	-	-0.011*	-	-	-	-	-	-
	-	(0.006)	-	-	-	-	-	-
Inst. Regulation	-	-	0.018***	-	-	-	-	-
	-	-	(0.004)	-	-	-	-	-
Access to finance	-	-	-	-0.025***	-	-	-	-
	-	-	-	(0.004)	-	-	-	-
Crime	-	-	-	-	-0.003	-	-	-
	-	-	-	-	(0.004)	-	-	-
Corruption	-	-	-	-	-	-0.007*	-	-
	-	-	-	-	-	(0.004)	-	-
Taxation	-	-	-	-	-	-	-0.019***	-
	-	-	-	-	-	-	(0.004)	
Labor regulation	-	-	-	-	-	-	-	0.002
	-	-	-	-	-	-	-	(0.004)
				Fixed Effects				
Country	871.87***	136.99***	140.55***	130.21***	138.21***	127.37***	139.61***	137.50***
R^2	0.097	0.138	0.139	0.139	0.138	0.138	0.138	0.138
Observations	180,986	34,068	34,093	34,071	34,099	34,099	34,099	34,099

Notes: Constant not reported. Robust standard errors in parenthesis. *, ** and *** denote significance at 10 percent. 5 percent and 1 percent levels, respectively.

Table 4. Estimation results for annual average firm growth in 2009

Variables	No regulations (1)	Overall inst. (2)	Inst. Regulation (3)	Access to finance (4)	Crime (5)	Corruption (6)	Tax (7)	Labor regulation (8)
Firm characteristics								
Initial size	-0.073***	-0.074***	-0.074***	-0.074***	-0.074***	-0.074***	-0.074***	-0.074***
	(0.001)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Age	-0.038***	-0.055***	-0.054***	-0.054***	-0.054***	-0.054***	-0.054***	-0.055***
	(0.001)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Initial size × age	0.016***	0.016***	0.016***	0.016***	0.016***	0.016***	0.016***	0.016***
	(0.000)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
TFP		0.039***	0.039***	0.039***	0.039***	0.039***	0.038***	0.039***
		(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Industry characteristics								
Agriculture	0.026***	-0.066***	-0.053***	-0.055***	-0.066***	-0.042**	-0.052***	-0.050***
	(0.004)	(0.018)	(0.018)	(0.018)	(0.019)	(0.018)	(0.018)	(0.018)
Mining	0.032***	-	-	-	-	-	-	-
	(0.006)	-	-	-	-	-	-	-
Construction	-0.035***	-0.050***	-0.038***	-0.041***	-0.047***	-0.024*	-0.039***	-0.032**
	(0.002)	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)
Manufacturing	-0.018***	-0.073***	-0.062***	-0.065***	-0.074***	-0.062***	-0.059***	-0.060***
	(0.002)	(0.014)	(0.013)	(0.013)	(0.014)	(0.013)	(0.014)	(0.013)
Wholesale	-0.004***	-0.016	-0.003	-0.008	-0.013	-0.001	-0.006	-0.006
	(0.002)	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)
Transport	-0.002	-0.042***	-0.030**	-0.034***	-0.038***	-0.029**	-0.033**	-0.036***
	(0.002)	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)
Overall instit.	-	-0.010**	-	-	-	-	-	-
	-	(0.004)	-	-	-	-	-	-
Inst. regulation	-	-	-0.018***	-	-	-	-	-
	-	-	(0.005)	-	-	-	-	-
Access to finance	-	-	-	-0.012**	-	-	-	-
	-	-	-	(0.005)	-	-	-	-
Crime	-	-	-	-	-0.009*	-	-	-
	-	-	-	-	(0.005)	-	-	-
Corruption	-	-	-	-	-	-0.028***	-	-
	-	-	-	-	-	(0.004)	-	-
Taxation	-	-	-	-	-	-	-0.009*	-
	-	-	-	-	-	-	(0.005)	
Labor regulations	-	-	-	-	-	-	-	-0.027***
	-	-	-	-	-	-	-	(0.005)
Fixed Effects								
Country	477.95***	79.96***	67.51***	100.25***	131.48***	71.85***	97.22***	61.56***
R^2	0.040	0.049	0.049	0.049	0.049	0.049	0.049	0.049
Observations	300,347	71,227	71,297	71,297	71,297	71,297	71,297	71,278

Notes: Constant not reported. Robust standard errors in parenthesis. *, ** and *** denote significance at 10 percent. 5 percent and 1 percent levels, respectively.

Table 5. Estimation results for high-growth probability, 2006–2008

Variables	No regulations (1)	Overall (2)	Institutions (3)	Finance (4)	Crime (5)	Corruption (6)	Tax (7)	Labor (8)
				Firm characteristics				
Initial size	-0.001***	-0.005***	-0.005***	-0.005***	-0.005***	-0.004***	-0.005***	-0.005***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Age	-0.008***	-0.014***	-0.014***	-0.014***	-0.014***	-0.014***	-0.014***	-0.014***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
TFP	-	0.001***	0.001***	0.001***	0.001***	0.002***	0.002***	0.002***
	-	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
				Industry characteristics				
Agriculture	0.001	0.020***	0.033***	0.005	0.022***	0.024***	0.012**	0.018***
	(0.002)	(0.006)	(0.008)	(0.004)	(0.007)	(0.007)	(0.005)	(0.006)
Mining	0.010**	-	-	-	-	-	-	-
	(0.004)	-	-	-	-	-	-	-
Construction	0.020***	0.063***	0.082***	0.041***	0.065***	0.067***	0.049***	0.062***
	(0.002)	(0.009)	(0.010)	(0.007)	(0.009)	(0.009)	(0.008)	(0.009)
Manufacturing	0.006***	0.038***	0.046***	0.026***	0.030***	0.035***	0.023***	0.029***
	(0.001)	(0.007)	(0.007)	(0.006)	(0.006)	(0.006)	(0.005)	(0.006)
Wholesale	0.005***	0.026***	0.030***	0.018***	0.026***	0.026***	0.016***	0.021***
	(0.001)	(0.005)	(0.005)	(0.004)	(0.005)	(0.005)	(0.004)	(0.004)
Transport	0.012***	0.053***	0.061***	0.042***	0.044***	0.052***	0.043***	0.045***
	(0.002)	(0.008)	(0.008)	(0.007)	(0.007)	(0.008)	(0.007)	(0.007)
Overall institutions	-	-0.024***	-	-	-	-	-	-
	-	(0.001)	-	-	-	-	-	-
Inst. regulation	-	-	-0.006***	-	-	-	-	-
	-	-	(0.001)	-	-	-	-	-
Access to finance	-	-	-	-0.015***	-	-	-	-
	-	-	-	(0.001)	-	-	-	-
Crime	-	-	-	-	-0.011***	-	-	-
	-	-	-	-	(0.001)	-	-	-
Corruption	-	-	-	-	-	0.004***	-	-
	-	-	-	-	-	(0.001)	-	-
Taxation	-	-	-	-	-	-	-0.012***	-
	-	-	-	-	-	-	(0.001)	
Labor regulations	-	-	-	-	-	-	-	-0.016***
	-	-	-	-	-	-	-	(0.001)
Pseudo R^2	0.034	0.052	0.047	0.050	0.048	0.047	0.050	0.051
Observations	197,411	45,476	45,535	45,479	45,540	45,540	45,540	45,540

Notes: Constant not reported. Robust standard errors in parenthesis. Average marginal effects reported (see, e.g., Bartus 2005) *, ** and *** denote significance at 10 percent. 5 percent and 1 percent levels, respectively.

Table 6. Estimation results for high-growth probability, 2009

Variables	No regulations (1)	Overall (2)	Institutions (3)	Finance (4)	Crime (5)	Corruption (6)	Tax (7)	Labor (8)
				Firm characteristics				
Initial size	-0.023***	-0.043***	-0.043***	-0.043***	-0.043***	-0.043***	-0.043***	-0.043***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Age	-0.029***	-0.036***	-0.036***	-0.036***	-0.036***	-0.036***	-0.036***	-0.036***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
TFP	-	0.003***	0.003***	0.003***	0.003***	0.003***	0.003***	0.003***
	-	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
				Industry characteristics				
Agriculture	0.051***	0.041***	0.045***	0.046***	0.041***	0.055***	0.041***	0.047***
	(0.002)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Mining	0.025***	-	-	-	-	-	-	-
	(0.003)	-	-	-	-	-	-	-
Construction	0.018***	0.009***	0.012***	0.012***	0.010***	0.022***	0.010***	0.014***
	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Manufacturing	-0.000	-0.012***	-0.009***	-0.009***	-0.012***	-0.008***	-0.011***	-0.008***
	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Wholesale	0.012***	-0.004**	-0.001	-0.001	-0.003**	0.003*	-0.004**	-0.001
	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Transport	0.015***	0.001	0.004**	0.003**	0.002	0.006***	0.003*	0.003*
	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Overall institutions	-	-0.005***	-	-	-	-	-	-
	-	(0.001)	-	-	-	-	-	-
Inst. Regulation	-	-	-0.002**	-	-	-	-	-
	-	-	(0.001)	-	-	-	-	-
Access to finance	-	-	-	-0.004***	-	-	-	-
	-	-	-	(0.001)	-	-	-	-
Crime	-	-	-	-	-0.003***	-	-	-
	-	-	-	-	(0.001)	-	-	-
Corruption	-	-	-	-	-	-0.015***	-	-
	-	-	-	-	-	(0.001)	-	-
Taxation	-	-	-	-	-	-	0.004***	-
	-	-	-	-	-	-	(0.001)	-
Labor regulations	-	-	-	-	-	-	-	-0.006***
	-	-	-	-	-	-	-	(0.001)
Pseudo R^2	0.031	0.051	0.051	0.051	0.051	0.051	0.051	0.051
Observations	300,347	79,914	79,999	79,999	79,999	79,999	79,999	79,980

Notes: Constant not reported. Robust standard errors in parenthesis. Average marginal effects reported (see, e.g., Bartus 2005) *, ** and *** denote significance at 10 percent. 5 percent and 1 percent levels, respectively. Wald tests for country-fixed effects not reported.

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